



## ENVIRONMENTAL ASSESSMENT REPORT



**City of Cedar Rapids  
515 9<sup>th</sup> Street SW  
Cedar Rapids, IA**

**Project Report Dated: August 10, 2017**



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## **A. ASBESTOS INSPECTION REPORT DATA**

### **1. LOCATION(s)**

515 9th Street SW  
Cedar Rapids, Iowa

### **2. CLIENT CONTACT**

Mr. John Riggs  
Manager, Building Services Division  
City of Cedar Rapids  
500 15th Avenue SW, Cedar Rapids, IA 52404

### **3. DATE(s) OF INSPECTION**

July, 2017

### **4. FIRM PERFORMING INSPECTION**

Hawkeye Environmental  
814 Wood Lily Road  
Solon, IA 52333

### **5. INSPECTOR LICENSING**

State of Iowa License # (s):  
17-7513 Steve Henneberry  
16-6940 Cody Henneberry

### **6. LABORATORY USED FOR BULK SAMPLE ANALYSIS**

International Asbestos Testing Laboratories  
9000 Commerce Parkway Suite B  
Mt. Laurel, New Jersey 08054

### **7. LABORATORY ACCREDITATION**

NVLAP (Nation Voluntary Laboratory Accreditation Program)  
Lab Code: 101165-0



## B. SCOPE OF WORK

### Methods and Procedures:

**The property located at 515 9th Street SW, Cedar Rapids, Iowa** was inspected prior to scheduled demolition activities which may disturb asbestos containing building materials in accordance with NESHAPS (National Emission Standards for Hazardous Air Pollutants) regulations.

Field sampling methods were based on (NESHAPS) National Emission Standards for Hazardous Air Pollutants) protocols. Representative samples of suspect building materials were taken from Homogeneous Areas (HA-defined as similar in age, appearance and function). The purpose of this inspection was to identify quantities and locations of asbestos containing building materials prior to demolition of the structures. Bulk samples of suspect asbestos containing materials (ACM) were analyzed by Polarized Light Microscopy (PLM) with dispersion staining, as described in 40 CFR Part 763 and NESHAPS. Each sample was analyzed for the six different types of fibrous asbestos forms, of which a percentage, by volume, is estimated and summarized. If further analysis and quantification is warranted, this analysis is performed by EPA 600/R-93/116 with 400 or 600 Point Count Procedure. Further analysis of samples may also be performed at the client's request using Transmission Electron Microscopy (TEM).

Sample analysis was performed by Environmental Testing Laboratories, Inc., of Romulus, Michigan. EMSL is accredited by the National Institute for Standards and Technology for Polarized Light Microscopy analysis under their NVLAP (National Voluntary Lab Accreditation Program).

Asbestos Containing Building Materials (ACBM)s and their control during renovation or demolition activities is regulated in Iowa by the Iowa Department of Natural Resources. Specific questions about testing or abatement activities may be directed to Mr. Tom Wuehr, Iowa DNR - Air Quality Division. [Tom.Wuehr@DNR.Iowa.gov](mailto:Tom.Wuehr@DNR.Iowa.gov) 515-494-8212 Additional forms, guidance and technical information regarding asbestos can be found on the DNR website at:

***<http://www.iowadnr.gov/air/prof/asbestos/asbestos.html>***

A visual inspection of the Property was conducted to determine the presence, location and approximate quantities of Household Hazardous Wastes (HHW's). A table summarizing identified HHW's is included in Section F of this report.



## INSPECTION NOTES

In accordance with your request and authorization Hawkeye Environmental, LLC has performed an asbestos survey for the project referenced above. It is our understanding that the buildings will be demolished which has the potential to disturb all building materials. It is the intent of this survey to determine if any of the materials with potential for disturbance are asbestos containing.

The structure is a single family residence which is in average to poor condition for its age and state of use.

Roof or roofing systems were sampled and included in this report.

A representative number of samples were collected from all suspect asbestos building materials.

Household Hazardous Wastes present inside structures and throughout the property were identified and listed in appendix F.



**C. SUMMARY OF ASBESTOS BUILDING MATERIALS**

**515 9th Street SW**

**Surfacing Materials**

<u>Material</u>	<u>Description</u>	<u>Location</u>	<u>Quantity</u>
None			

**Thermal Systems Insulation**

<u>Material</u>	<u>Description</u>	<u>Location</u>	<u>Quantity</u>
None			

**Miscellaneous Materials**

<u>Material</u>	<u>Description</u>	<u>Location</u>	<u>Quantity</u>
None			



## **BULK SAMPLE ANALYSIS**

**City of Cedar Rapids  
515 9th Street SW  
Cedar Rapids, Iowa**

## CERTIFICATE OF ANALYSIS

**Client:** Hawkeye Environmental  
814 Wood Lily Road  
Solon IA 52333

**Report Date:** 8/4/2017  
**Report No.:** 542842 - PLM  
**Project:** 515 9th St SW  
**Project No.:**

**Client:** HAW824

### PLM BULK SAMPLE ANALYSIS SUMMARY

<b>Lab No.:</b> 6301499	<b>Description:</b> Black Shingle	<b>Location:</b>
<b>Client No.:</b> 001	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 15 Fibrous Glass	<u>Percent Non-Fibrous Material:</u> 85

<b>Lab No.:</b> 6301500	<b>Description:</b> Green/Black Shingle	<b>Location:</b>
<b>Client No.:</b> 002	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 35 Cellulose	<u>Percent Non-Fibrous Material:</u> 65

<b>Lab No.:</b> 6301501	<b>Description:</b> Black Shingle	<b>Location:</b> Garage
<b>Client No.:</b> 003	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 35 Cellulose	<u>Percent Non-Fibrous Material:</u> 65


<b>Lab No.:</b> 6301502	<b>Description:</b> Black/Grey/Brown Shingle	<b>Location:</b> Garage
<b>Client No.:</b> 004	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 35 Cellulose	<u>Percent Non-Fibrous Material:</u> 65

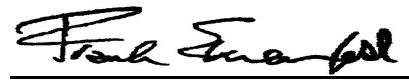
<b>Lab No.:</b> 6301503	<b>Description:</b> Green Floor Tile	<b>Location:</b> Kitchen
<b>Client No.:</b> 005	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

<b>Lab No.:</b> 6301503(L2)	<b>Description:</b> Yellow Mastic	<b>Location:</b> Kitchen
<b>Client No.:</b> 005	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

<b>Lab No.:</b> 6301504	<b>Description:</b> Off-White Floor Tile	<b>Location:</b> Kitchen
<b>Client No.:</b> 006	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

**Date Received:** 7/31/2017  
**Date Analyzed:** 08/04/2017  
**Signature:**   
**Analyst:** Randy Caran

**Approved By:**   
Frank E. Ehrenfeld, III  
Laboratory Director



## CERTIFICATE OF ANALYSIS

**Client:** Hawkeye Environmental  
814 Wood Lily Road  
Solon IA 52333

**Report Date:** 8/4/2017  
**Report No.:** 542842 - PLM  
**Project:** 515 9th St SW  
**Project No.:**

**Client:** HAW824

### PLM BULK SAMPLE ANALYSIS SUMMARY

**Lab No.:** 6301504(L2)  
**Client No.:** 006

**Description:** Yellow Mastic  
**Facility:**

**Location:** Kitchen

Percent Asbestos:  
*None Detected*

Percent Non-Asbestos Fibrous Material:  
None Detected

Percent Non-Fibrous Material:  
100

**Lab No.:** 6301505  
**Client No.:** 007

**Description:** Brown Floor Tile  
**Facility:**

**Location:** Back Entry

Percent Asbestos:  
*None Detected*

Percent Non-Asbestos Fibrous Material:  
None Detected

Percent Non-Fibrous Material:  
100

**Lab No.:** 6301505(L2)  
**Client No.:** 007

**Description:** Yellow Mastic  
**Facility:**

**Location:** Back Entry

Percent Asbestos:  
*None Detected*

Percent Non-Asbestos Fibrous Material:  
None Detected

Percent Non-Fibrous Material:  
100

**Lab No.:** 6301505(L3)  
**Client No.:** 007

**Description:** Yellow Floor Tile  
**Facility:**

**Location:** Back Entry

Percent Asbestos:  
*None Detected*

Percent Non-Asbestos Fibrous Material:  
None Detected

Percent Non-Fibrous Material:  
100

**Lab No.:** 6301505(L4)  
**Client No.:** 007

**Description:** Off-White Mastic  
**Facility:**

**Location:** Back Entry

Percent Asbestos:  
*None Detected*

Percent Non-Asbestos Fibrous Material:  
None Detected

Percent Non-Fibrous Material:  
100

**Lab No.:** 6301506  
**Client No.:** 008

**Description:** White Sheetrock  
**Facility:**

**Location:** Kitchen

Percent Asbestos:  
*None Detected*

Percent Non-Asbestos Fibrous Material:  
3 Cellulose

Percent Non-Fibrous Material:  
97

**Lab No.:** 6301507  
**Client No.:** 009

**Description:** White Tape  
**Facility:**

**Location:** Kitchen

Percent Asbestos:  
*None Detected*

Percent Non-Asbestos Fibrous Material:  
100 Cellulose

Percent Non-Fibrous Material:  
None Detected

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

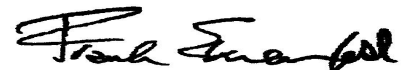
**Date Received:** 7/31/2017

**Date Analyzed:** 08/04/2017

**Signature:**

**Analyst:** Randy Caran

**Approved By:**



Frank E. Ehrenfeld, III  
Laboratory Director

## CERTIFICATE OF ANALYSIS

**Client:** Hawkeye Environmental  
814 Wood Lily Road  
Solon IA 52333

**Report Date:** 8/4/2017  
**Report No.:** 542842 - PLM  
**Project:** 515 9th St SW  
**Project No.:**

**Client:** HAW824

### PLM BULK SAMPLE ANALYSIS SUMMARY

<b>Lab No.:</b> 6301508	<b>Description:</b> White Joint Compound	<b>Location:</b> Kitchen
<b>Client No.:</b> 010	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

<b>Lab No.:</b> 6301509	<b>Description:</b> White Joint Compound	<b>Location:</b> Kitchen
<b>Client No.:</b> 011	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

<b>Lab No.:</b> 6301510	<b>Description:</b> White Joint Compound	<b>Location:</b> Kitchen
<b>Client No.:</b> 012	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100


<b>Lab No.:</b> 6301511	<b>Description:</b> White Caulk	<b>Location:</b> Window
<b>Client No.:</b> 013	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u>	<u>Percent Non-Fibrous Material:</u> 100

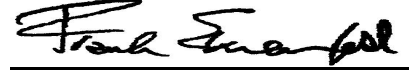
<b>Lab No.:</b> 6301512	<b>Description:</b> White Caulk	<b>Location:</b> Door
<b>Client No.:</b> 014	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u>	<u>Percent Non-Fibrous Material:</u> 100

<b>Lab No.:</b> 6301513	<b>Description:</b> Brown Insulation	<b>Location:</b>
<b>Client No.:</b> 015	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 100 Cellulose	<u>Percent Non-Fibrous Material:</u> None Detected

<b>Lab No.:</b> 6301514	<b>Description:</b> Tan Insulation	<b>Location:</b>
<b>Client No.:</b> 016	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 100 Cellulose	<u>Percent Non-Fibrous Material:</u> None Detected

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

**Date Received:** 7/31/2017  
**Date Analyzed:** 08/04/2017  
**Signature:**   
**Analyst:** Randy Caran

**Approved By:**   
Frank E. Ehrenfeld, III  
Laboratory Director

## CERTIFICATE OF ANALYSIS

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**Project No.:**

**Client:** HAW824

### Appendix to Analytical Report

**Customer Contact:** Steve Henneberry  
**Analysis:** US EPA 600, R93-116

This appendix seeks to promote greater understanding of any observations, exceptions, special instructions, or circumstances that the laboratory needs to communicate to the client concerning the above samples. The information below is used to help promote your ability to make the most informed decisions for you and your customers. Please note the following points of contact for any questions you may have.

