



AN ENVIRONMENTAL ANALYTICAL LABORATORY

### COMPREHENSIVE VALIDATION PACKAGE

ATL Applications

INVENTORY SHEET

WORK ORDER # 1010269A

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Completed by:

*Kara McKiernan*  
(Signature)

Kara McKiernan/ Document Control  
(Print Name & Title)

10/28/10  
(Date)

**WORK ORDER #: 1010269A**

Work Order Summary

<b>CLIENT:</b>	Mr. Brian Baker Environmental Health & Engineering, Inc. 117 Fourth Avenue Needham, MA 02494	<b>BILL TO:</b>	Accounts Payable Environmental Health & Engineering, Inc. 117 Fourth Avenue Needham, MA 02494
<b>PHONE:</b>	800-825-5343	<b>P.O. #</b>	17314
<b>FAX:</b>	781-247-4305	<b>PROJECT #</b>	17314
<b>DATE RECEIVED:</b>	10/13/2010	<b>CONTACT:</b>	Ausha Scott
<b>DATE COMPLETED:</b>	10/27/2010		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
01A	116117	ATL Applications
02A	116118	ATL Applications
03A	116119	ATL Applications
04A	116120	ATL Applications
05A	116121	ATL Applications
06A	116122	ATL Applications
07A	116100	ATL Applications
08A	116101	ATL Applications
09A	116102	ATL Applications
10A	116103	ATL Applications
11A	116104	ATL Applications
12A	116105	ATL Applications
13A	116135	ATL Applications
14A	116136	ATL Applications
15A	116137	ATL Applications
16A	116138	ATL Applications
16AA	116138 Lab Duplicate	ATL Applications
17A	Lab Blank	ATL Applications

Continued on next page

**WORK ORDER #: 1010269A**

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. #** 17314

**FAX:** 781-247-4305      **PROJECT #** 17314

**DATE RECEIVED:** 10/13/2010      **CONTACT:** Ausha Scott

**DATE COMPLETED:** 10/27/2010

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
17B	Lab Blank	ATL Applications
18A	LCS	ATL Applications

CERTIFIED BY:

*Sinda S. Fumman*

Laboratory Director

DATE: 10/27/10

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

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# 1010269A**

Sixteen Radiello 170 (H<sub>2</sub>S) samples were received on October 13th, 2010. The procedure involves adsorption of H<sub>2</sub>S 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/m<sup>3</sup>.

Sampling rate of 69 mL/min for H<sub>2</sub>S was provided by the manufacturer.

**Receiving Notes**

Sample collection date was not provided on the Chain of Custody for any sample. The client was contacted and a date of 10/5/10, 10/6/10 and 10/7/10 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 21600 minutes was used for the QC samples and Trip Blanks.

There was no media present in the tube for sample 116120.

**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)
116117	1010269A-01A	NA	10/18/2010	1.00	0.80	0.54	1.6	1.1
116118	1010269A-02A	NA	10/18/2010	1.00	0.80	0.54	1.6	1.1
116119	1010269A-03A	NA	10/18/2010	1.00	0.80	0.54	2.1	1.4
116120	1010269A-04A	NA	10/18/2010	1.00	0.80	0.54	ND	ND
116121	1010269A-05A	NA	10/18/2010	1.00	0.80	0.51	ND	ND
116122	1010269A-06A	NA	10/18/2010	1.00	0.80	0.51	ND	ND
116100	1010269A-07A	NA	10/18/2010	1.00	0.80	0.51	ND	ND
116101	1010269A-08A	NA	10/18/2010	1.00	0.80	0.51	ND	ND
116102	1010269A-09A	NA	10/18/2010	1.00	0.80	0.51	ND	ND
116103	1010269A-10A	NA	10/18/2010	1.00	0.80	0.51	ND	ND
116104	1010269A-11A	NA	10/18/2010	1.00	0.80	0.51	0.88	0.55
116105	1010269A-12A	NA	10/18/2010	1.00	0.80	0.51	2.4	1.5
116135	1010269A-13A	NA	10/18/2010	1.00	0.80	0.55	ND	ND
116136	1010269A-14A	NA	10/18/2010	1.00	0.80	0.55	ND	ND
116137	1010269A-15A	NA	10/18/2010	1.00	0.80	0.55	ND	ND
116138	1010269A-16A	NA	10/18/2010	1.00	0.80	0.55	ND	ND
116138 Lab Duplicate	1010269A-16AA	NA	10/18/2010	1.00	0.80	0.55	ND	ND
Method Blank	1010269A-17A	NA	10/18/2010	1.00	0.80	0.51	ND	ND
Method Blank	1010269A-17B	NA	10/18/2010	1.00	0.80	0.51	ND	ND
LCS	1010269A-18A	NA	10/18/2010	1.00	0.80	0.51	%Rec 126	

- COMMENTS: 1. NA=Not Applicable  
 2. ND=Not Detected  
 3. Exposure time of 21600 minutes was assumed for the QC samples.  
 4. Background subtraction not performed.

