

COMPREHENSIVE VALIDATION PACKAGE

ATL Applications

INVENTORY SHEET

WORK ORDER # 0908455A

| | 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 | 13 |
| l. GC/MS Tune (Results + Raw Data) | - | - |
| 4. Shipping/Receiving Documents: | | |
| a. Login Receipt Summary Sheet | 14 | 15 |
| b. Chain-of-Custody Records | 16 | 17 |
| c. Sample Log-In Sheet | 18 | 19 |
| d. Misc. Shipping/Receiving Records (list individual records) | | |
| <u>Sample Receipt Discrepancy Report</u> | 20 | 22 |
| 5. Other Records (describe or list) | | |
| a. <u>Manual Spectral Defense</u> | - | - |
| b. <u>Manual Integrations</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> | 23 | 24 |
| g. <u>Variance Table</u> | - | - |
| h. <u>Canister Certification</u> | - | - |
| i. <u>Data Review Check Sheet</u> | 25 | 25 |

Completed by:

Kara McKiernan

Kara McKiernan/ Document Control

09/17/09

(Signature)

(Print Name & Title)

(Date)

WORK ORDER #: 0908455A

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 | 99905 | ATL Applications |
| 01AA | 99905 Lab Duplicate | ATL Applications |
| 02A | 99906 | ATL Applications |
| 02AA | 99906 Lab Duplicate | ATL Applications |
| 03A | 99907 | ATL Applications |
| 04A | 99908 | ATL Applications |
| 05A | 99909 | ATL Applications |
| 06A | 99910 | ATL Applications |
| 07A | 100007 | ATL Applications |
| 08A | 100008 | ATL Applications |
| 09A | 100009 | ATL Applications |
| 10A | 100010 | ATL Applications |
| 11A | 100011 | ATL Applications |
| 12A | 100534 | ATL Applications |
| 13A | 100535 | ATL Applications |
| 14A | 100536 | ATL Applications |
| 15A | 100537 | ATL Applications |

Continued on next page

LABORATORY NARRATIVE
Ozone by Radllo 172
Environmental Health & Engineering, Inc.
Workorder# 0908455A

Twenty Radllo 172 (Ozone) samples were received on August 21, 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 included with the shipment. Temperature was measured and was not within 4±2 °C. Coolant in the form of ice was present. Analysis proceeded.

Sample collection date was not provided on the Chain of Custody for all samples. The client was contacted and 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 22,000 minutes was used for the QC samples and samples 99910 and 100539.