**iATL Customer Service:** customerservice@iatl.com  
**iATL Office Manager:** cdavis@iatl.com  
**iATL Account Representative:** Shirley Clark  
**Sample Login Notes:** See Batch Sheet Attached  
**Sample Matrix:** Bulk Building Materials  
**Exceptions Noted:** See Following Pages

#### General Terms, Warrants, Limits, Qualifiers:

General information about iATL capabilities and client/laboratory relationships and responsibilities are spelled out in iATL policies that are listed at [www.iATL.com](http://www.iATL.com) and in our Quality Assurance Manual per ISO 17025 standard requirements. The information therein is a representation of iATL definitions and policies for turnaround times, sample submittal, collection media, blank definitions, quantification issues and limit of detection, analytical methods and procedures, sub-contracting policies, results reporting options, fees, terms, and discounts, confidentiality, sample archival and disposal, and data interpretation.

iATL warrants the test results to be of a precision normal for the type and methodology employed for each sample submitted. iATL disclaims any other warrants, expressed or implied, including warranty of fitness for a particular purpose and warranty of merchantability. iATL accepts no legal responsibility for the purpose for which the client uses test results. Any analytical work performed must be governed by our Standard Terms and Conditions. Prices, methods and detection limits may be changed without notification. Please contact your Customer Service Representative for the most current information.

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA LAP LLC, or any agency of local, state or province governments nor of any agency of the U.S. government.

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

#### Information Pertinent to this Report:

Analysis by US EPA 600 93-116: Determination of Asbestos in Bulk Building Materials by Polarized Light Microscopy (PLM).

#### Certifications:

- NIST-NVLAP No. 101165-0
- NY-DOH No. 11021
- AIHA-LAP, LLC No. 100188

Quantification at <0.25% by volume is possible with this method. (PC) Indicates Stratified Point Count Method performed. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed (ex. analyze until positive instructions). Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, PLM is not consistently reliable in detecting asbestos in non-friable organically bound (NOB) materials. Quantitative transmission electron microscopy (TEM) is currently the only method that can pronounce materials as non-asbestos containing.

Analytical Methodology Alternatives: Your initial request for analysis may not have accounted for recent advances in regulatory requirements or advances in technology that are routinely used in similar situations for other qualified projects. You may have the option to explore additional analysis for further information. Below are a few options, listed as the matrix followed by the appropriate methodology. Also included are links to more information on our website.

Bulk Building Materials that are Non-Friable Organically Bound (NOB) by Gravimetric Reduction techniques employing PLM and TEM: ELAP 198.6 (PLM-NOB), ELAP 198.4 (TEM-NOB)

Loose Fill Vermiculite Insulation, Attic Insulation, Zonolite (copyright), etc.: US EPA 600 R-4/004 (multi-tiered analytical process)  
Sprayed On Insulation/Fireproofing with Vermiculite (SOF-V): ELAP 198.8 (PLM-SOF-V)>

Soil, sludge, sediment, aggregate, and like materials analyzed for asbestos or other elongated mineral particles (ex. erionite, etc.): ASTM D7521, CARB 435, and other options available

## CERTIFICATE OF ANALYSIS

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Solon IA 52333

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**Project No.:**

**Client:** HAW824

Asbestos in Surface Dust according to one of ASTM's Methods (very dependent on sampling collection technique – by TEM): ASTM D 5755, D5756, or D6480

Various other asbestos matrices (air, water, etc.) and analytical methods are available.

### Disclaimers / Qualifiers:

There may be some samples in this project that have a "NOTE:" associated with a sample result. We use added disclaimers or qualifiers to inform the client about something that requires further explanation. Here is a list with highlighted disclaimers that may be pertinent to this project. For a full explanation of these and other disclaimers, please inquire at [customerservice@iatl.com](mailto:customerservice@iatl.com).

- 1) Note: No mastic provided for analysis.
- 2) Note: Insufficient mastic provided for analysis.
- 3) Note: Insufficient material provided for analysis.
- 4) Note: Insufficient sample provided for QC reanalysis.
- 5) Note: Different material than indicated on Sample Log / Description.
- 6) Note: Sample not submitted.
- 7) Note: Attached to asbestos containing material.
- 8) Note: Received wet.
- 9) Note: Possible surface contamination.
- 10) Note: Not building material. 1% threshold may not apply.
- 11) Note: Recommend TEM-NOB analysis as per EPA recommendations.
- 12) Note: Asbestos detected but not quantifiable.
- 13) Note: Multiple identical samples submitted, only one analyzed.
- 14) Note: Analyzed by EPA 600/R-93/116. Point Counting detection limit at 0.080%.
- 15) Note: Analyzed by EPA 600/R-93/116. Point Counting detection limit at 0.125%.

### Recommendations for Vermiculite Analysis:

Several analytical protocols exist for the analysis of asbestos in vermiculite. These analytical approaches vary depending upon the nature of the vermiculite mineral being tested (e.g. un-processed gange, homogeneous exfoliated books of mica, or mixed mineral composites). Please contact your client representative for pricing and turnaround time options available.

iATL recommends initial testing using the EPA 600/R-93/116 method. This method is specifically designed for the analysis of asbestos in bulk building materials. It provides an acceptable starting point for primary screening of vermiculite for possible asbestos.

Results from this testing may be inconclusive. EPA suggests proceeding to a multi-tiered analysis involving wet separation techniques in conjunction with PLM and TEM gravimetric analysis (EPA 600/R-04/004).

Further information on this method and other vermiculite and asbestos issues can be found at the following: Agency for Toxic Substances and Disease Registry (ATSDR) [www.atsdr.cdc.gov](http://www.atsdr.cdc.gov), United States Geological Survey (USGS) [www.minerals.usgs.gov/minerals/](http://www.minerals.usgs.gov/minerals/), US EPA [www.epa.gov/asbestos](http://www.epa.gov/asbestos). The USEPA also has an informative brochure "Current Best Practices for Vermiculite Attic Insulation" EPA 747F03001 May 2003, that may assist the health and remediation professional.

The following is a summary of the analytical process outlines in the EPA 600/R-04/004 Method:

- 1) **Analytical Step/Method:** Initial Screening by PLM, EPA 600R-93/116  
**Requirements/Comments:** Minimum of 0.1 g of sample. ~0.25% LOQ for most samples.
- 2) **Analytical Step/Method:** Wet Separation by PLM Gravimetric Technique, EPA R-04/004  
**Requirements/Comments:** Minimum 50g\*\* of dry sample. Analysis of "Sinks" only.
- 3) **Analytical Step/Method:** Wet Separation by PLM Gravimetric Technique, EPA R-04/004  
**Requirements/Comments:** Minimum 50g\*\* of dry sample. Analysis of "Floats" only.
- 4) **Analytical Step/Method:** Wet Separation by TEM Gravimetric Technique, EPA R-04/004  
**Requirements/Comments:** Minimum 50g\*\* of dry sample. Analysis of "Sinks" only.
- 5) **Analytical Step/Method:** Wet Separation by TEM Gravimetric Technique, EPA R-04/004  
**Requirements/Comments:** Minimum 50g\*\* of dry sample. Analysis of "Suspension" only.

LOQ, Limit of Quantitation estimates for mass and volume analyses.

\*With advance notice and confirmation by the laboratory.

\*\*Approximately 1 Liter of sample in double-bagged container (~9x6 inch bag of sample).

## Chain of Custody

-Bulk Asbestos -

<b>Contact Information</b>	
<b>Client Company:</b> <u>Hawkeye Environmental</u>	<b>Project Number:</b> _____
<b>Office Address:</b> <u>814 Wood Lily Road</u>	<b>Project Name:</b> <u>515 9th St. SW</u>
<b>City, State, Zip:</b> <u>Solon, IA 52333</u>	<b>Primary Contact:</b> <u>Steve Hennberg</u>
<b>Fax Number:</b> _____	<b>Office Phone:</b> <u>319-333-7420</u>
<b>Email Address:</b> <u>Steve@HawkeyeEnv.com</u>	<b>Cell Phone:</b> <u>319-551-4441</u>

**PLM Instructions:**

- PLM: Bulk Asbestos Building Materials EPA 600 R-93/116, 1993
- PLM: Bulk Asbestos Building Materials EPA 600 M-4/82-020, 1982
- PLM: Bulk Asbestos Building Materials NIOSH 9002, 1985
- PLM: Bulk Asbestos Building Materials NYSDOH-ELAP 198.1, 2002
- PLM: Bulk Asbestos Building Materials NYSDOH-ELAP 198.6, 2010
- TEM: Bulk Asbestos Building Materials NYSDOH-ELAP 198.4, 2009