# Hydrogen Sulfide Radliello Calculation Worksheet

Worker Order #: 1010269A

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

Sampling T (deg C) 25 Typically 25

Volume (ml) 10.5 Typically 10.5 for H2S

Date of Analysis: 10/18/2010 Takes into account temp

Corrected Q 0.096

Q Includes conversion from Sulfide to H2S

Conc (ug/l) 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	Conc (ppb) of H2S	Conc (ug/m3) of H2S
01A	116117	NA	0.192	20160	1.00	0.14350485	1.506800928	1.601334244	0.779	1.085
02A	116118	NA	0.195	20160	1.00	0.146329852	1.536463443	1.632857719	0.794	1.107
03A	116119	NA	0.243	20160	1.00	0.191529874	2.011063679	2.137233312	1.039	1.448
04A	116120	NA	0.018	20160	1.00	-0.020345232	-0.213624931	-0.227027281	-0.110	-0.154
05A	116121	NA	0.02	21600	1.00	-0.018461897	-0.193849921	-0.206011631	-0.093	-0.130
06A	116122	NA	0.019	21600	1.00	-0.019403564	-0.203737426	-0.216519456	-0.098	-0.137
07A	116100	NA	0.02	21600	1.00	-0.018461897	-0.193849921	-0.206011631	-0.093	-0.130
08A	116101	NA	0.017	21600	1.00	-0.021286899	-0.223512436	-0.237535106	-0.108	-0.150
09A	116102	NA	0.079	21600	1.00	0.037096464	0.38951287	0.413950036	0.188	0.262
10A	116103	NA	0.081	21600	1.00	0.038979798	0.40928788	0.434965685	0.197	0.275
11A	116104	NA	0.123	21600	1.00	0.078529818	0.824563087	0.876294329	0.398	0.554
12A	116105	NA	0.269	21600	1.00	0.21601322	2.268138808	2.410436758	1.094	1.525
13A	116135	NA	0.046	19980	1.00	0.006021448	0.063225207	0.067191815	0.033	0.046
14A	116136	NA	0.050	19980	1.00	0.009788117	0.102775227	0.109223115	0.054	0.075
15A	116137	NA	0.05	19980	1.00	0.009788117	0.102775227	0.109223115	0.054	0.075
16A	116138	NA	0.086	19980	1.00	0.043688134	0.458725405	0.48750481	0.239	0.333
16AA	116138 Lab Duplicate	NA	0.087	19980	1.00	0.044629801	0.46861291	0.498012634	0.244	0.341
17A	Method Blank	NA	0.018	21600	1.00	-0.03729524	-0.39160002	-0.416168128	-0.103	-0.144
17B	Method Blank	NA	0.017	21600	1.00	-0.03729524	-0.39160002	-0.416168128	-0.103	-0.144
18A	LCS	NA	0.217	21600	1.00	0.167046529	1.753988551	1.864029866	0.846	1.179

QC Duration  
21600

CCV Spike Amt  
0.133

Verified: HH and AW on 9/4/09



## QC Results and Raw Data

Work Order: 1010269A

Date: 10/18/10

Method: Rad 170

Analyst: M. Skidmore

Wavelength: 665 nm

Standard ID	Concentration	ABS
	(Sulfide (µg/mL))	
Level 1 1993-80-E	0.0716	0.097
Level 2 -D	0.143	0.180
Level 3 -C	0.286	0.356
Level 4 -B	0.572	0.683
Level 5 -A	1.145	1.237
ICV 1993-81	0.286	0.345

$r = 0.9974$

$m = 1.062$

$b = 0.0396$

ICV % Recovery = 101

Fraction	Dilution	ABS	Sample ID	Sample Volume	Comments
01A	1.00	0.192	116117	10.5 mL	
02A		0.195	116118		
03A		0.243	116119		
04A		0.018	116120		No Media in Tube
05A		0.020	116121		
06A		0.019	116122		
07A		0.020	116100		
08A		0.017	116101		
09A		0.079	116102		
10A		0.081	116103		
11A		0.123	116104		
12A		0.269	116105		
13A		0.046	116135		
14A		0.050	116136		
15A		0.050	116137		
16A		0.086	116138		
16AA		0.087	↓		
BIK1		0.018	N/A		Lot: 10101
BIK2		0.017	↓		↓
LCS		0.217	↓		↓ 0.133 µg/mL
CCV		0.348	N/A		0.286 µg/mL
					MJS 10/19/10

Procedure:

- 1.) Add 10 mL of H<sub>2</sub>O 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 10/19/10