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 | Lab | Collection Date | Analysis Date | Dilution Factor | Reporting Limit (ug) | Reporting Limit (ug/m3) | Amount (ug) | Amount (ug/m3) |
|---------------------|---------------|-----------------|---------------|-----------------|----------------------|-------------------------|-------------|----------------|
| Sample ID. 99905 | 0908455A-01A | 8/18/2009 | 8/21/2009 | 1.00 | 0.64 | 1.2 | ND | ND |
| 99905 Lab Duplicate | 0908455A-01AA | 8/18/2009 | 8/21/2009 | 1.00 | 0.64 | 1.2 | ND | ND |
| 99906 | 0908455A-02A | 8/18/2009 | 8/21/2009 | 1.00 | 0.64 | 1.2 | 1.2 | 2.3 |
| 99906 Lab Duplicate | 0908455A-02AA | 8/18/2009 | 8/21/2009 | 1.00 | 0.64 | 1.2 | 1.1 | 2.2 |
| 99907 | 0908455A-03A | 8/18/2009 | 8/21/2009 | 1.00 | 0.64 | 1.2 | ND | ND |
| 99908 | 0908455A-04A | 8/18/2009 | 8/21/2009 | 1.00 | 0.64 | 1.2 | ND | ND |
| 99909 | 0908455A-05A | 8/18/2009 | 8/21/2009 | 2.00 | 1.3 | 2.4 | 1.8 | 3.4 |
| 99910 | 0908455A-06A | 8/18/2009 | 8/21/2009 | 1.00 | 0.64 | 1.2 | ND | ND |
| 100007 | 0908455A-07A | 8/19/2009 | 8/21/2009 | 1.00 | 0.64 | 1.2 | ND | ND |
| 100008 | 0908455A-08A | 8/19/2009 | 8/21/2009 | 1.00 | 0.64 | 1.2 | ND | ND |
| 100009 | 0908455A-09A | 8/19/2009 | 8/21/2009 | 1.00 | 0.64 | 1.2 | ND | ND |
| 100010 | 0908455A-10A | 8/19/2009 | 8/21/2009 | 2.00 | 1.3 | 2.4 | 1.4 | 2.6 |
| 100011 | 0908455A-11A | 8/19/2009 | 8/21/2009 | 1.00 | 0.64 | 1.2 | ND | ND |
| 100034 | 0908455A-12A | 8/18/2009 | 8/21/2009 | 1.00 | 0.64 | 1.3 | ND | ND |
| 100035 | 0908455A-13A | 8/18/2009 | 8/21/2009 | 1.00 | 0.64 | 1.3 | ND | ND |
| 100036 | 0908455A-14A | 8/18/2009 | 8/21/2009 | 1.00 | 0.64 | 1.3 | 9.5 | 19 |
| 100037 | 0908455A-15A | 8/18/2009 | 8/21/2009 | 1.00 | 0.64 | 1.3 | ND | ND |
| 100038 | 0908455A-16A | 8/18/2009 | 8/21/2009 | 1.00 | 0.64 | 1.3 | ND | ND |
| 100039 | 0908455A-17A | 8/18/2009 | 8/21/2009 | 1.00 | 0.64 | 1.2 | ND | ND |
| 100843 | 0908455A-18A | 8/18/2009 | 8/21/2009 | 1.00 | 0.64 | 1.6 | ND | ND |
| 100842 | 0908455A-19A | 8/18/2009 | 8/21/2009 | 1.00 | 0.64 | 1.6 | ND | ND |
| 100841 | 0908455A-20A | 8/18/2009 | 8/21/2009 | 1.00 | 0.64 | 1.6 | ND | ND |
| Method Blank | 0908455A-21A | NA | 8/21/2009 | 1.00 | 0.64 | 1.2 | ND | ND |
| Method Blank | 0908455A-21B | NA | 8/21/2009 | 1.00 | 0.64 | 1.2 | ND | ND |
| Method Blank | 0908455A-21C | NA | 8/21/2009 | 1.00 | 0.64 | 1.2 | ND | ND |
| CCV | 0908455A-22A | NA | 8/21/2009 | 1.00 | 0.64 | 1.2 | %Rec 109 | |