<ul style="list-style-type: none"> <li><input type="checkbox"/> PLM: Point Counting           <ul style="list-style-type: none"> <li><input type="checkbox"/> PC: via ELAP 198.1</li> <li><input type="checkbox"/> PC: 400 Points</li> <li><input type="checkbox"/> PC: 800 Points *</li> <li><input type="checkbox"/> PC: 1600 Points *</li> </ul> </li> <li><input type="checkbox"/> PLM: Instructions for Multi-Layered Samples           <ul style="list-style-type: none"> <li><input type="checkbox"/> Analyze and Report All Separable Layers per EPA 600</li> <li><input type="checkbox"/> Report Composite for Drywall Systems per NESHAP</li> <li><input type="checkbox"/> Report All Layers and Composite Where Applicable</li> <li><input type="checkbox"/> Only Analyze and Report Specifically Noted Layer</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> PLM: Analyze Until Positive (Positive Stop)           <ul style="list-style-type: none"> <li><input type="checkbox"/> AUP: by Homogenous Area as Noted</li> <li><input type="checkbox"/> AUP: by Material Type as Noted</li> </ul> </li> <li><input type="checkbox"/> PLM: NOB via 198.6           <ul style="list-style-type: none"> <li><input type="checkbox"/> PLM: Friable via EPA 600 2.3</li> <li><input type="checkbox"/> If &lt;1% by PLM, to TEM via 198.4 *</li> <li><input type="checkbox"/> If &lt;1% by PLM, Hold for Instructions</li> </ul> </li> <li><input type="checkbox"/> PLM: Non-Building Material<sup>**,*</sup> (Dust, Wipe, Tape)           <ul style="list-style-type: none"> <li><input type="checkbox"/> Soil or Vermiculite Analysis<sup>*</sup></li> <li><input type="checkbox"/> CARB 435</li> </ul> </li> </ul>
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**Special Instructions:** \_\_\_\_\_

\* Additional charge and turnaround may be required    \*\* Alternative Method (ex: EPA 600/R-04/004) may be recommended by Laboratory

**Turnaround Time**

Preliminary Results Requested Date: \_\_\_\_\_

Specific date / time

10 Day     5 Day     3 Day     2 Day     1 Day\*     12 Hour\*\*     6 Hour\*\*     RUSH\*\*

\* End of next business day unless otherwise specified. \*\* Matrix Dependent. \*\*\*Please notify the lab before shipping\*\*\*

Verbal     Email     Fax

**Chain of Custody**

Relinquished (Name/Organization): <u>Cody Hennberg</u>	Date: <u>7-28-17</u>	Time: <u>5:00 PM</u>	
Received (Name / iATL): _____	Date: _____	Time: <u>Les</u>	
Sample Login (Name / iATL): _____	Date: _____	Time: _____	
Analysis(Name(s) / iATL): _____	Date: <u>8/4/17</u>	Time: <u>JUL 31 2017</u>	
QA/QC Review (Name / iATL): _____	Date: <u>8-7-17</u>	Time: _____	
Archived / Released: _____	QA/QC InterLAB Use: _____	Date: _____	Time: _____

## Sample Log

-Bulk Asbestos-

Client: Hawkeye Environmental

Project: 515 9th St. SW

Sampling Date/Time: 7-28-17

Bulk Asbestos Sample Log			
Client Sample #	iATL #	Location/Description	Notes
001	0301499	shingle	black
002	0301500	tar paper	black
003	0301501	shingle (garage)	black
004	0301502	tar paper ( " )	brown
005	0301503	floor tile (kitchen)	top - green
006	0301504	floor tile (kitchen)	bot - gray
007	0301505	floor tile (back entry)	wood
008	0301506	drywall (kitchen)	gray
009	0301507	" tape ( " )	white
010	0301508	" joint compound ( " )	"
011	0301509	" " " ( " )	"
012	0301510	" " " ( " )	"
013	0301511	window caulk	"
014	0301512	door caulk	"
015	0301513	vapor barrier	brown
016	0301514	blown-in	gray

515 9th Street SW  
Cedar Rapids, Iowa

### Household Hazardous Waste Inventory

HHW / Recyclable	Description / Notes	Units	Size / Quantity	Location
Latex Paint		10	1 Gallon Cans	House



# ENVIRONMENTAL ASSESSMENT REPORT



**City of Cedar Rapids  
1372 22nd Avenue SW  
Cedar Rapids, IA**

**Project Report Dated: August 10, 2017**





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## **A. ASBESTOS INSPECTION REPORT DATA**

### **1. LOCATION(s)**

1372 22nd Avenue SW  
Cedar Rapids, Iowa

### **2. CLIENT CONTACT**

Mr. John Riggs  
Manager, Building Services Division  
City of Cedar Rapids  
500 15th Avenue SW, Cedar Rapids, IA 52404

### **3. DATE(s) OF INSPECTION**

July, 2017

### **4. FIRM PERFORMING INSPECTION**

Hawkeye Environmental  
814 Wood Lily Road  
Solon, IA 52333

### **5. INSPECTOR LICENSING**

State of Iowa License # (s):  
17-7513 Steve Henneberry  
16-6940 Cody Henneberry

### **6. LABORATORY USED FOR BULK SAMPLE ANALYSIS**

International Asbestos Testing Laboratories  
9000 Commerce Parkway Suite B  
Mt. Laurel, New Jersey 08054

### **7. LABORATORY ACCREDITATION**

NVLAP (Nation Voluntary Laboratory Accreditation Program)  
Lab Code: 101165-0



## B. SCOPE OF WORK

### Methods and Procedures:

**The property located at 1372 22nd Avenue SW, Cedar Rapids, Iowa** was inspected prior to scheduled demolition activities which may disturb asbestos containing building materials in accordance with NESHAPS (National Emission Standards for Hazardous Air Pollutants) regulations.

Field sampling methods were based on (NESHAPS) National Emission Standards for Hazardous Air Pollutants) protocols. Representative samples of suspect building materials were taken from Homogeneous Areas (HA-defined as similar in age, appearance and function). The purpose of this inspection was to identify quantities and locations of asbestos containing building materials prior to demolition of the structures. Bulk samples of suspect asbestos containing materials (ACM) were analyzed by Polarized Light Microscopy (PLM) with dispersion staining, as described in 40 CFR Part 763 and NESHAPS. Each sample was analyzed for the six different types of fibrous asbestos forms, of which a percentage, by volume, is estimated and summarized. If further analysis and quantification is warranted, this analysis is performed by EPA 600/R-93/116 with 400 or 600 Point Count Procedure. Further analysis of samples may also be performed at the client's request using Transmission Electron Microscopy (TEM).

Sample analysis was performed by Environmental Testing Laboratories, Inc., of Romulus, Michigan. EMSL is accredited by the National Institute for Standards and Technology for Polarized Light Microscopy analysis under their NVLAP (National Voluntary Lab Accreditation Program).

Asbestos Containing Building Materials (ACBM)s and their control during renovation or demolition activities is regulated in Iowa by the Iowa Department of Natural Resources. Specific questions about testing or abatement activities may be directed to Mr. Tom Wuehr, Iowa DNR - Air Quality Division. [Tom.Wuehr@DNR.iowa.gov](mailto:Tom.Wuehr@DNR.iowa.gov) 515-494-8212 Additional forms, guidance and technical information regarding asbestos can be found on the DNR website at:

***<http://www.iowadnr.gov/air/prof/asbestos/asbestos.html>***

A visual inspection of the Property was conducted to determine the presence, location and approximate quantities of Household Hazardous Wastes (HHW's). A table summarizing identified HHW's is included in Section F of this report.



## **INSPECTION NOTES**

In accordance with your request and authorization Hawkeye Environmental, LLC has performed an asbestos survey for the project referenced above. It is our understanding that the buildings will be demolished which has the potential to disturb all building materials. It is the intent of this survey to determine if any of the materials with potential for disturbance are asbestos containing.

The structure is a single family residence which is in average to poor condition for its age and state of use.

Roof or roofing systems were sampled and included in this report.

A representative number of samples were collected from all suspect asbestos building materials.

Household Hazardous Wastes present inside structures and throughout the property were identified and listed in appendix E.



**C. SUMMARY OF ASBESTOS BUILDING MATERIALS**

**1372 22nd Avenue SW**

**Surfacing Materials**

<b><u>Material</u></b>	<b><u>Description</u></b>	<b><u>Location</u></b>	<b><u>Quantity</u></b>
None			

**Thermal Systems Insulation**

<b><u>Material</u></b>	<b><u>Description</u></b>	<b><u>Location</u></b>	<b><u>Quantity</u></b>
None			

**Miscellaneous Materials**

<b><u>Material</u></b>	<b><u>Description</u></b>	<b><u>Location</u></b>	<b><u>Quantity</u></b>
Caulk	Silver	Doors (exterior)	2 Ea.
Caulk	Gray	House Windows (approx. 2' x 4')	16 Ea.
Caulk	White	Garage Windows (approx. 2' x 2')	2 Ea.

**Contractors must field verify all material quantities, locations and condition prior to bid.**



## **BULK SAMPLE ANALYSIS**

**City of Cedar Rapids  
1372 22nd Avenue SW  
Cedar Rapids, Iowa**

## CERTIFICATE OF ANALYSIS

**Client:** Hawkeye Environmental  
814 Wood Lily Road  
Solon IA 52333

**Report Date:** 8/4/2017  
**Report No.:** 542845 - PLM  
**Project:** 1372 22nd Ave SW  
**Project No.:**

**Client:** HAW824

### PLM BULK SAMPLE ANALYSIS SUMMARY

**Lab No.:** 6301567  
**Client No.:** 001

Percent Asbestos:  
*None Detected*

**Description:** Black Shingle  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
15 Fibrous Glass

**Location:** House

Percent Non-Fibrous Material:  
85

**Lab No.:** 6301568  
**Client No.:** 002

Percent Asbestos:  
*None Detected*

**Description:** Black Tar Paper  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
20 Fibrous Glass

**Location:** House

Percent Non-Fibrous Material:  
80

**Lab No.:** 6301569  
**Client No.:** 003

Percent Asbestos:  
*None Detected*

**Description:** White/Green Shingle  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
50 Cellulose

**Location:** Garage

Percent Non-Fibrous Material:  
50

**Lab No.:** 6301570  
**Client No.:** 004

Percent Asbestos:  
*None Detected*

**Description:** Brown/Black Shingle  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
50 Cellulose

**Location:** Garage

Percent Non-Fibrous Material:  
50

**Lab No.:** 6301571  
**Client No.:** 005

Percent Asbestos:  
*None Detected*

**Description:** Black Tar Paper  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
80 Cellulose

**Location:** Garage

Percent Non-Fibrous Material:  
20

**Lab No.:** 6301572  
**Client No.:** 006

Percent Asbestos:  
*None Detected*

**Description:** Black Tar Paper  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
95 Cellulose

**Location:** House

Percent Non-Fibrous Material:  
5

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

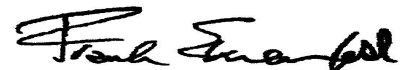
**Date Received:** 7/31/2017

**Date Analyzed:** 08/04/2017

**Signature:**

**Analyst:** Randy Caran

**Approved By:**



Frank E. Ehrenfeld, III  
Laboratory Director

## CERTIFICATE OF ANALYSIS

**Client:** Hawkeye Environmental  
814 Wood Lily Road  
Solon IA 52333

**Report Date:** 8/4/2017  
**Report No.:** 542845 - PLM  
**Project:** 1372 22nd Ave SW  
**Project No.:**

**Client:** HAW824

### PLM BULK SAMPLE ANALYSIS SUMMARY

<b>Lab No.:</b> 6301573	<b>Description:</b> Off-White/Brown Fibrous	<b>Location:</b> House
<b>Client No.:</b> 007	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 98 Cellulose	<u>Percent Non-Fibrous Material:</u> 2

