



AN ENVIRONMENTAL ANALYTICAL LABORATORY

COMPREHENSIVE VALIDATION PACKAGE

ATL Applications

INVENTORY SHEET

WORK ORDER # 0909376B

	Page Nos.	
	From	To
1. Work Order Cover Page & Laboratory Narrative & Table	1	4
2. Sample Results and Raw Data (Organized By Sample)	5	8
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	9	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	15
c. Sample Log-In Sheet	16	17
d. Misc. Shipping/Receiving Records (list individual records)		
<u>Sample Receipt Discrepancy Report</u>	18	19
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>	20	21
g. <u>Variance Table</u>	-	-
h. <u>Canister Certification</u>	-	-
i. <u>Data Review Check Sheet</u>	22	22

Completed by:


(Signature)

Kara McKiernan/ Document Control
(Print Name & Title)

10/08/09
(Date)

WORK ORDER #: 0909376B

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:	10/07/2009		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
14A	104948	ATL Applications
15A	104949	ATL Applications
16A	104950	ATL Applications
16AA	104950 Lab Duplicate	ATL Applications
17A	104951	ATL Applications
18A	104952	ATL Applications
19A	104953	ATL Applications
20A	102901	ATL Applications
21A	102902	ATL Applications
22A	102907	ATL Applications
23A	102911	ATL Applications
24A	102915	ATL Applications
24AA	102915 Lab Duplicate	ATL Applications
25A	106263	ATL Applications
26A	106264	ATL Applications
27A	106268	ATL Applications
28A	106272	ATL Applications
29A	106276	ATL Applications

Continued on next page

WORK ORDER #: 0909376B

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
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DATE RECEIVED:	09/18/2009	CONTACT:	Ausha Scott
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<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
30A	Lab Blank	ATL Applications
30B	Lab Blank	ATL Applications
31A	CCV	ATL Applications

CERTIFIED BY:



Laboratory Director

DATE: 10/07/09

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
Ozone by Radiello 172
Environmental Health & Engineering, Inc.
Workorder# 0909376B

Sixteen Radiello 172 (Ozone) samples were received on September 18, 2009. The procedure involves reaction of 4-pyridylaldehyde with 3-methyl-2-benzothiazolinone hydrazone to yield the corresponding azide. The absorbance is then measured at 430 nm using a spectrophotometer. Results are reported in uG and uG/m3.

Sampling rate of 24.6 mL/min 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 date was incomplete on the Chain of Custody for samples 102901, 102902, 102907, 102911, 102915, 106263, 106264, 106268, 106272 and 106276. The year of collection was assumed to be 2009.

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 18720 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 # 62 for RAD 172 (Ozone)

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)
104948	0909376B-14A	9/15/2009	9/22/2009	1.00	0.64	1.4	ND	ND
104949	0909376B-15A	9/15/2009	9/22/2009	1.00	0.64	1.4	ND	ND
104950	0909376B-16A	9/15/2009	9/22/2009	2.00	1.3	2.8	14	30
104950 Lab Duplicate	0909376B-16AA	9/15/2009	9/22/2009	2.00	1.3	2.8	14	30
104951	0909376B-17A	N/A	9/22/2009	1.00	0.64	1.4	ND	ND
104952	0909376B-18A	9/15/2009	9/22/2009	1.00	0.64	1.4	ND	ND
104953	0909376B-19A	9/15/2009	9/22/2009	1.00	0.6	1.4	ND	ND
102901	0909376B-20A	9/15/2009	9/22/2009	1.00	0.64	1.4	ND	ND
102902	0909376B-21A	9/15/2009	9/22/2009	1.00	0.64	1.4	ND	ND
102907	0909376B-22A	9/15/2009	9/22/2009	1.00	0.64	1.4	ND	ND
102911	0909376B-23A	9/15/2009	9/22/2009	1.00	0.64	1.4	ND	ND
102915	0909376B-24A	9/15/2009	9/22/2009	1.00	0.64	1.4	12	26
102915 Lab Duplicate	0909376B-24AA	9/15/2009	9/22/2009	1.00	0.64	1.4	12	26
106263	0909376B-25A	9/15/2009	9/22/2009	1.00	0.64	1.4	ND	ND
106264	0909376B-26A	9/15/2009	9/22/2009	1.00	0.64	1.4	ND	ND
106268	0909376B-27A	9/15/2009	9/22/2009	2.00	1.3	2.8	15	33
106272	0909376B-28A	9/15/2009	9/22/2009	1.00	0.64	1.4	ND	ND
106276	0909376B-29A	9/15/2009	9/22/2009	1.00	0.64	1.4	ND	ND
Method Blank	0909376B-30A	N/A	9/22/2009	1.00	0.64	1.4	ND	ND
Method Blank	0909376B-30B	N/A	9/22/2009	1.00	0.64	1.4	ND	ND
CCV	0909376B-31A	N/A	9/22/2009	1.00	0.64	1.4	%Rec 100	