COMMENTS: 1. NA=Not Applicable

2. ND=Not Detected

3. Exposure time of 22000 minutes was assumed for the QC samples and samples 99910 and 100539.

4. Background subtraction not performed.

Ozone Radiello Calculation Worksheet

Workorder #: 0908455A

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: 8/21/2009

| LabSampleID | Client | Date of Collection | Ozone taking into account Temp | Abs | Duration (min) | DF | Ozone Conc (ug) | Abs-YanhDF Slope | Conc (ug) x 1000000 / Q x Duration | Low PointDF | RI (ug) x 1000000 / Q x Duration | Result (ug) |
|-------------|---------------------|--------------------|--------------------------------|-------|----------------|--------------|-----------------|------------------|------------------------------------|-------------|----------------------------------|-------------|
| 01A | 99905 | 8/18/2009 | 0.101 | 21137 | 1.00 | 0.492410077 | 0.947 | 0.638 | 1.228 | ND | | |
| 01AA | 99905 Lab Duplicate | 8/18/2009 | 0.104 | 21137 | 1.00 | 0.515559693 | 0.992 | 0.638 | 1.228 | ND | | |
| 02A | 99906 | 8/18/2009 | 0.191 | 21137 | 1.00 | 1.188898576 | 2.283 | 0.638 | 1.228 | 1.2 | | |
| 02AA | 99906 Lab Duplicate | 8/18/2009 | 0.185 | 21137 | 1.00 | 1.140599343 | 2.194 | 0.638 | 1.228 | 1.1 | | |
| 03A | 99907 | 8/18/2009 | 0.066 | 21137 | 1.00 | 0.222331216 | 0.428 | 0.638 | 1.228 | ND | | |
| 04A | 99908 | 8/18/2009 | 0.065 | 21137 | 1.00 | 0.214614677 | 0.413 | 0.638 | 1.228 | ND | | |
| 05A | 99909 | 8/18/2009 | 1.185 | 21137 | 2.00 | 17.71427645 | 34.068 | 1.277 | 2.656 | 17.7 | | |
| 06A | 99910 | 8/18/2009 | 0.044 | 21137 | 1.00 | 0.0526736 | 0.101 | 0.638 | 1.228 | ND | | |
| 07A | 100007 | 8/18/2009 | 0.071 | 21529 | 1.00 | 0.26091391 | 0.493 | 0.638 | 1.205 | ND | | |
| 08A | 100008 | 8/18/2009 | 0.063 | 21529 | 1.00 | 0.199181599 | 0.376 | 0.638 | 1.205 | ND | | |
| 09A | 100009 | 8/18/2009 | 0.051 | 21529 | 1.00 | 0.106583133 | 0.201 | 0.638 | 1.205 | ND | | |
| 10A | 100010 | 8/18/2009 | 0.929 | 21529 | 2.00 | 13.76340854 | 25.988 | 1.277 | 2.411 | 13.8 | | |
| 11A | 100011 | 8/18/2009 | 0.052 | 21529 | 1.00 | 0.114299671 | 0.216 | 0.638 | 1.205 | ND | | |
| 12A | 100534 | 8/18/2009 | 0.043 | 20125 | 1.00 | 0.044850821 | 0.091 | 0.638 | 1.290 | ND | | |
| 13A | 100535 | 8/18/2009 | 0.046 | 20125 | 1.00 | 0.068000438 | 0.137 | 0.638 | 1.290 | ND | | |
| 14A | 100536 | 8/18/2009 | 1.264 | 20125 | 1.00 | 9.466744797 | 19.122 | 0.638 | 1.290 | 9.5 | | |
| 15A | 100537 | 8/18/2009 | 0.054 | 20125 | 1.00 | 0.129732749 | 0.262 | 0.638 | 1.290 | ND | | |
| 16A | 100538 | 8/18/2009 | 0.047 | 20125 | 1.00 | 0.075716977 | 0.153 | 0.638 | 1.290 | ND | | |
| 17A | 100539 | 8/18/2009 | 0.033 | 21137 | 1.00 | -0.032314567 | -0.062 | 0.638 | 1.228 | ND | | |
| 18A | 100843 | 8/18/2009 | 0.035 | 15840 | 1.00 | -0.01688149 | -0.043 | 0.638 | 1.638 | ND | | |
| 19A | 100842 | 8/18/2009 | 0.049 | 15840 | 1.00 | 0.091150055 | 0.234 | 0.638 | 1.638 | ND | | |
| 20A | 100841 | 8/18/2009 | 0.058 | 15840 | 1.00 | 0.160598905 | 0.412 | 0.638 | 1.638 | ND | | |
| 21A | Method Blank | N/A | 0.027 | 21137 | 1.00 | -0.078613801 | -0.151 | 0.638 | 1.228 | ND | | |
| 21B | Method Blank | N/A | 0.029 | 21137 | 1.00 | -0.063180723 | -0.122 | 0.638 | 1.228 | ND | | |
| 21C | Method Blank | N/A | 0.031 | 21137 | 1.00 | -0.047747645 | -0.092 | 0.638 | 1.228 | ND | | |
| 22A | CCV | N/A | 0.936 | 21137 | 1.00 | 6.935720044 | 13.339 | 0.638 | 1.228 | 6.9 | | |

QC Duration 21137

CCV Spike Amt 6.384

QC Results and Raw Data

Spectrophotometer Logbook

@Air Toxics Ltd.

Log Book #: 1564

Work Order: 0908455A/B

Date: 8/2/09
 Analyst: A. Toyama

Method: Rad 172
 Wavelength: 430 nm
 Prep. Notes:

| Standard ID | Concentration | ABS |
|----------------|------------------------------|-------|
| 1858-15 - 2.85 | 2.85 $\mu\text{g}/\text{mL}$ | 0.057 |
| -5.7 | 5.7 $\mu\text{g}/\text{mL}$ | 0.101 |
| -11.4 | 11.4 $\mu\text{g}/\text{mL}$ | 0.190 |
| -22.8 | 22.8 $\mu\text{g}/\text{mL}$ | 0.377 |
| -57 | 57 $\mu\text{g}/\text{mL}$ | 0.909 |
| -114 | 114 $\mu\text{g}/\text{mL}$ | 1.670 |

$r = 0.99819$
 $m = 0.12959$
 $b = 0.037187$

| Fraction | Dilution | ABS | Sample ID | Sample Volume |
|----------|----------|----------------------------------|-----------|---------------|
| 01A | 1.00 | 0.554 ^{ms 8/2/09} 0.101 | 99905 | 50ml |
| 02A | ↓ | 0.191 | 06 | |
| 03A | | 0.066 | 07 | |
| 04A | ↓ | 0.065 | 08 | |
| 05A | 2.00 | 1.185 | 09 | |
| 06A | 1.00 | 0.044 | ↓ 10 | |
| 07A | ↓ | 0.071 | 100007 | |
| 08A | ↓ | 0.063 | 08 | |
| 09A | ↓ | 0.051 | 09 | |
| 10A | 2.00 | 0.929 | 10 | |
| 11A | 1.00 | 0.052 | ↓ 11 | |
| 12A | ↓ | 0.043 | 100534 | |
| 13A | ↓ | 0.046 | 35 | |
| 14A | ↓ | 1.264 | 36 | |
| 15A | ↓ | 0.054 | ↓ 37 | |