<b>Lab No.:</b> 6301574	<b>Description:</b> White Shingle	<b>Location:</b> Back Door
<b>Client No.:</b> 008	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 50 Cellulose	<u>Percent Non-Fibrous Material:</u> 50


<b>Lab No.:</b> 6301575	<b>Description:</b> Black Tar Paper	<b>Location:</b> Garage
<b>Client No.:</b> 009	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 50 Cellulose	<u>Percent Non-Fibrous Material:</u> 50

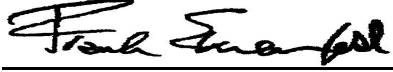
<b>Lab No.:</b> 6301576	<b>Description:</b> White Shingle	<b>Location:</b> Garage
<b>Client No.:</b> 010	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 90 Cellulose	<u>Percent Non-Fibrous Material:</u> 10

<b>Lab No.:</b> 6301577	<b>Description:</b> Grey/Brown/Black Shingle	<b>Location:</b> House
<b>Client No.:</b> 011	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 75 Cellulose	<u>Percent Non-Fibrous Material:</u> 25

<b>Lab No.:</b> 6301578	<b>Description:</b> Grey Caulk	<b>Location:</b> House
<b>Client No.:</b> 012	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

**Date Received:** 7/31/2017  
**Date Analyzed:** 08/04/2017  
**Signature:**   
**Analyst:** Randy Caran

**Approved By:**   
Frank E. Ehrenfeld, III  
Laboratory Director



## CERTIFICATE OF ANALYSIS

**Client:** Hawkeye Environmental  
814 Wood Lily Road  
Solon IA 52333

**Report Date:** 8/4/2017  
**Report No.:** 542845 - PLM  
**Project:** 1372 22nd Ave SW  
**Project No.:**

**Client:** HAW824

### PLM BULK SAMPLE ANALYSIS SUMMARY

**Lab No.:** 6301579  
**Client No.:** 013

Percent Asbestos:  
**PC 4.7 Chrysotile**

**Description:** Silver Caulk  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
4 Talc

**Location:** House

Percent Non-Fibrous Material:  
91.3

**Lab No.:** 6301580  
**Client No.:** 014

Percent Asbestos:  
**None Detected**

**Description:** Blue/Brown Fibrous  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
100 Cellulose

**Location:** Garage

Percent Non-Fibrous Material:  
Trace

**Lab No.:** 6301581  
**Client No.:** 015

Percent Asbestos:  
**PC 9.3 Chrysotile**

**Description:** White Caulk  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
None Detected

**Location:** Garage

Percent Non-Fibrous Material:  
90.7

**Lab No.:** 6301582  
**Client No.:** 016

Percent Asbestos:  
**None Detected**

**Description:** Black Tar  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
None Detected

**Location:** House

Percent Non-Fibrous Material:  
100

**Lab No.:** 6301583  
**Client No.:** 017

Percent Asbestos:  
**None Detected**

**Description:** White Caulk  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
None Detected

**Location:** House Window

Percent Non-Fibrous Material:  
100

**Lab No.:** 6301583(L2)  
**Client No.:** 017

Percent Asbestos:  
**PC 8.9 Chrysotile**

**Description:** Grey Caulk  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
None Detected

**Location:** House Window

Percent Non-Fibrous Material:  
91.1

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

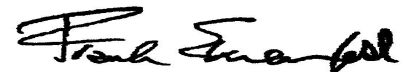
**Date Received:** 7/31/2017

**Date Analyzed:** 08/04/2017

**Signature:**

**Analyst:** Randy Caran

**Approved By:**



Frank E. Ehrenfeld, III  
Laboratory Director

## CERTIFICATE OF ANALYSIS

**Client:** Hawkeye Environmental  
814 Wood Lily Road  
Solon IA 52333

**Report Date:** 8/4/2017  
**Report No.:** 542845 - PLM  
**Project:** 1372 22nd Ave SW  
**Project No.:**

**Client:** HAW824

### PLM BULK SAMPLE ANALYSIS SUMMARY

<b>Lab No.:</b> 6301584	<b>Description:</b> White Caulk	<b>Location:</b> Garage Window
<b>Client No.:</b> 018	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

<b>Lab No.:</b> 6301585	<b>Description:</b> Grey Plaster	<b>Location:</b> Living
<b>Client No.:</b> 019	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 2 Cellulose	<u>Percent Non-Fibrous Material:</u> 98


<b>Lab No.:</b> 6301586	<b>Description:</b> White Plaster	<b>Location:</b> Living Rm
<b>Client No.:</b> 020	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

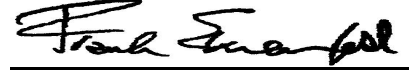
<b>Lab No.:</b> 6301586(L2)	<b>Description:</b> White Texture	<b>Location:</b> Living Rm
<b>Client No.:</b> 020	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

<b>Lab No.:</b> 6301587	<b>Description:</b> Grey Plaster	<b>Location:</b> Dining
<b>Client No.:</b> 021	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 2 Cellulose	<u>Percent Non-Fibrous Material:</u> 98

<b>Lab No.:</b> 6301588	<b>Description:</b> White Plaster	<b>Location:</b> Dining
<b>Client No.:</b> 022	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

**Date Received:** 7/31/2017  
**Date Analyzed:** 08/04/2017  
**Signature:**   
**Analyst:** Randy Caran

**Approved By:**   
Frank E. Ehrenfeld, III  
Laboratory Director

## CERTIFICATE OF ANALYSIS

**Client:** Hawkeye Environmental  
814 Wood Lily Road  
Solon IA 52333

**Report Date:** 8/4/2017  
**Report No.:** 542845 - PLM  
**Project:** 1372 22nd Ave SW  
**Project No.:**

**Client:** HAW824

### PLM BULK SAMPLE ANALYSIS SUMMARY

**Lab No.:** 6301588(L2)  
**Client No.:** 022  
Percent Asbestos:  
*None Detected*

**Description:** White Texture  
**Facility:**  
Percent Non-Asbestos Fibrous Material:  
None Detected

**Location:** Dining  
Percent Non-Fibrous Material:  
100

**Lab No.:** 6301589  
**Client No.:** 023  
Percent Asbestos:  
*None Detected*

**Description:** Grey Plaster  
**Facility:**  
Percent Non-Asbestos Fibrous Material:  
2 Cellulose

**Location:** Bedroom  
Percent Non-Fibrous Material:  
98

**Lab No.:** 6301590  
**Client No.:** 024  
Percent Asbestos:  
*None Detected*

**Description:** White Plaster  
**Facility:**  
Percent Non-Asbestos Fibrous Material:  
None Detected

**Location:** Bedroom  
Percent Non-Fibrous Material:  
100

**Lab No.:** 6301590(L2)  
**Client No.:** 024  
Percent Asbestos:  
*None Detected*

**Description:** White Texture  
**Facility:**  
Percent Non-Asbestos Fibrous Material:  
None Detected

**Location:** Bedroom  
Percent Non-Fibrous Material:  
100

**Lab No.:** 6301591  
**Client No.:** 025  
Percent Asbestos:  
*None Detected*

**Description:** White Texture  
**Facility:**  
Percent Non-Asbestos Fibrous Material:  
None Detected

**Location:** Kitchen  
Percent Non-Fibrous Material:  
100

This sample contains vermiculite mineral. It is not vermiculite attic insulation, but may be considered for possible future analysis by EPA 600-04-004. See attached.


**Lab No.:** 6301592  
**Client No.:** 026  
Percent Asbestos:  
*None Detected*

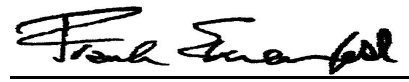
**Description:** White Texture  
**Facility:**  
Percent Non-Asbestos Fibrous Material:  
None Detected

**Location:** Upstairs  
Percent Non-Fibrous Material:  
100

This sample contains vermiculite mineral. It is not vermiculite attic insulation, but may be considered for possible future analysis by EPA 600-04-004. See attached.

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

**Date Received:** 7/31/2017  
**Date Analyzed:** 08/04/2017  
**Signature:**   
**Analyst:** Randy Caran

**Approved By:**   
Frank E. Ehrenfeld, III  
Laboratory Director

## CERTIFICATE OF ANALYSIS

**Client:** Hawkeye Environmental  
814 Wood Lily Road  
Solon IA 52333

**Report Date:** 8/4/2017  
**Report No.:** 542845 - PLM  
**Project:** 1372 22nd Ave SW  
**Project No.:**

**Client:** HAW824

### PLM BULK SAMPLE ANALYSIS SUMMARY

**Lab No.:** 6301593  
**Client No.:** 027

**Description:** White Texture  
**Facility:**

**Location:** Living Rm

Percent Asbestos:  
*None Detected*

Percent Non-Asbestos Fibrous Material:  
None Detected

Percent Non-Fibrous Material:  
100

This sample contains vermiculite mineral. It is not vermiculite attic insulation, but may be considered for possible future analysis by EPA 600-04-004. See attached.