COMMENTS: 1. NA=Not Applicable

2. ND=Not Detected

3. Exposure time of 18/720 minutes was assumed for the QC samples.

4. Background subtraction not performed

Ozone Radiello Calculation Worksheet

Workorder #: 09093768

Sampling Rate (mL/min))

24.6 Typically 24.6 for Ozone

Sampling T (deg C)

25 Typically 25

Volume (mL)

5 Typically 5 for Ozone

Date of Analysis:

9/22/2009

(Abs-Y-int)xDF

Slope

Conc (ug) x 1000000

Q x Duration

Low PointxDF

LabSampleID	Corrected Q	Client	Ozone taking into account Temp	Date of Collection	Abs	Duration (min)	DF	Ozone Conc (ug)	Conc (ug/m3)	RL(ug)
14A	24.6	104948		9/15/2009	0.035	18720	1.00	0.108932278	0.237	0.638
15A		104949		9/15/2009	0.04	18720	1.00	0.151057395	0.328	0.638
16A		104950		9/15/2009	0.840	18720	2.00	13.78215195	29.928	1.277
16AA		104950 Lab Duplicate		9/15/2009	0.846	18720	2.00	13.88325222	30.147	1.277
17A		104951		N/A	0.035	18720	1.00	0.108932278	0.237	0.638
18A		104952		9/15/2009	0.065	18720	1.00	0.361682975	0.785	0.638
19A		104953		9/15/2009	0.038	18720	1.00	0.134207348	0.291	0.638
20A		102901		9/15/2009	0.037	18720	1.00	0.125782325	0.273	0.638
21A		102902		9/15/2009	0.039	18720	1.00	0.142632371	0.310	0.638
22A		102907		9/15/2009	0.039	18720	1.00	0.142632371	0.310	0.638
23A		102911		9/15/2009	0.031	18720	1.00	0.075232186	0.163	0.638
24A		102915		9/15/2009	1.47	18720	1.00	12.1988406	26.490	0.638
24AA		102915 Lab Duplicate		9/15/2009	1.474	18720	1.00	12.2325407	26.563	0.638
25A		106263		9/15/2009	0.04	18720	1.00	0.151057395	0.328	0.638
26A		106264		9/15/2009	0.033	18720	1.00	0.092082232	0.200	0.638
27A		106268		9/15/2009	0.915	18720	2.00	15.04590543	32.672	1.277
28A		106272		9/15/2009	0.031	18720	1.00	0.075232186	0.163	0.638
29A		106276		9/15/2009	0.038	18720	1.00	0.134207348	0.291	0.638
30A		Method Blank		N/A	0.019	18720	1.00	-0.185943534	#DIV/0!	0.638
30B		Method Blank		N/A	0.028	18720	1.00	-0.185943534	#DIV/0!	0.638
31A		Method Blank		N/A	0.326	18720	1.00	-0.185943534	#DIV/0!	0.638
		CCV		N/A				-0.025868093	-0.056	0.638
								0.049957116	0.108	0.638
								-0.185943534	-0.404	0.638
								2.560614036	5.560	0.638

QC Duration

18720

CCV Spike Amt

2.5536

$$\frac{RL (\mu g) \times 1000000}{Q \times Duration}$$

Calibration Data

Date of Calibration
9/22/2009 Linear Regression

4-PA
ug/ml*0.224*0.5ml

[illegible]

QC Results and Raw Data

Work Order: 0909376BDate: 9/22/09Method: Rad 172 ozoneAnalyst: M. SkidmoreWavelength: 430 nm

Standard ID	Concentration	ABS
	(concentration of 4-PA)	
Level 1	5.7 mg/mL	0.087
Level 2	11.4 mg/mL	0.170
Level 3	22.8 mg/mL	0.332
Level 4	57 mg/mL	0.796
Level 5	114 mg/mL	1.529
ICV	22.8 mg/mL	0.331

$$r = \underline{0.9996}$$

$$m = \underline{0.1187}$$

$$b = \underline{0.02207}$$

$$\text{ICV \% Recovery} = \underline{102}$$

Fraction	Dilution	ABS	Sample ID	Sample Volume	Comments
14A	1.00	0.035	104948	5.0 mL	
15A	↓	0.040	104949		
16A	2.00	0.840	104950		
16AA	↓	0.846	104950		
17A	1.00	0.035	104951		
18A		0.065	104952		
19A		0.038	104953		
20A		0.037	102901		
21A		0.039	102902		
22A		0.039	102907		
23A		0.031	102911		
24A		1.470	102915		
24AA		1.474	106263 102915		
25A		0.040	106264 106263		
26A	↓	0.033	106268 106264		
27A	2.00	0.915	106272 106268		
28A	1.00	0.031	106276 106272		
29A		0.038	106276		
Blk		0.019	N/A		106209146
Blk		0.028	↓		↓
CCV	↓	0.326	↓	↓	
MTS 9/23/09					