Signed

10/19/10

Date

# Spectrophotometer Standard Preparation Log

@Air Toxics Ltd. Log Book #: 1993

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

Solvent: HPLC H<sub>2</sub>O  
Solvent Lot #: DB 270

Procedure/Comments: \_\_\_\_\_

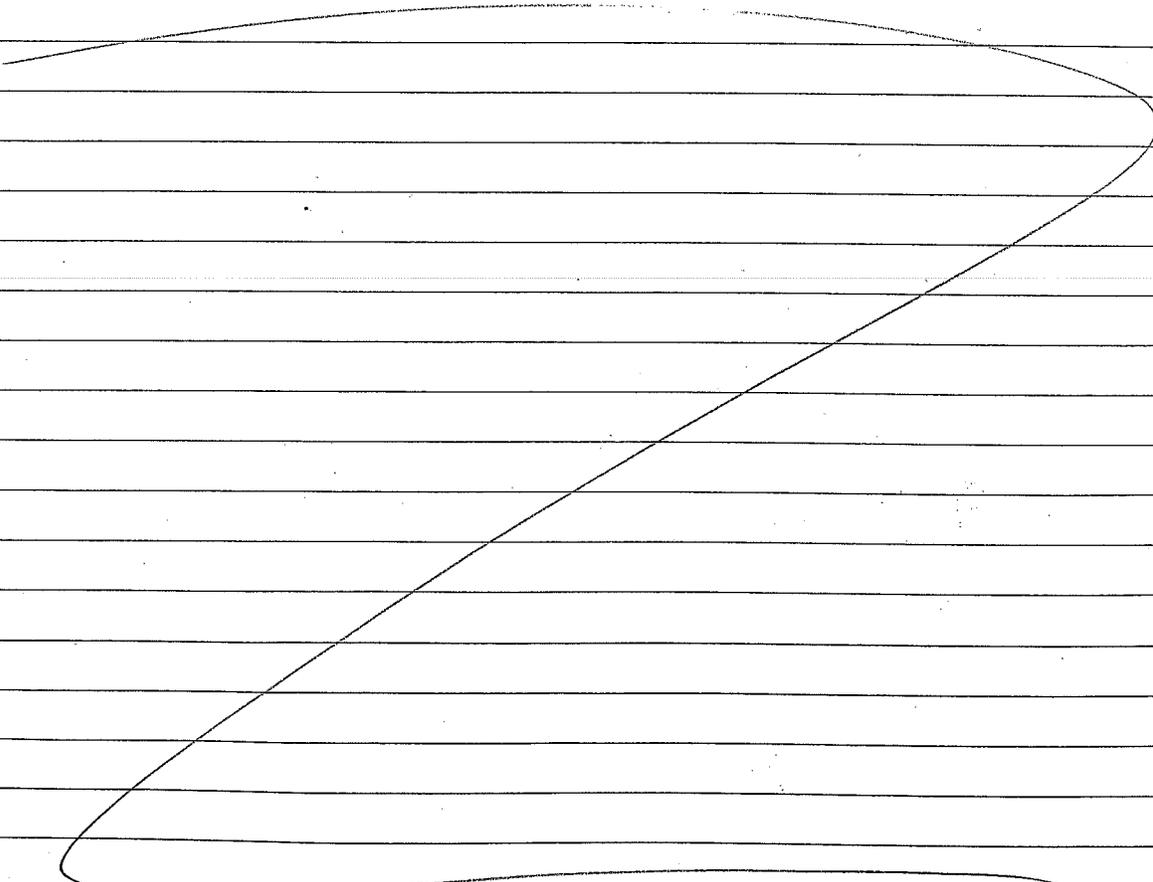
Sulfuric Acid Solution:

Slowly add 6.25 mL of concentrated sulfuric acid to 2.5 mL of D.I. H<sub>2</sub>O, and let the solution cool. (sulfuric acid lot: 01428LS).

Amine Solution:

Dissolve 1.6875g of N,N-dimethyl-p-phenyldiammonium 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<sub>2</sub>O + 120 mL sulfuric acid).

MJS 10/18/10



MJS 10/18/10

M. Skidmore 10/18/10

Fauzi

10/22/10

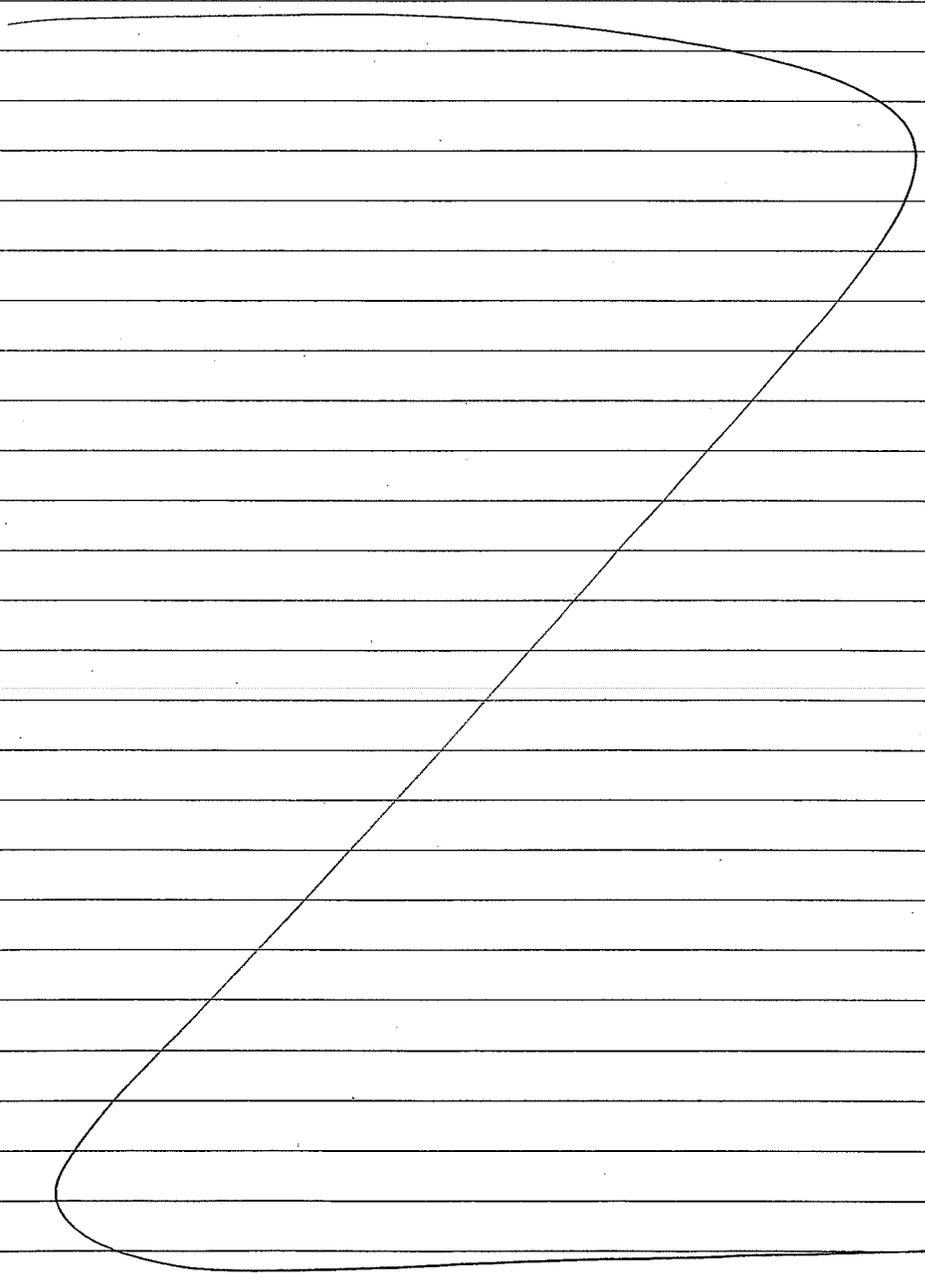
Spectrophotometer Standard Preparation Log