**Lab No.:** 6301594  
**Client No.:** 028

**Description:** Off-White Floor Tile; 12"  
**Facility:**

**Location:** Bathroom

Percent Asbestos:  
*None Detected*

Percent Non-Asbestos Fibrous Material:  
None Detected

Percent Non-Fibrous Material:  
100

**Lab No.:** 6301594(L2)  
**Client No.:** 028

**Description:** Brown Mastic  
**Facility:**

**Location:** Bathroom

Percent Asbestos:  
*None Detected*

Percent Non-Asbestos Fibrous Material:  
None Detected

Percent Non-Fibrous Material:  
100

**Lab No.:** 6301595  
**Client No.:** 029

**Description:** Brown Vinyl Sheet Flooring  
**Facility:**

**Location:** Kitchen

Percent Asbestos:  
*None Detected*

Percent Non-Asbestos Fibrous Material:  
50 Cellulose

Percent Non-Fibrous Material:  
50

**Lab No.:** 6301596  
**Client No.:** 030

**Description:** Black Tar Paper  
**Facility:**

**Location:** Kitchen

Percent Asbestos:  
*None Detected*

Percent Non-Asbestos Fibrous Material:  
90 Cellulose

Percent Non-Fibrous Material:  
10

**Lab No.:** 6301597  
**Client No.:** 031

**Description:** White Mastic  
**Facility:**

**Location:** Kitchen

Percent Asbestos:  
*None Detected*

Percent Non-Asbestos Fibrous Material:  
None Detected

Percent Non-Fibrous Material:  
100

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

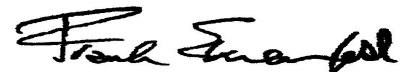
**Date Received:** 7/31/2017

**Date Analyzed:** 08/04/2017

**Signature:**

**Analyst:** Randy Caran

**Approved By:**



Frank E. Ehrenfeld, III  
Laboratory Director

## CERTIFICATE OF ANALYSIS

**Client:** Hawkeye Environmental  
814 Wood Lily Road  
Solon IA 52333

**Report Date:** 8/4/2017  
**Report No.:** 542845 - PLM  
**Project:** 1372 22nd Ave SW  
**Project No.:**


**Client:** HAW824

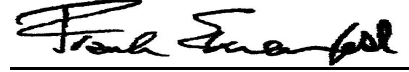
### PLM BULK SAMPLE ANALYSIS SUMMARY

<p><b>Lab No.:</b> 6301598 <b>Client No.:</b> 032</p> <p><u>Percent Asbestos:</u> <i>None Detected</i></p>	<p><b>Description:</b> Yellow Mastic <b>Facility:</b></p> <p><u>Percent Non-Asbestos Fibrous Material:</u> None Detected</p>	<p><b>Location:</b> Bathroom</p> <p><u>Percent Non-Fibrous Material:</u> 100</p>
<p><b>Lab No.:</b> 6301599 <b>Client No.:</b> 033</p> <p><u>Percent Asbestos:</u> <i>None Detected</i></p>	<p><b>Description:</b> White Sheetrock <b>Facility:</b></p> <p><u>Percent Non-Asbestos Fibrous Material:</u> 3 Cellulose</p>	<p><b>Location:</b> Kitchen</p> <p><u>Percent Non-Fibrous Material:</u> 97</p>
<p><b>Lab No.:</b> 6301600 <b>Client No.:</b> 034</p> <p><u>Percent Asbestos:</u> <i>None Detected</i></p>	<p><b>Description:</b> White Tape <b>Facility:</b></p> <p><u>Percent Non-Asbestos Fibrous Material:</u> 100 Cellulose</p>	<p><b>Location:</b> Kitchen</p> <p><u>Percent Non-Fibrous Material:</u> None Detected</p>
<p><b>Lab No.:</b> 6301601 <b>Client No.:</b> 035</p> <p><u>Percent Asbestos:</u> <i>None Detected</i></p>	<p><b>Description:</b> White Joint Compound <b>Facility:</b></p> <p><u>Percent Non-Asbestos Fibrous Material:</u> None Detected</p>	<p><b>Location:</b> Kitchen</p> <p><u>Percent Non-Fibrous Material:</u> 100</p>
<p><b>Lab No.:</b> 6301602 <b>Client No.:</b> 036</p> <p><u>Percent Asbestos:</u> <i>None Detected</i></p>	<p><b>Description:</b> White Joint Compound <b>Facility:</b></p> <p><u>Percent Non-Asbestos Fibrous Material:</u> None Detected</p>	<p><b>Location:</b> Upstairs</p> <p><u>Percent Non-Fibrous Material:</u> 100</p>
<p><b>Lab No.:</b> 6301603 <b>Client No.:</b> 037</p> <p><u>Percent Asbestos:</u> <i>None Detected</i></p>	<p><b>Description:</b> White Joint Compound <b>Facility:</b></p> <p><u>Percent Non-Asbestos Fibrous Material:</u> None Detected</p>	<p><b>Location:</b> Living Rm</p> <p><u>Percent Non-Fibrous Material:</u> 100</p>

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

**Date Received:** 7/31/2017  
**Date Analyzed:** 08/04/2017

**Signature:**   
**Analyst:** Randy Caran

**Approved By:**   
Frank E. Ehrenfeld, III  
Laboratory Director

## CERTIFICATE OF ANALYSIS

**Client:** Hawkeye Environmental  
814 Wood Lily Road  
Solon IA 52333

**Report Date:** 8/4/2017  
**Report No.:** 542845 - PLM  
**Project:** 1372 22nd Ave SW  
**Project No.:**

**Client:** HAW824

### PLM BULK SAMPLE ANALYSIS SUMMARY

<b>Lab No.:</b> 6301604	<b>Description:</b> White Sheetrock	<b>Location:</b> Garage
<b>Client No.:</b> 038	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 3 Cellulose	<u>Percent Non-Fibrous Material:</u> 97


<b>Lab No.:</b> 6301605	<b>Description:</b> Grey Insulation	<b>Location:</b>
<b>Client No.:</b> 039	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 100 Cellulose	<u>Percent Non-Fibrous Material:</u> None Detected

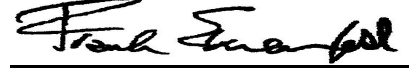
<b>Lab No.:</b> 6301606	<b>Description:</b> White Caulk	<b>Location:</b> Fuse Box
<b>Client No.:</b> 040	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

<b>Lab No.:</b> 6301607	<b>Description:</b> White/Brown Ceiling Tile	<b>Location:</b> Kitchen
<b>Client No.:</b> 041	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 100 Cellulose	<u>Percent Non-Fibrous Material:</u> Trace

<b>Lab No.:</b> 6301608	<b>Description:</b> Tan Mastic	<b>Location:</b> Back Entry
<b>Client No.:</b> 042	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

**Date Received:** 7/31/2017  
**Date Analyzed:** 08/04/2017  
**Signature:**   
**Analyst:** Randy Caran

**Approved By:**   
Frank E. Ehrenfeld, III  
Laboratory Director

## CERTIFICATE OF ANALYSIS

**Client:** Hawkeye Environmental  
814 Wood Lily Road  
Solon IA 52333

**Report Date:** 8/4/2017  
**Report No.:** 542845 - PLM  
**Project:** 1372 22nd Ave SW  
**Project No.:**

**Client:** HAW824

### Appendix to Analytical Report

**Customer Contact:** Steve Henneberry  
**Analysis:** US EPA 600, R93-116

This appendix seeks to promote greater understanding of any observations, exceptions, special instructions, or circumstances that the laboratory needs to communicate to the client concerning the above samples. The information below is used to help promote your ability to make the most informed decisions for you and your customers. Please note the following points of contact for any questions you may have.

**iATL Customer Service:** customerservice@iatl.com  
**iATL Office Manager:** cdavis@iatl.com  
**iATL Account Representative:** Shirley Clark  
**Sample Login Notes:** See Batch Sheet Attached  
**Sample Matrix:** Bulk Building Materials  
**Exceptions Noted:** See Following Pages

#### General Terms, Warrants, Limits, Qualifiers:

General information about iATL capabilities and client/laboratory relationships and responsibilities are spelled out in iATL policies that are listed at [www.iATL.com](http://www.iATL.com) and in our Quality Assurance Manual per ISO 17025 standard requirements. The information therein is a representation of iATL definitions and policies for turnaround times, sample submittal, collection media, blank definitions, quantification issues and limit of detection, analytical methods and procedures, sub-contracting policies, results reporting options, fees, terms, and discounts, confidentiality, sample archival and disposal, and data interpretation.

iATL warrants the test results to be of a precision normal for the type and methodology employed for each sample submitted. iATL disclaims any other warrants, expressed or implied, including warranty of fitness for a particular purpose and warranty of merchantability. iATL accepts no legal responsibility for the purpose for which the client uses test results. Any analytical work performed must be governed by our Standard Terms and Conditions. Prices, methods and detection limits may be changed without notification. Please contact your Customer Service Representative for the most current information.

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA LAP LLC, or any agency of local, state or province governments nor of any agency of the U.S. government.

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

#### Information Pertinent to this Report:

Analysis by US EPA 600 93-116: Determination of Asbestos in Bulk Building Materials by Polarized Light Microscopy (PLM).

#### Certifications:

- NIST-NVLAP No. 101165-0
- NY-DOH No. 11021
- AIHA-LAP, LLC No. 100188

Quantification at <0.25% by volume is possible with this method. (PC) Indicates Stratified Point Count Method performed. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed (ex. analyze until positive instructions). Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, PLM is not consistently reliable in detecting asbestos in non-friable organically bound (NOB) materials. Quantitative transmission electron microscopy (TEM) is currently the only method that can pronounce materials as non-asbestos containing.

Analytical Methodology Alternatives: Your initial request for analysis may not have accounted for recent advances in regulatory requirements or advances in technology that are routinely used in similar situations for other qualified projects. You may have the option to explore additional analysis for further information. Below are a few options, listed as the matrix followed by the appropriate methodology. Also included are links to more information on our website.

Bulk Building Materials that are Non-Friable Organically Bound (NOB) by Gravimetric Reduction techniques employing PLM and TEM: ELAP 198.6 (PLM-NOB), ELAP 198.4 (TEM-NOB)

Loose Fill Vermiculite Insulation, Attic Insulation, Zonolite (copyright), etc.: US EPA 600 R-4/004 (multi-tiered analytical process)  
Sprayed On Insulation/Fireproofing with Vermiculite (SOF-V): ELAP 198.8 (PLM-SOF-V)>

Soil, sludge, sediment, aggregate, and like materials analyzed for asbestos or other elongated mineral particles (ex. erionite, etc.): ASTM D7521, CARB 435, and other options available

## CERTIFICATE OF ANALYSIS

**Client:** Hawkeye Environmental  
814 Wood Lily Road  
Solon IA 52333

**Report Date:** 8/4/2017  
**Report No.:** 542845 - PLM  
**Project:** 1372 22nd Ave SW  
**Project No.:**

**Client:** HAW824

Asbestos in Surface Dust according to one of ASTM's Methods (very dependent on sampling collection technique – by TEM): ASTM D 5755, D5756, or D6480

Various other asbestos matrices (air, water, etc.) and analytical methods are available.

### Disclaimers / Qualifiers:

There may be some samples in this project that have a "NOTE:" associated with a sample result. We use added disclaimers or qualifiers to inform the client about something that requires further explanation. Here is a list with highlighted disclaimers that may be pertinent to this project. For a full explanation of these and other disclaimers, please inquire at [customerservice@iatl.com](mailto:customerservice@iatl.com).

- 1) Note: No mastic provided for analysis.
- 2) Note: Insufficient mastic provided for analysis.
- 3) Note: Insufficient material provided for analysis.
- 4) Note: Insufficient sample provided for QC reanalysis.
- 5) Note: Different material than indicated on Sample Log / Description.
- 6) Note: Sample not submitted.
- 7) Note: Attached to asbestos containing material.
- 8) Note: Received wet.
- 9) Note: Possible surface contamination.
- 10) Note: Not building material. 1% threshold may not apply.
- 11) Note: Recommend TEM-NOB analysis as per EPA recommendations.
- 12) Note: Asbestos detected but not quantifiable.
- 13) Note: Multiple identical samples submitted, only one analyzed.
- 14) Note: Analyzed by EPA 600/R-93/116. Point Counting detection limit at 0.080%.
- 15) Note: Analyzed by EPA 600/R-93/116. Point Counting detection limit at 0.125%.