Notes: 01A+02A: Silica already in tube. code 172, Lot# 09146, exp. 01/010
 Sample lot unknown. ↖ Blanks

Spectrophotometer Logbook

@Air Toxics Ltd.

Log Book #: 1564

Work Order: 0908455A/B

Date: 8/21/09

Method: Rad 172

Analyst: A. Tojanna

Wavelength: 430 nm

Prep. Notes: Cont. From page 10

| Standard ID | Concentration | ABS |
|--------------|-----------------|-------|
| 185B-15-2.85 | 2.85 μ g/ml | 0.057 |
| -5.7 | 5.7 | 0.101 |
| -11.4 | 11.4 | 0.190 |
| -22.8 | 22.8 | 0.377 |
| -57 | 57 | 0.909 |
| -114 | 114 | 1.670 |

r = _____
 m = _____
 b = _____

| Fraction | Dilution | ABS | Sample ID | Sample Volume |
|----------|----------|-------|-----------|---------------|
| KoA | 1.00 | 0.047 | 100538 | 50 mL |
| 17A | | 0.033 | 539 | |
| 18A | | 0.035 | 843 | |
| 19A | | 0.049 | 842 | |
| 20A | | 0.058 | 841 | |
| 01AA | | 0.104 | 99905 | |
| 02AA | | 0.185 | 99906 | |
| Blk | | 0.027 | NA | |
| Blk | | 0.029 | | |
| Blk | | 0.031 | | |
| LCS/ccv | | 0.936 | | |

8/21/09
ATJ

Notes: LCS/ccv prepared at 57 μ g/ml

Standard ID: 1858-14
Project: Rad 172 MBTH Solution
Analyst: A. Toyama
Preparation Date: 8/2/09
Expiration Date: 8/2/09

Solvent: DI H₂O
Solvent Lot #: NA

Ozone

Procedure/Comments: Dissolve 25g of 3-Methyl-2-benzothiazolinone (Located ERIA) hydrazine hydrochloride hydrate, 97% (1476-1106) into 500 mL DI H₂O and add 2.5 mL of concentrated sulfuric acid.

8/20/09
AT

Standard ID: 1858-15Project: Rad 172 Calibration SolutionAnalyst: A. ToyamaPreparation Date: 8/21/09Expiration Date: 8/21/09Solvent: DI H₂OSolvent Lot #: NA

Procedure/Comments: Dissolve 20 μl of 4-Pyridine - carboxaldehyde, 97% (1476-1103, Located F22H) in 200 mL DI H₂O. From this solution prepare dilutions at 1:2, 1:5, 1:10, 1:20 and 1:40. = 114 μg/mL

1:2) 250 μl Pyridine solution with 250 μl of DI H₂O. = 57 μg/mL ✓

1:5) 100 μl of Pyridine solution with 400 μl of DI H₂O. = 22.8 μg/mL

1:10) 100 μl of Pyridine solution with 900 μl of DI H₂O. = 11.4 μg/mL

1:20) 250 μl of Pyridine 1:10 solution with 250 μl of DI H₂O. = 5.7 μg/mL

1:40) 125 μl of Pyridine 1:10 solution with 375 μl of DI H₂O. = 2.85 μg/mL

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

1 μg of 4-pyridylaldehyde = 0.224 μg of ozone

8/21/09

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 #: 0908455A
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 date on the Chain of Custody. The sampling date 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

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. |
|------------|-------------|--------------------------|----------------------|
| 01A 99905 | AIR PASSIVE | OZONE ANALYSIS | 4D 16H 17M |
| 02A 99906 | | | |
| 03A 99907 | | | |
| 04A 99908 | | | |
| 05A 99909 | | | |
| 06A 99910 | | | |
| 07A 100007 | | | |
| 08A 100008 | | | |
| 09A 100009 | | | |
| 10A 100010 | | | |
| 11A 100011 | | | |
| 12A 100534 | | | |
| 13A 100535 | | | |
| 14A 100536 | | | |
| 15A 100537 | | | |
| 16A 100538 | | | |