Procedure:

M. Skidmore
Signed

9/23/09
Date

Spectrophotometer Standard Preparation Log

@Air Toxics Ltd. Log Book #: 1858

Standard ID: 1858-46

Project: Rad 172 calibration Solution

Analyst: M. Skidmore

Preparation Date: 9/22/09

Expiration Date: 9/22/09

Solvent: DI H₂O

Solvent Lot #: N/A

Procedure/Comments: _____

Dissolve 20 μ l of 4-Pyridine-carboxaldehyde, 97% (1476-1103, located F22H) in 200mL D.I. H₂O. From this solution prepare dilutions at 1:2, 1:5, 1:10, 1:20. Stock Solution = 114 μ g/mL.

1:2) 250 μ l Pyridine solution with 250 μ l of D.I. H₂O = 57 μ g/mL.

1:5) 100 μ l Pyridine solution with 400 μ l of D.I. H₂O = 22.8 μ g/mL.

1:10) 100 μ l Pyridine solution with 900 μ l of D.I. H₂O = 11.4 μ g/mL

1:20) 250 μ l Pyridine 1:10 solution with 250 μ l of D.I. H₂O = 5.7 μ g/mL
(Then remove 250 μ l of 1:10 solution to yield a final volume of 0.5 mL)

Then add 4.5 mL of MBTH solution to each level, stir and let stand for 1 hour (cover with parafilm). Then read absorbance at 430 nm.

Note: 1 μ g of 4-pyridylaldehyde = 0.224 μ g of ozone.

MJS 9/23/09

9/24/09

AK

Standard ID: 1858-63
Project: ICV RAD 172
Analyst: ly
Preparation Date: 9/22/09
Expiration Date: 9/22/09

Solvent: D.I. H₂O
Solvent Lot #: NA

Procedure/Comments: _____

_____ Dissolve 20 μ l of 4-Pyridine-carboxaldehyde, 97% (1476-1103, located F22H) in 200mL
_____ D.I. H₂O. Stock Solution = 114 μ g/mL. From this solution prepare a dilution at:

_____ 1:5) 100 μ l Pyridine solution with 400 μ l of D.I. H₂O = 22.8 μ g/mL.

_____ Then add 4.5 mL of MBTH solution to each level, stir and let stand for 1 hour (cover
_____ with parafilm). Then read absorbance at 430 nm.

_____ Note: 1 μ g of 4-pyridylaldehyde = 0.224 μ g of ozone.

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 #: 0909376B
of pages (Including Cover): 4

10/8/2009

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.

Samples 102901, 102902, 102907, 102911, 102915, 106263, 106264, 106268, 106272 and 106276 were received without complete documentation regarding collection date on the Chain of Custody or sample tags. The year 2009 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

TO: AIR TOXICS

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

In all correspondence regarding this matter, please refer to EH&E Project # 16512

The cost of this analysis will be covered by EH&E Purchase Order # 16512

For EH & E Data Coordinator - URGENT DATA ☐

SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	START	OTHER: Time/Date/Vol.	STOP
14A 104948	AIR/PASSIVE	OZONE ANALYSIS	9/2/09	9/15/09	
15A 104949			9/2	9/15/09	
16A 104950			9/2	9/15/09	
17A 104951			9/2	0	
18A 104952			9/2	9/15/09	
19A 104953			9/2	9/15/09	
20A 102901			9/2	9/15	
21A 102902			9/2	9/15	
22A 102907			9/2	9/15	
23A 102911			9/2	9/15	
24A 102915			9/2	9/15	
25A 106263			9/2	9/15	
26A 106264			9/2	9/15	
27A 106268			9/2	9/15	
28A 106272			9/2	9/15	
29A 106276			9/2	9/15	

Special Instructions:

☒ Standard turn around time

☐ Rush by _____ date/time

☐ Other _____
CUSTODY SEAL INTACT?
Y N NONE TEMPS. 72

☐ Fax results 781-247-4305

☐ RETURN SAMPLES

☒ Electronic transfer - datacoordinator@ehinc.com

☒ Additional report recipient INFRA@EHEINC.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: 9/12/09

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: _____

Page 2 of 4

SAMPLE RECEIPT SUMMARY

WORKORDER 0909376B

Client

Mr. Taeko Minegishi
Environmental Health &
Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

Phone

800-825-5343

Fax

781-247-4305

Date Promised: 09/29/09 11:59 pm

Date Completed: 10/7/09

Date Received: 9/18/09

PO#: 16512

Project#: 16512

Total \$: \$ 880.00

Logged By: MG

Sales Rep: TL

<u>Fraction</u>	<u>Sample #</u>	<u>Analysis</u>	<u>Collected</u>	<u>Amount\$</u>
14A	104948	ATL Applications	9/15/2009	\$50.00
15A	104949	ATL Applications	9/15/2009	\$50.00
16A	104950	ATL Applications	9/15/2009	\$50.00
16AA	104950 Lab Duplicate	ATL Applications	9/15/2009	\$0.00
17A	104951	ATL Applications	NA	\$50.00
18A	104952	ATL Applications	9/15/2009	\$50.00
19A	104953	ATL Applications	9/15/2009	\$50.00
20A	102901	ATL Applications	9/15/2009	\$50.00
21A	102902	ATL Applications	9/15/2009	\$50.00
22A	102907	ATL Applications	9/15/2009	\$50.00
23A	102911	ATL Applications	9/15/2009	\$50.00
24A	102915	ATL Applications	9/15/2009	\$50.00
24AA	102915 Lab Duplicate	ATL Applications	9/15/2009	\$0.00
25A	106263	ATL Applications	9/15/2009	\$50.00
26A	106264	ATL Applications	9/15/2009	\$50.00
27A	106268	ATL Applications	9/15/2009	\$50.00
28A	106272	ATL Applications	9/15/2009	\$50.00
29A	106276	ATL Applications	9/15/2009	\$50.00
30A	Lab Blank	ATL Applications	NA	\$0.00
30B	Lab Blank	ATL Applications	NA	\$0.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: CPSC Indoor Air Monitoring/13297

BILL TO: Accounts Payable
Environmental Health & Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

Analysis Code: Other GC

TERMS:

Reporting Method: ATL Application #62 Ozone-Radiello 172

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

SAMPLE RECEIPT SUMMARY Continued

Client

Mr. Taeko Minegishi
Environmental Health &
Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

Phone

800-825-5343

Fax

781-247-4305

Date Promised: 09/29/09 11:59 pm

Date Completed: 10/7/09

Date Received: 9/18/09

PO#: 16512

Project#: 16512

Total \$: \$ 880.00

Logged By: MG

Sales Rep: TL

<u>Fraction</u>	<u>Sample #</u>	<u>Analysis</u>	<u>Collected</u>	<u>Amount\$</u>
31A	CCV	ATL Applications	NA	\$0.00
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 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 #62 Ozone-Radiello 172

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: MG Project ID: 13297 PM: AS Date: 9/18/2009 Discrepancy Type: ☒ 1. ☒ 2. ☐ 3.

Workorder(s) affected: 0909376 Sample(s) affected: ALL/ 20A-29A

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: 1.11: The year was not noted for the Date Of Collection on the COC for samples 20A - 29A

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: 2.18: Received samples 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. | 3.6. ☐ Sample loss due to Instrument malfunction / broken glassware. |
| 3.2. ☐ Tedlar Bag found to be flat/low volume; sample cannot be analyzed. | 3.7. ☐ Low/high surrogate recoveries noted in QC/sample(s) for extractable samples. |
| 3.3. ☐ Sulfur samples received with insufficient time to analyze prior to expiration. | 3.8. ☐ Reporting Limit was raised. |
| 3.4. ☐ Canister found to be leaking at the time of analysis. | 3.9. ☐ Post weight > Pre weight in field/lab Blank for PM10/TSP samples. |
| 3.5. ☐ VOST tube saturated; bag dilution necessary. | 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 #62 Ozone-Radiello 172

CAS Number	Compound	Rpt. Limit (ug)
10028-15-6	Ozone	1.0

DATA REVIEW CHECKLIST

Work Order #:

09093768

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: 16A ~ 2.4A

M/Q:

A₁/A₂
(Analytical Review/Date)A₁:R/T
(Reporting Review/Date)

R: Km 9/30/09

M
(Management Review/Date)

M 10/7/09

Q
(QA Review/Date)A₂:

T:

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

Rev. 02/20/09

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