### Recommendations for Vermiculite Analysis:

Several analytical protocols exist for the analysis of asbestos in vermiculite. These analytical approaches vary depending upon the nature of the vermiculite mineral being tested (e.g. un-processed gänge, homogeneous exfoliated books of mica, or mixed mineral composites). Please contact your client representative for pricing and turnaround time options available.

iATL recommends initial testing using the EPA 600/R-93/116 method. This method is specifically designed for the analysis of asbestos in bulk building materials. It provides an acceptable starting point for primary screening of vermiculite for possible asbestos.

Results from this testing may be inconclusive. EPA suggests proceeding to a multi-tiered analysis involving wet separation techniques in conjunction with PLM and TEM gravimetric analysis (EPA 600/R-04/004).

Further information on this method and other vermiculite and asbestos issues can be found at the following: Agency for Toxic Substances and Disease Registry (ATSDR) [www.atsdr.cdc.gov](http://www.atsdr.cdc.gov), United States Geological Survey (USGS) [www.minerals.usgs.gov/minerals/](http://www.minerals.usgs.gov/minerals/), US EPA [www.epa.gov/asbestos](http://www.epa.gov/asbestos). The USEPA also has an informative brochure "Current Best Practices for Vermiculite Attic Insulation" EPA 747F03001 May 2003, that may assist the health and remediation professional.

The following is a summary of the analytical process outlines in the EPA 600/R-04/004 Method:

- 1) **Analytical Step/Method:** Initial Screening by PLM, EPA 600R-93/116  
**Requirements/Comments:** Minimum of 0.1 g of sample. ~0.25% LOQ for most samples.
- 2) **Analytical Step/Method:** Wet Separation by PLM Gravimetric Technique, EPA R-04/004  
**Requirements/Comments:** Minimum 50g\*\* of dry sample. Analysis of "Sinks" only.
- 3) **Analytical Step/Method:** Wet Separation by PLM Gravimetric Technique, EPA R-04/004  
**Requirements/Comments:** Minimum 50g\*\* of dry sample. Analysis of "Floats" only.
- 4) **Analytical Step/Method:** Wet Separation by TEM Gravimetric Technique, EPA R-04/004  
**Requirements/Comments:** Minimum 50g\*\* of dry sample. Analysis of "Sinks" only.
- 5) **Analytical Step/Method:** Wet Separation by TEM Gravimetric Technique, EPA R-04/004  
**Requirements/Comments:** Minimum 50g\*\* of dry sample. Analysis of "Suspension" only.

LOQ, Limit of Quantitation estimates for mass and volume analyses.

\*With advance notice and confirmation by the laboratory.

\*\*Approximately 1 Liter of sample in double-bagged container (~9x6 inch bag of sample).



## Chain of Custody

-Bulk Asbestos -

### Contact Information

**Client Company:** Hawkeye Environmental  
**Office Address:** 814 Wood Lily Road  
**City, State, Zip:** Solon, IA 52333  
**Fax Number:** \_\_\_\_\_  
**Email Address:** Steve@HawkeyeEnv.com

**Project Number:** \_\_\_\_\_  
**Project Name:** 1372 22<sup>nd</sup> Ave SW  
**Primary Contact:** Steve Henneberry  
**Office Phone:** 319-333-7420  
**Cell Phone:** 319-551-4441

### PLM Instructions:

- PLM: Bulk Asbestos Building Materials EPA 600 R-93/116, 1993
  - PLM: Bulk Asbestos Building Materials EPA 600 M-4/82-020, 1982
  - PLM: Bulk Asbestos Building Materials NIOSH 9002, 1985
  - PLM: Bulk Asbestos Building Materials NYSDOH-ELAP 198.1, 2002
  - PLM: Bulk Asbestos Building Materials NYSDOH-ELAP 198.6, 2010
  - TEM: Bulk Asbestos Building Materials NYSDOH-ELAP 198.4, 2009
- 
- PLM: Point Counting
    - PC: via ELAP 198.1
    - PC: 400 Points
    - PC: 800 Points \*
    - PC: 1600 Points \*
  - PLM: Analyze Until Positive (Positive Stop)
    - AUP: by Homogenous Area as Noted
    - AUP: by Material Type as Noted
  - PLM: NOB via 198.6
    - PLM: Friable via EPA 600 2.3
    - If <1% by PLM, to TEM via 198.4 \*
    - If <1% by PLM, Hold for Instructions
  - PLM: Instructions for Multi-Layered Samples
    - Analyze and Report All Separable Layers per EPA 600
    - Report Composite for Drywall Systems per NESHAP
    - Report All Layers and Composite Where Applicable
    - Only Analyze and Report Specifically Noted Layer
  - PLM: Non-Building Material<sup>\*\*\*</sup> (Dust, Wipe, Tape)
    - Soil or Vermiculite Analysis \*
    - CARB 435

### Special Instructions:

\* Additional charge and turnaround may be required \*\* Alternative Method (ex: EPA 600/R-04/004) may be recommended by Laboratory

### Turnaround Time

Preliminary Results Requested Date: \_\_\_\_\_  Verbal  Email  Fax  
Specific date / time  
 10 Day  5 Day  3 Day  2 Day  1 Day\*  12 Hour\*\*  6 Hour\*\*  RUSH\*\*

\* End of next business day unless otherwise specified. \*\* Matrix Dependent. \*\*\*Please notify the lab before shipping\*\*\*

### Chain of Custody

Relinquished (Name/Organization):	<u>Cody Henneberry</u>	Date:	<u>7-28-17</u>	Time:	<u>5:00 PM</u>
Received (Name / iATL):	_____	Date:	_____	Time:	_____
Sample Login (Name / iATL):	_____	Date:	_____	Time:	_____
Analysis (Name(s) / iATL):	_____	Date:	<u>8/4/17</u>	Time:	<u>9</u>
QA/QC Review (Name / iATL):	<u>[Signature]</u>	Date:	<u>8-4-17</u>	Time:	_____
Archived / Released:	_____	Date:	_____	Time:	<u>JUL 31 2017</u>

## Sample Log

-Bulk Asbestos -

Client: Hawkeye Environmental

Project: 1372 22nd Ave SW

Sampling Date/Time: 7-28-17

Bulk Asbestos Sample Log			
Client Sample #	IATL #	Location/Description	Notes
001	0301507	shingle (house)	black
002	0301508	tar paper (house)	"
003	0301509	shingle (garage)	" / wht.
004	0301510	" (")	" / brown
005	0301511	tar paper (garage)	blk.
006	0301512	vapor barrier (house - under yellow)	blk
007	0301513	siding (house)	yellow
008	0301514	asphalt siding (back door)	blk / wht
009	0301515	tar paper (in garage)	blk.
010	0301516	shingle (" ")	blk / wht
011	0301517	siding (house)	blue
012	0301518	window caulk ("")	gray
013	0301519	door caulk ("")	"
014	0301520	sideing (garage)	blue
015	0301521	window caulking ("")	gray
016	0301522	vent tar (house)	blk

## Sample Log

– Bulk Asbestos –

Client: Hawkeye Environmental

Project: 1372 22<sup>nd</sup> Ave SW

Sampling Date/Time: 7-28-17

Bulk Asbestos Sample Log			
Client Sample #	iATL #	Location/Description	Notes
B17	0301503	window caulking (house)	gray
B18	0301504	" " (garage)	"
B19	0301505	plaster (living Rm)	gray
B20	0301506	skim coat ( " " )	white
B21	0301507	plaster (dining)	gray
B22	0301508	skim coat ( " " )	white
B23	0301509	plaster (bedroom)	gray
B24	0301510	skim coat ( " " )	white
B25	0301511	spray applied toxt (Kitchen)	"
B26	0301512	" " " (upstairs)	"
B27	0301513	" " " (living Rm)	"
B28	0301514	12" Floor tile (bathroom)	beige
B29	0301515	linoleum (Kitchen)	brown
B30	0301516	tarpaper ( " ) (under line)	blk
B31	0301517	panel adhesive (Kitchen)	white
B32	0301518	sub adhesive (bathroom)	yellow

## Sample Log

-Bulk Asbestos -

Client: Hawkeye Environmental Project: 1372 22nd Ave SW

Sampling Date/Time: 7-28-17

Bulk Asbestos Sample Log			
Client Sample #	iATL #	Location/Description	Notes
033	0301599	drywall (kitchen)	white
034	0301600	" tape (")	"
035	0301601	" joint compound (")	"
036	0301602	" " " (upstairs)	"
037	0301603	" " " (living Rm)	"
038	0301604	" (garage)	"
039	0301605	blown-in insulation	gray
040	0301606	caulking (fuse box)	white
041	0301607	pressboard wall (kitchen)	brown
042	0301608	carpet mastic (back entry)	yellow





## ENVIRONMENTAL ASSESSMENT REPORT



**City of Cedar Rapids  
618 G Avenue NW  
Cedar Rapids, IA**

**Project Report Dated: August 11, 2017**



**I. CONTENTS**

**A. ASBESTOS INSPECTION REPORT**

- 1. LOCATION**
- 2. CONTACT PERSONS**
- 3. DATE OF INSPECTION**
- 4. FIRM PERFORMING THE INSPECTION**
- 5. LICENSING OF ACCREDITED INSPECTOR(S)**
- 6. BULK SAMPLE LABORATORY**
- 7. LABORATORY ACCREDITATION**

**B. SCOPE OF WORK / INSPECTION NOTES**

**C. SUMMARY OF ASBESTOS MATERIALS**

**D. BULK SAMPLE ANALYSIS / CHAIN OF CUSTODY**

**E. ASBESTOS CONTAINING MATERIAL PHOTOS**

**F. HOUSEHOLD HAZARDOUS WASTES**



## **A. ASBESTOS INSPECTION REPORT DATA**

### **1. LOCATION(s)**

618 G Avenue NW  
Cedar Rapids, Iowa

### **2. CLIENT CONTACT**

Mr. John Riggs  
Manager, Building Services Division  
City of Cedar Rapids  
500 15th Avenue SW, Cedar Rapids, IA 52404

### **3. DATE(s) OF INSPECTION**

August 4, 2017

### **4. FIRM PERFORMING INSPECTION**

Hawkeye Environmental  
814 Wood Lily Road  
Solon, IA 52333

### **5. INSPECTOR LICENSING**

State of Iowa License # (s):  
17-7513 Steve Henneberry  
16-6940 Cody Henneberry

### **6. LABORATORY USED FOR BULK SAMPLE ANALYSIS**

International Asbestos Testing Laboratories  
9000 Commerce Parkway Suite B  
Mt. Laurel, New Jersey 08054

### **7. LABORATORY ACCREDITATION**

NVLAP (Nation Voluntary Laboratory Accreditation Program)





## B. SCOPE OF WORK

### Methods and Procedures:

The property located at 618 G Avenue NW, Cedar Rapids, Iowa was inspected prior to scheduled demolition activities which may disturb asbestos containing building materials in accordance with NESHAPS (National Emission Standards for Hazardous Air Pollutants) regulations.