@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<sub>2</sub>O  
Solvent Lot #: DB 270

Procedure/Comments: Dissolve 125 g of ferric chloride hexahydrate  
(located in ERAC, lot: 73297) in 50 mL of H<sub>2</sub>O,



MJS 10/18/10

Miles Skidmore 10/18/10  
Signed Date

Fauzi  
Reviewed

10/22/10  
Date Rev. 8/97

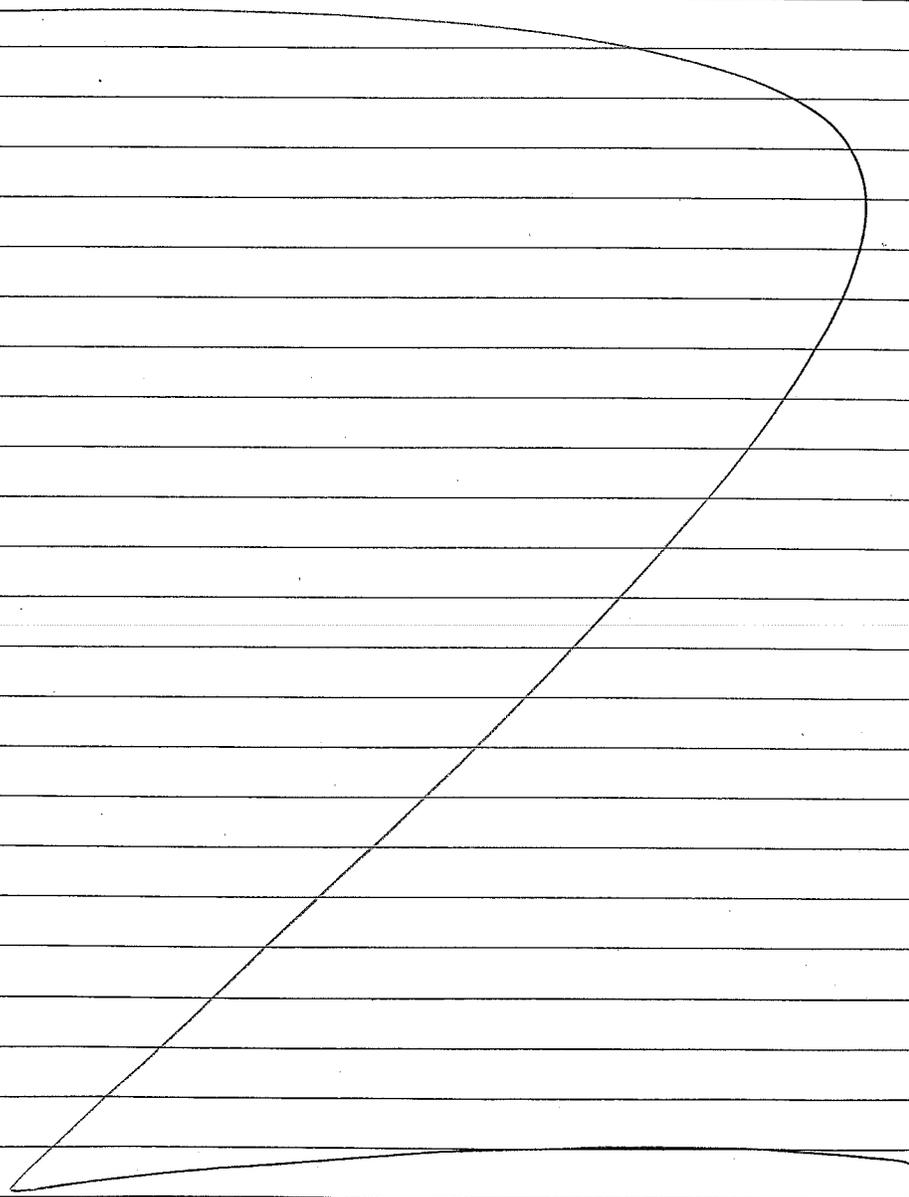
Spectrophotometer Standard Preparation Log