Special Instructions:

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

Fedex 8704 2332 9291
CUSTOMER SEAL INTACT?
 Y N NONE 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: A. Dur 0850 of (company name) ATL 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 100539 | AIR/PASSIVE | OZONE ANALYSIS | Ø |
| 18A 100843 | | | 12 DAYS 11 DAYS |
| 19A 100842 | | | |
| 20A 100841 | | | |
| 21A 100840 | | | |
| 22A 100839 | | | |
| 23A 100838 | | | |
| 24A 100177 | | | 15D 4H 2MIN |
| 25A 100178 | | | |
| 26A 100180 | | | |
| 27A 100181 | | | |
| 28A 100331 | | | 12D 22MIN |
| 29A 100332 | | | |
| 30A 100333 | | | |
| 31A 100334 | | | |
| 32A 100335 | | | |

Special Instructions:

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

Fed ex 8704 2332 7291
CUSTOMER SEAL INTACT?
Y N 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: AD 0850 of (company name) ATL 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 0908455A

| | | |
|--|--------------|---|
| 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: MG |

| <u>Fraction</u> | <u>Sample #</u> | <u>Analysis</u> | <u>Collected</u> | <u>Amount\$</u> |
|-----------------|---------------------|------------------|------------------|-----------------|
| 01A | 99905 | ATL Applications | 8/18/2009 | \$50.00 |
| 01AA | 99905 Lab Duplicate | ATL Applications | 8/18/2009 | \$0.00 |
| 02A | 99906 | ATL Applications | 8/18/2009 | \$50.00 |
| 02AA | 99906 Lab Duplicate | ATL Applications | 8/18/2009 | \$0.00 |
| 03A | 99907 | ATL Applications | 8/18/2009 | \$50.00 |
| 04A | 99908 | ATL Applications | 8/18/2009 | \$50.00 |
| 05A | 99909 | ATL Applications | 8/18/2009 | \$50.00 |
| 06A | 99910 | ATL Applications | 8/18/2009 | \$50.00 |
| 07A | 100007 | ATL Applications | 8/19/2009 | \$50.00 |
| 08A | 100008 | ATL Applications | 8/19/2009 | \$50.00 |
| 09A | 100009 | ATL Applications | 8/19/2009 | \$50.00 |
| 10A | 100010 | ATL Applications | 8/19/2009 | \$50.00 |
| 11A | 100011 | ATL Applications | 8/19/2009 | \$50.00 |
| 12A | 100534 | ATL Applications | 8/18/2009 | \$50.00 |
| 13A | 100535 | ATL Applications | 8/18/2009 | \$50.00 |
| 14A | 100536 | ATL Applications | 8/18/2009 | \$50.00 |
| 15A | 100537 | ATL Applications | 8/18/2009 | \$50.00 |
| 16A | 100538 | ATL Applications | 8/18/2009 | \$50.00 |
| 17A | 100539 | ATL Applications | 8/18/2009 | \$50.00 |
| 18A | 100843 | 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 #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 | 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: MG |

| <u>Fraction</u> | <u>Sample #</u> | <u>Analysis</u> | <u>Collected</u> | <u>Amount\$</u> |
|--|-----------------|------------------|------------------|-----------------|
| 19A | 100842 | ATL Applications | 8/18/2009 | \$50.00 |
| 20A | 100841 | ATL Applications | 8/18/2009 | \$50.00 |
| 21A | Method Blank | ATL Applications | NA | \$0.00 |
| 21B | Method Blank | ATL Applications | NA | \$0.00 |
| 21C | 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 #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: BL Date: 8/21/2009 Discrepancy Type: 1. 2. 3.

Workorder(s) affected: 0908455 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: 2.6: Date of Collection not noted on the COC.

2.18: Samples arrived 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: AS Person notified: Conference call Date: 8/24/2009

- Waiting for Client Reply

Comments: **Date of collections provided, Proceed** _____

Notify Lab Name: _____ Date: _____ **Notify Receiving:**

- Additional notifications attached.

Additional Comments:

Other Records



Method : ATL Application #62 Ozone-Radllo 172

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

DATA REVIEW CHECKLIST

Work Order #:

0908455A

- 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: Dups OLA, 02A

M/Q:

| A ₁ / (Analytical Review/Date) | R/T (Reporting Review/Date) | M (Management Review/Date) | Q (QA Review/Date) |
|--|--------------------------------|-------------------------------|-----------------------|
| A ₁ : | R: by 9/16/09 | M: hr 9/16/09 | |
| A ₂ : | T: | | |