Field sampling methods were based on (NESHAPS) National Emission Standards for Hazardous Air Pollutants) protocols. Representative samples of suspect building materials were taken from Homogeneous Areas (HA-defined as similar in age, appearance and function). The purpose of this inspection was to identify quantities and locations of asbestos containing building materials prior to demolition of the structures. Bulk samples of suspect asbestos containing materials (ACM) were analyzed by Polarized Light Microscopy (PLM) with dispersion staining, as described in 40 CFR Part 763 and NESHAPs. Each sample was analyzed for the six different types of fibrous asbestos forms, of which a percentage, by volume, is estimated and summarized. If further analysis and quantification is warranted, this analysis is performed by EPA 600/R-93/116 with 400 or 600 Point Count Procedure. Further analysis of samples may also be performed at the client's request using Transmission Electron Microscopy (TEM).

Sample analysis was performed by Environmental Testing Laboratories, Inc., of Romulus, Michigan. EMSL is accredited by the National Institute for Standards and Technology for Polarized Light Microscopy analysis under their NVLAP (National Voluntary Lab Accreditation Program).

Asbestos Containing Building Materials (ACBM)s and their control during renovation or demolition activities is regulated in Iowa by the Iowa Department of Natural Resources. Specific questions about testing or abatement activities may be directed to Mr. Tom Wuehr, Iowa DNR - Air Quality Division. [Tom.Wuehr@DNR.iowa.gov](mailto:Tom.Wuehr@DNR.iowa.gov) 515-494-8212 Additional forms, guidance and technical information regarding asbestos can be found on the DNR website at:

***<http://www.iowadnr.gov/air/prof/asbestos/asbestos.html>***

A visual inspection of the Property was conducted to determine the presence, location and approximate quantities of Household Hazardous Wastes (HHW's). A table summarizing identified HHW's is included in Section F of this report.



## **INSPECTION NOTES**

In accordance with your request and authorization Hawkeye Environmental, LLC has performed an asbestos survey for the project referenced above. It is our understanding that the buildings will be demolished which has the potential to disturb all building materials. It is the intent of this survey to determine if any of the materials with potential for disturbance are asbestos containing.

The structure is a single family residence which is in average to poor condition for its age and state of use.

Roof or roofing systems were sampled and included in this report.

A representative number of samples were collected from all suspect asbestos building materials.

Household Hazardous Wastes present inside structures and throughout the property were identified and listed in appendix E.



**C. SUMMARY OF ASBESTOS BUILDING MATERIALS**

**618 G Avenue NW**

**Surfacing Materials**

<b><u>Material</u></b>	<b><u>Description</u></b>	<b><u>Location</u></b>	<b><u>Quantity</u></b>
None			

**Thermal Systems Insulation**

<b><u>Material</u></b>	<b><u>Description</u></b>	<b><u>Location</u></b>	<b><u>Quantity</u></b>
Duct Paper	Gray	Furnace In-wall ducts	80 LF

**Miscellaneous Materials**

<b><u>Material</u></b>	<b><u>Description</u></b>	<b><u>Location</u></b>	<b><u>Quantity</u></b>
Cement Asbestos Siding	Gray	Exterior	1950 SF
Chimney Tar / Mastic	Gray / Black	Porch Roofs / Chimney	55 LF

**Contractors must field verify all material quantities, locations and condition prior to bid.**



## **BULK SAMPLE ANALYSIS**

**City of Cedar Rapids  
618 G Avenue NW  
Cedar Rapids, Iowa**

# ENVIRONMENTAL TESTING LABORATORIES, INC.



38900 HURON RIVER DRIVE, SUITE 200  
ROMULUS, MICHIGAN 48174  
(734) 955-6600  
FAX: (734) 955-6604

To : Hawkeye Environmental  
814 Wood Lily Rd  
Solon, IA 52333

Project Location : City Of Cedar Rapids  
618 G Ave NW

Attention : Steve Henneberry

Client Project : N/A

ETC Job : 195533

Report Date : 8/10/2017

Login #	Sample ID	Work Requested	Completed
583511	001	Asbestos Analysis	08/10/2017
583512	002	Asbestos Analysis	08/10/2017
583513	003	Asbestos Analysis	08/10/2017
583514	004	Asbestos Analysis	08/10/2017
583515	005	Asbestos Analysis	08/10/2017
583516	006	Asbestos Analysis	08/10/2017
583517	007	Asbestos Analysis	08/10/2017
583518	008	Asbestos Analysis	08/10/2017
583519	009	Asbestos Analysis	08/10/2017
583520	010	Asbestos Analysis	08/10/2017
583521	011	Asbestos Analysis	08/10/2017
583522	012	Asbestos Analysis	08/10/2017
583523	013	Asbestos Analysis	08/10/2017
583524	014	Asbestos Analysis	08/10/2017
583525	015	Asbestos Analysis	08/10/2017
583526	016	Asbestos Analysis	08/10/2017
583527	017	Asbestos Analysis	08/10/2017
583528	018	Asbestos Analysis	08/10/2017
583529	019	Asbestos Analysis	08/10/2017
583530	020	Asbestos Analysis	08/10/2017

This report is intended for use solely by the individual or entity to which it is addressed. This report may not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government. It may contain information that is privileged, confidential and otherwise exempt by law from disclosure. If the reader of this information is not the intended recipient or an employee of its intended recipient, you are herewith notified that any dissemination, distribution or copying of this information is strictly prohibited. If you have received this information in error, please notify ETL immediately. Thank you.

---

Login #	Sample ID	Work Requested	Completed
583531	021	Asbestos Analysis	08/10/2017
583532	022	Asbestos Analysis	08/10/2017
583533	023	Asbestos Analysis	08/10/2017
583534	024	Asbestos Analysis	08/10/2017
583535	025	Asbestos Analysis	08/10/2017
583536	026	Asbestos Analysis	08/10/2017
583537	027	Asbestos Analysis	08/10/2017
583538	028	Asbestos Analysis	08/10/2017
583539	029	Asbestos Analysis	08/10/2017
583540	030	Asbestos Analysis	08/10/2017
583541	31	Asbestos Analysis	08/10/2017
583542	032	Asbestos Analysis	08/10/2017

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Reviewed by:



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Quality Assurance Coordinator



### Polarized Light Microscopy Asbestos Analysis Report

**To :** Hawkeye Environmental  
814 Wood Lily Rd  
Solon, IA 52333  
**Location :** City Of Cedar Rapids  
618 G Ave NW

**ETC Job :** 195533  
**Client Project :** N/A  
**Date Collected :** 08/04/2017  
**Date Received :** 08/07/2017  
**Date Analyzed :** 08/10/2017

Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
583511 001  Analyst: Scott Larabell	Chimney Tar	Black/Gray Non-Fibrous Homogenous	5% Cellulose	92% Other	3% Chrysotile
583512 002  Analyst: Scott Larabell	Shingle	Black Non-Fibrous Homogenous	3% Cellulose	97% Other	None Detected
583513 003  Analyst: Scott Larabell	Cement Siding	Grey Non-Fibrous Homogenous	5% Cellulose	75% Other	20% Chrysotile
583514 004  Analyst: Scott Larabell	Vapor Barrier	Black Fibrous Homogenous	60% Cellulose	40% Other	None Detected
583515 005  Analyst: Scott Larabell	Vapor Barrier	Black Fibrous Homogenous	65% Cellulose	35% Other	None Detected
583516 006 Ext Analyst: Scott Larabell	Window Glazing (Ext)	Grey Non-Fibrous Homogenous	3% Cellulose	97% Other	None Detected
583517 007 Entry Analyst: Scott Larabell	Spray Texture	White Non-Fibrous Homogenous	2% Cellulose	98% Other	None Detected

## Polarized Light Microscopy Asbestos Analysis Report

**To :** Hawkeye Environmental  
 814 Wood Lily Rd  
 Solon, IA 52333  
**Location :** City Of Cedar Rapids  
 618 G Ave NW

**ETC Job :** 195533  
**Client Project :** N/A  
**Date Collected :** 08/04/2017  
**Date Received :** 08/07/2017  
**Date Analyzed :** 08/10/2017

Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
583518 008 Living Room Analyst: Scott Larabell	Spray Texture	Blue Non-Fibrous Homogenous	2% Cellulose	98% Other	None Detected
583519 009 Dining Room Analyst: Scott Larabell	Spray Texture	Blue Non-Fibrous Homogenous	2% Cellulose	98% Other	None Detected
583520 010 Entry Analyst: Scott Larabell	Wall Texture	Purple Non-Fibrous Homogenous	3% Cellulose	97% Other	None Detected
583521 011 Dining Room Analyst: Scott Larabell	Wall Texture	Purple Non-Fibrous Homogenous	3% Cellulose	97% Other	None Detected
583522 012 Dining Room Analyst: Scott Larabell	Wall Texture	Blue Non-Fibrous Homogenous	2% Cellulose	98% Other	None Detected
583523 013 Dining Room Analyst: Scott Larabell	Panel Texture	Blue Non-Fibrous Homogenous	2% Cellulose	98% Other	None Detected
583524 014 Dining Room Analyst: Scott Larabell	Panel Texture	Blue Non-Fibrous Homogenous	3% Cellulose	97% Other	None Detected

ETL, Inc. maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced without written approval by ETL, Inc. Test Method EPA 600/R-93-116 & EPA 600/M4-82/020 or NYSDOH-ELAP item 198.1 and/or 198.6 was used to analyze all samples. Matrix interference and/or resolution limits (i.e. detecting asbestos in non-friable organically bound materials) may yield false results in certain circumstances. Quantitative transmission electron microscopy (TEM) is currently the only method that can pronounce materials as non-asbestos containing. Interpretation and use of test results are the responsibility of the client. ETL, Inc. is not responsible for the accuracy of the results when requested to physically separate and analyze layered samples. Any PLM results below 10% should be re-analyzed using the EPA recommended Point Count method. Any material that has greater than 1% asbestos content is considered to be an Asbestos Containing Material (ACM). These materials are regulated by both OSHA and the EPA and must be treated accordingly. Results are related to only to samples that were tested.