@Air Toxics Ltd. Log Book #: 1993

Standard ID: 1993-78  
Project: Ferric Chloride-Amine Solution Rad 170  
Analyst: M. Skidmore  
Preparation Date: 10/18/10  
Expiration Date: 10/18/10

Solvent: HPLC H<sub>2</sub>O  
Solvent Lot #: DB270

Procedure/Comments: Add 12.5 mL of ferric chloride solution (1993-77, exp 10/18/11) with 62.5 mL of amine solution (1993-76, exp 11/18/10).



NJS  
10/18/10

Mile RB 10/18/10  
Signed Date

Fauzin  
Reviewed

10/22/10  
Date Rev. 8/97

# Spectrophotometer Standard Preparation Log

@Air Toxics Ltd. Log Book #: 1993

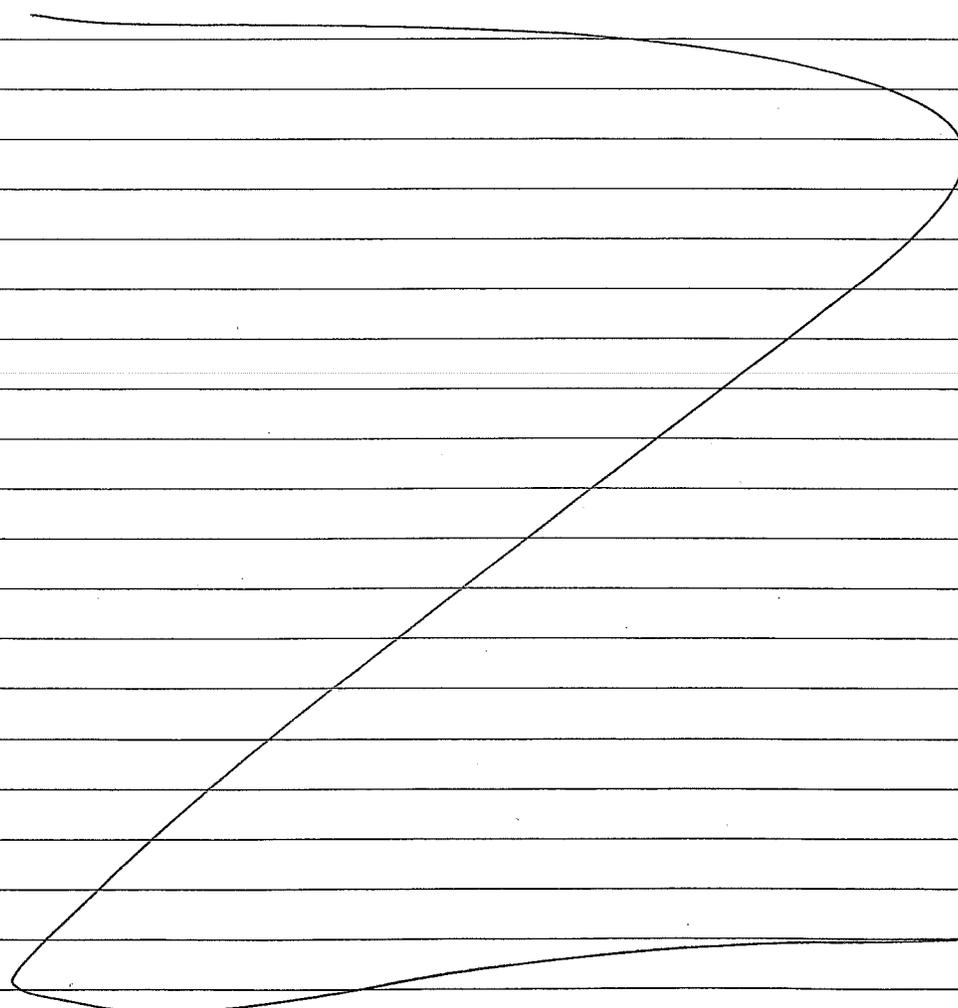
Standard ID: 1993-79  
Project: Rad 170 H<sub>2</sub>S LCS  
Analyst: M. Skidmore  
Preparation Date: 10/18/10  
Expiration Date: 10/18/10

Solvent: HPLC H<sub>2</sub>O  
Solvent Lot #: DB270

Procedure/Comments: \_\_\_\_\_

A Rad 170 cartridge (lot: 10101 ) was placed in a 40 mL VOA vial. 10.0 mL of D.I. H<sub>2</sub>O was aliquoted into the vial. 1.0 mL of H<sub>2</sub>S gas (1476-1497; 1000 ppm ) was injected into the vial, into the H<sub>2</sub>O. The solution was allowed to gently shake for 2 hours. Then 0.5 of the ferric-chloride-amine (1993-78 ) 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 10/18/10



MJS  
10/18/10

**Spectrophotometer Standard Preparation Log**

@Air Toxics Ltd. Log Book #: 1993

Standard ID: 1993-80  
Project: Rad 170 calibration curve  
Analyst: M. Skidmore  
Preparation Date: 10/18/10  
Expiration Date: 10/18/10

Solvent: HPLC H<sub>2</sub>O  
Solvent Lot #: DB 270

Procedure/Comments: \_\_\_\_\_

\_\_\_\_\_ Solution A: 2 mL of Code Rad 171 (1476-1736, exp 2/3/11) (located in ER1B) with  
\_\_\_\_\_ 98 mL of D.I. H<sub>2</sub>O = 1.145 µg/mL

\_\_\_\_\_ Solution B: 2.5 mL of Solution A with 2.5 mL of D.I. H<sub>2</sub>O = 0.572 µg/mL

\_\_\_\_\_ Solution C: 1.25 mL of Solution A with 3.75 mL of D.I. H<sub>2</sub>O = 0.286 µg/mL

\_\_\_\_\_ Solution D: 0.625 mL of Solution A with 4.375 mL of D.I. H<sub>2</sub>O = 0.143 µg/mL

\_\_\_\_\_ Solution E: 0.375 mL of Solution A with 5.625 mL of D.I. H<sub>2</sub>O = 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 10/18/10

MJS  
10/18/10

Spectrophotometer Standard Preparation Log

@Air Toxics Ltd. Log Book #: 1993

Standard ID: 1993-81 <sup>MTS 10/18/10</sup>  
Project: Rad 170 ~~A~~ ICV  
Analyst: Fm  
Preparation Date: 10/18/10  
Expiration Date: 10/18/10

Solvent: HPLC water  
Solvent Lot #: DB270

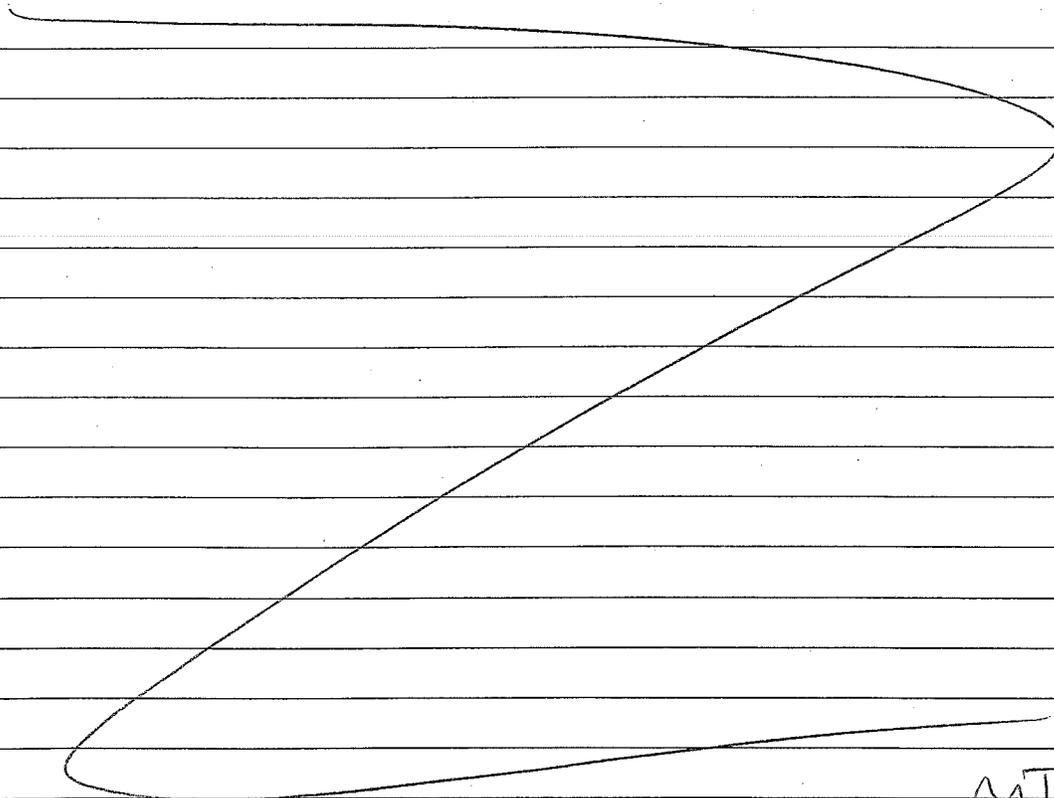
Procedure/Comments: \_\_\_\_\_

Solution A: 2 mL of Code Rad 171 (1476-1736, exp 2/3/11) (located in ER1B) with 98 mL of D.I. H<sub>2</sub>O = 1.145 µg/mL

Solution C: 1.25 mL of Solution A with 3.75 mL of D.I. H<sub>2</sub>O = 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.

MTS 10/18/10



MTS 10/18/10

## 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. Brian Baker  
FAX #: 781-247-4305  
FROM: Sample Receiving  
Workorder #: 1010269A  
# of pages (Including Cover): 4

10/28/2010

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.

The following discrepancies have been observed:

Samples were received without documentation regarding collection date on the Chain of Custody. The sampling date of 10/5/10, 10/6/10 and 10/7/10 you have provided by telephone/fax/e-mail will be used to determine the extent of hold time.

*Your prompt response is appreciated.*

CHAIN OF CUSTODY FORM

DATE: 1010269A  
10/12/10

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

TO: Air Toxic

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 # 17314

The cost of this analysis will be covered by EH&E Purchase Order # 17314

For EH & E Data Coordinator - URGENT DATA

SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER:Time/Date/Vol.
01A 116117	Air	H2S Analysis	14 Days
02A 116118			
03A 116119			
04A 116120			
05A 116121			0
06A 116122			0
07A 116100			0
08A 116101			0
09A 116102			15 Days
10A 116103			
11A 116104			
12A 116105			
13A 116135			13 Days 21 Hours
14A 116136			
15A 116137			
16A 116138			

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; tminagishi@eheinc.com

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

Relinquished by: Tom Tracy of Environmental Health & Engineering, Inc. Date: 10/12/10  
 Received by: Chris White of (company name) ARZ Date: 10/13/10 09:00  
 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: \_\_\_\_\_

CUSTODY SEAL INTACT?  
Y N NONE TEMP 5.5°C

FedEx 873924616829

**SAMPLE RECEIPT SUMMARY**

**WORKORDER 1010269A**

<b>Client</b>	<b>Phone</b>	<b>Date Promised:</b> 10/26/10 11:59 pm
Mr. Brian Baker	800-825-5343	<b>Date Completed:</b> 10/27/10
Environmental Health & Engineering, Inc.	<b>Fax</b>	<b>Date Received:</b> 10/13/10
117 Fourth Avenue	781-247-4305	<b>PO#:</b> 17314
Needham, MA 02494		<b>Project#:</b> 17314
<b>Sales Rep:</b> TL		<b>Total \$:</b> \$ 1,360.00
		<b>Logged By:</b> AW

<u>Fraction</u>	<u>Sample #</u>	<u>Analysis</u>	<u>Collected</u>	<u>Amount\$</u>
01A	116117	ATL Applications	10/5/2010	\$80.00
02A	116118	ATL Applications	10/5/2010	\$80.00
03A	116119	ATL Applications	10/5/2010	\$80.00
04A	116120	ATL Applications	10/5/2010	\$80.00
05A	116121	ATL Applications	10/5/2010	\$80.00
06A	116122	ATL Applications	10/5/2010	\$80.00
07A	116100	ATL Applications	10/5/2010	\$80.00
08A	116101	ATL Applications	10/5/2010	\$80.00
09A	116102	ATL Applications	10/5/2010	\$80.00
10A	116103	ATL Applications	10/5/2010	\$80.00
11A	116104	ATL Applications	10/5/2010	\$80.00
12A	116105	ATL Applications	10/5/2010	\$80.00
13A	116135	ATL Applications	10/6/2010	\$80.00
14A	116136	ATL Applications	10/6/2010	\$80.00
15A	116137	ATL Applications	10/6/2010	\$80.00
16A	116138	ATL Applications	10/6/2010	\$80.00
16AA	116138 Lab Duplicate	ATL Applications	10/6/2010	\$0.00
17A	Lab Blank	ATL Applications	NA	\$0.00
17B	Lab Blank	ATL Applications	NA	\$0.00
18A	LCS	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/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

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

**SAMPLE RECEIPT SUMMARY Continued**

<b>Client</b>	<b>Phone</b>	<b>Date Promised:</b>
		<b>Date Completed:</b>
		<b>Date Received:</b>
	<b>Fax</b>	<b>PO#:</b>
		<b>Project#:</b>
<b>Sales Rep:</b>		<b>Total \$:</b> \$ 1,360.00
		<b>Logged By:</b> AW

<u>Fraction</u>	<u>Sample #</u>	<u>Analysis</u>	<u>Collected</u>	<u>Amount\$</u>
Misc. Charges eCVP (16) @ \$5.00 each.				\$80.00

**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  
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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

@ Air Toxics Ltd	Title: <b>Sample Discrepancy Report</b>			Release Date: 03/03/10
	Form #: F1.3	Revision #: 1	Revision Date: 10/7/08	Page #: 1 of 2

## Sample Discrepancy Report

### Identification

Initiated By: AW Project ID: 14482 PM: AS Date: 10/13/2010 Discrepancy Type:  1.  2.  3.

Workorder(s) affected: 1010269A/B/C/D Sample(s) affected: All

### 1. Sample Receipt Discrepancies

Narration Not Required:

- 1.1.  Sample container (cartridge/tube/VOA vial) was received broken, however sample was intact.
- 1.2.  No brass cap on canister.
- 1.3.  Date of Collection noted on first sample, but no arrow down to indicate all samples.

Notify Lab for further determination:

- 1.4.  Tedlar bag received with minimal volume.

Initials: \_\_\_\_\_ Date: \_\_\_\_\_

Narration Required in Lab Narrative and Sample Confirmation:

- 1.5.  COC was not filled out in ink.
- 1.6.  COC improperly relinquished / received.
- 1.7.  Sample tags / can numbers do not match the COC.
- 1.8.  Sample date  error /  missing on COC but noted on sample tag (check one).
- 1.9.  Custody Seal on the outside of the container was  broken /  improperly placed (check one).
- 1.10.  ID-none on the sample Tag/Blank
- 1.11.  Other (describe below).

Describe the Discrepancy: \_\_\_\_\_

### 2. Sample Receipt/Screening Discrepancies requiring PM notification

Document on Cover Page of Sample Receipt Confirmation and in Receiving Notes of Lab Narrative

#### If Section II. is filled out PM must be notified within 24 hrs of initiation

- 2.1.  COC was not received with samples.
- 2.2.  Analysis method(s) is  not specified /  incorrectly specified (check one) on the COC.
- 2.3.  Incorrect sampling media / container for analysis requested.
- 2.4.  Number of samples on the COC does not match the number of samples that were received.
- 2.5.  Samples were received expired.
- 2.6.  Sampling date (time for sulfur) is not documented for  some /  any samples (check one).
- 2.7.  Sample received with amount of H<sub>2</sub>O 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: MJS Date: 10/22/2010 Notify Receiving:  Notify PM:

Team Lead Initials: \_\_\_\_\_ Date: \_\_\_\_\_

Describe the Discrepancy: No media was present in the tube for sample 04A.

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: BBaker Date: 10/13/2010

Waiting for Client Reply

Comments: Client emailed spreadsheet on 10/18

3.10 Notified client of missing cartridge. Please narrate.

Notify Lab Name: \_\_\_\_\_ Date: \_\_\_\_\_ Notify Receiving:

Additional notifications attached.

**Additional Comments:**

\_\_\_\_\_

## Other Records



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Method : ATL Application #59 H2S-Radiello 170

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

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**DATA REVIEW CHECKLIST**      Work Order #: 1010269A

- |                                     |                                     |                                     |                          |                          |                          |  |
|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Analysis/Reporting vs. Project Profile/SOP requirements checked (i.e. 100% Dups, J-Flag to MDL, etc) |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | The final report has the correct reporting list, special units, and header info.                     |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Non-Standard sublist printed/verified, LOQ and LOD verified  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Lab Narrative is correct (proper method & description/Receiving & Analytical notes correct)          |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Sample Discrepancy Report (SDR) is completed   |

- |                                     |                          |                                     |                          |                          |                          |   |
|-------------------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Corrective Action issued - # _____                                    |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Unusual circumstances have been documented in the notes section below |

**LUMEN validation report present and initialed**      **CIRCLE (YES / NO)**

- |                                     |                                     |                                     |                          |                          |                          |   |
|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Lab Blank, CCV, LCS and DUP met QC criteria   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Hold time is met for all samples  |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Appropriate data qualifier flags are applied  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Manual integrations for samples and QC are properly documented  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Samples analyzed within the project or method specific clock  |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Retention times have been verified  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Appropriate ICAL(s) included, %RSD Recalculation  |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | At least one result per sample is verified against the target quant sheets/raw data                         |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Dilution factor correctly calculated (sample load volume, syringe and bag dilutions, can pressurization(s)) |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Correct amount of sample analyzed (i.e. sample not over-diluted)  |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Spectra verified - documentation of spectral defense included (Section 5A of eCVP pkg)                      |

- |                                     |                                     |                                     |                          |                          |                          |  |
|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | TICs resemble reference spectra  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | TICs between duplicate samples are consistent  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Checked samples for trends (i.e. Influent vs. Effluent, Field Dups, Field/Trip Blank, etc.)  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Data for multiple analyses of sample(s) has been evaluated for comparability of results  |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Special units for all samples in the final report are correctly calculated   |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Manually entered results checked (i.e. TPH/NMOC)   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Chain of Custody verified for any special comments (i.e. different compounds/RLs, action levels)                                   |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Chain of Custody scanned correctly   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Verify sample id's vs. chain of custody  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Date MDL(s) performed per instrument(s) <u>9/4/09</u>  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Samples pressurized w/ appropriate gas (N <sub>2</sub> or He) <input type="checkbox"/> Other (i.e. Tedlar bag, cartridge, sorbent) |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Final pressure consistent with canister size (6L vs. 1L)   |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Verify receipt pressures   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Verify canister ID #'s   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Final invoice amount correct (adjusted for TAT, Penalties, Re-issue Charges etc.)  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Final PDF report reviewed for correctness  |

Notes: (to include: noting samples with QA/QC problems, Blanks with positive hits, narratives, etc.)  
 A/R: 2,600 minutes used for Duration of QC'S and Trip Blanks.  
No media in Tube for sample 04A.

I/O: \_\_\_\_\_

A <sub>1</sub> /A <sub>2</sub> (Analytical Review/Date)	W/T (Write-up/Tech Review/Date)	R* (Report Review/Date)	Q (QA Review/Date)
A: <u>Mike Miller 10/22/10</u>	W: <u>Willie Miller 10/22/10</u>	R: _____	Q: _____

A<sub>2</sub>: \_\_\_\_\_      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.