## Polarized Light Microscopy Asbestos Analysis Report

**To :** Hawkeye Environmental  
 814 Wood Lily Rd  
 Solon, IA 52333  
**Location :** City Of Cedar Rapids  
 618 G Ave NW

**ETC Job :** 195533  
**Client Project :** N/A  
**Date Collected :** 08/04/2017  
**Date Received :** 08/07/2017  
**Date Analyzed :** 08/10/2017

Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
583525 015 Dining Room Analyst: Scott Larabell	Panel Texture	Blue Non-Fibrous Homogenous	3% Cellulose	97% Other	None Detected
583526 016 Analyst: Scott Larabell	Duct Paper	Grey Fibrous Homogenous	10% Cellulose	65% Other	25% Chrysotile
583527 017 Dining Room Analyst: Scott Larabell	Wall Panel	Brown Non-Fibrous Homogenous	70% Cellulose	30% Other	None Detected
583528 018 Dining Room Analyst: Scott Larabell	Wall Adhesive	Tan Non-Fibrous Homogenous	3% Cellulose	97% Other	None Detected
583529 019 Sun Room Analyst: Scott Larabell	Plaster	Grey Non-Fibrous Homogenous	2% Cellulose	98% Other	None Detected
583530 020 Sun Room Analyst: Scott Larabell	Skim	White Non-Fibrous Homogenous	2% Cellulose	98% Other	None Detected
583531 021 Entry Analyst: Scott Larabell	Plaster	Grey Non-Fibrous Homogenous	2% Cellulose	98% Other	None Detected

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### Polarized Light Microscopy Asbestos Analysis Report

**To :** Hawkeye Environmental  
814 Wood Lily Rd  
Solon, IA 52333  
**Location :** City Of Cedar Rapids  
618 G Ave NW

**ETC Job :** 195533  
**Client Project :** N/A  
**Date Collected :** 08/04/2017  
**Date Received :** 08/07/2017  
**Date Analyzed :** 08/10/2017

Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
583532 022 Entry Analyst: Scott Larabell	Skim	White Non-Fibrous Homogenous	3% Cellulose	97% Other	None Detected
583533 023 Up Bed Analyst: Scott Larabell	Plaster	Grey Non-Fibrous Homogenous	2% Cellulose	98% Other	None Detected
583534 024 Up Bed Analyst: Scott Larabell	Skim	White Non-Fibrous Homogenous	2% Cellulose	98% Other	None Detected
583535 025 Entry Analyst: Scott Larabell	Floor Tile	Brown Non-Fibrous Homogenous	2% Cellulose	98% Other	None Detected
583536 026 Kitchen Analyst: Scott Larabell	Floor Tile	Brown Non-Fibrous Homogenous	2% Cellulose	98% Other	None Detected
583537 027 Up Bath Analyst: Scott Larabell	Floor Tile	Wood Non-Fibrous Homogenous	2% Cellulose	98% Other	None Detected
583538 028 Kitchen Analyst: Scott Larabell	Linoleum	Yellow Non-Fibrous Homogenous	65% Cellulose	35% Other	None Detected

## Polarized Light Microscopy Asbestos Analysis Report

**To :** Hawkeye Environmental  
 814 Wood Lily Rd  
 Solon, IA 52333  
**Location :** City Of Cedar Rapids  
 618 G Ave NW

**ETC Job :** 195533  
**Client Project :** N/A  
**Date Collected :** 08/04/2017  
**Date Received :** 08/07/2017  
**Date Analyzed :** 08/10/2017

Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
583539 029 Dining Analyst: Scott Larabell	Linoleum	White Non-Fibrous Homogenous	60% Cellulose	40% Other	None Detected
583540 030 Sun Room Analyst: Scott Larabell	Ceiling Tile (2x4)	White Non-Fibrous Homogenous	2% Cellulose	98% Other	None Detected
583541 31 Above 2x4 Analyst: Scott Larabell	Ceiling Tile (2x2)	White Fibrous Homogenous	70% Cellulose	30% Other	None Detected
583542 032 Attic Analyst: Scott Larabell	Blown-In Insulation	Brown Fibrous Homogenous	50% Cellulose 30% Mineral wool	20% Other	None Detected



Lab Supervisor/Other Signatory



Analyst: Scott Larabell

400 Point Count Results by EPA 600/R-93/116 PLM (denoted by "PC")  
 Item 198.1: PLM Methods for Identifying and Quantitating Asbestos in Bulk Samples  
 Item 198.6: PLM Methods for Identifying and Quantitating Asbestos in Non-Friable Organically Bound Bulk Samples  
 EPA 600/R-93/116: Method for Determination of Asbestos in Bulk Building Materials  
 EPA 600/M4-82-020: Interim Method for Determination of Asbestos in Bulk Insulation Samples

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**ENVIRONMENTAL TESTING LABORATORIES, INC**



38900 HURON RIVER DRIVE  
 ROMULUS, MICHIGAN 48174  
 (734) 955-6600  
 FAX: (734) 992-2261  
 www.2ell.com

**Bulk Asbestos  
 Chain of Custody**

ETL Project #: 195533

<b>Client:</b> Hawkeye Environmental	<b>Contact:</b> Steve Henneberry Phone: 319-551-4441	<b>Project Location/name:</b> 618 G Ave. NW City of Cedar Rapids
<b>Address:</b> 814 Wood Lily Road, Solon, IA 52333	<b>Fax:</b> E-mail: Steve@Hawkeyeenv.com	<b>Client Project #:</b>
<b>Please Provide Results:</b> <input checked="" type="checkbox"/> Email <input type="checkbox"/> Fax <input type="checkbox"/> Verbal <input type="checkbox"/> Other _____		<b>Date Sampled:</b> 8/4/17

**Turnaround Time (TAT):**  RUSH  Same Day  24 hr  48 hr  Standard (3+ days)  Other \_\_\_\_\_

**PLM Instructions**  
 (Check all that apply)

<input type="checkbox"/> PLM EPA600/R-93/116, 1993 (Standard method)	<input checked="" type="checkbox"/> Stop at 1st Positive - Clearly mark Homogenous Group
<input type="checkbox"/> Point Counting: 400 Points*	
<input type="checkbox"/> PLM Non-Building Material (Dust, Wipe, Tape)	<input type="checkbox"/> Soil or Vermiculite Analysis *

\* Additional charge and turnaround may be required

Lab ID	Sample ID	Sample Location	Material Description
583511	001	chimney tar/flashing	black/gray
512	002	shingle	black
513	003	cement siding	gray
514	004	vapor barrier	black
515	005	vapor barrier (under wood)	"
516	006	window glazing (ext)	gray
511	007	spray applied texture (entry)	white
518	008	" " " (living room)	blue
519	009	" " " (dining room)	"
520	010	wall texture (entry)	purple
521	011	" " " (dining room)	blue
522	012	" " " (" ")	blue

	Name/Organization	Date	Time
Relinquished (Name/Organization):	Cody Henneberry   Hawkeye Environmental	8/4/17	6:00 pm
Received (Name/ETL):		8/7/17	
Stereoscopic Analysis (Name/ETL):	SS	8-8-17	431 am/pm
Sample Login (Name/ETL):		8/7/17	
Analysis (Name/ETL):	SS	8-8-17	431 am/pm
QA/QC Review (Name/ETL):			

<b>Special Instructions:</b>	<b>Remarks:</b>
------------------------------	-----------------

**ENVIRONMENTAL TESTING LABORATORIES, INC**

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 www.2etl.com



**Bulk Asbestos  
 Chain of Custody**

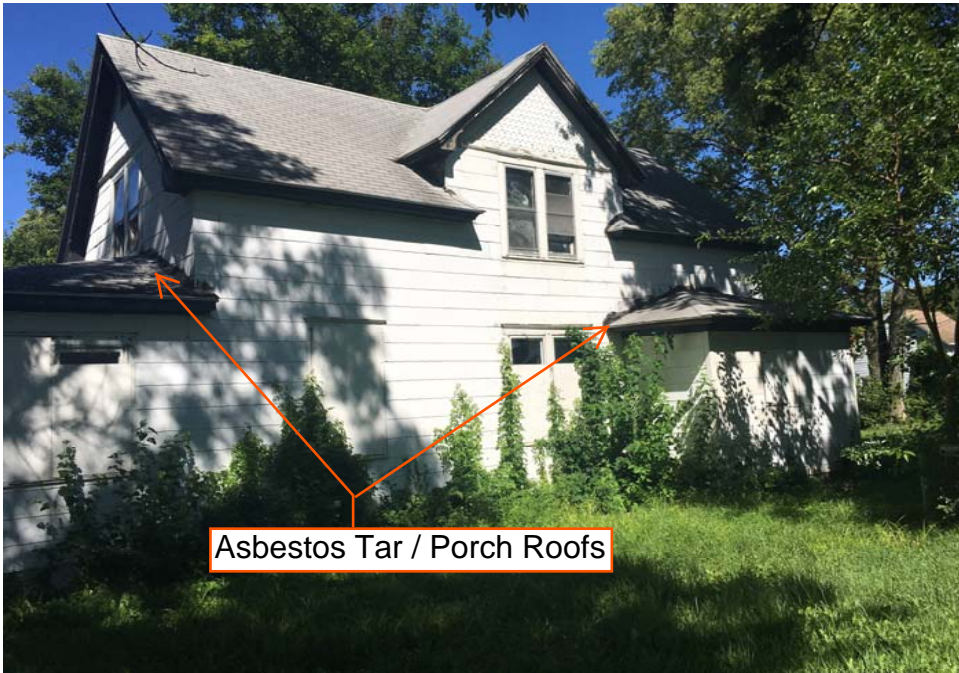
ETL Project #:

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Lab ID	Sample ID	Sample Location	Material Description
523	013	Panel texture (dining)	blue
524	014	" " ( " )	"
525	015	" " ( " )	"
526	016	Duct paper	gray
527	017	wall panel (dining)	brown
528	018	" " adhesive ( " )	tan
529	019	plaster (sun room)	gray
530	020	skim coat ( " )	white
531	021	plaster (entry)	gray
532	022	skim coat ( " )	white
533	023	plaster (up bed)	gray
534	024	skim coat ( " )	white
535	025	12" floor tile (entry)	brown
536	026	" " " (kitchen)	"
537	027	" " " (up bath)	wood
538	028	linoleum (kitchen)	yellow
539	029	" (dining)	white
540	030	2x4 ceiling tile (sun rm)	white
541	031	2x2 " " (above 2x4)	white
542	032	blown-in (attic)	brown



Cement Asbestos Siding



Asbestos Tar / Porch Roofs





Asbestos Tar



Asbestos In-wall Duct Paper









ENVIRONMENTAL ASSESSMENT  
REPORT



**City of Cedar Rapids  
818 12th Street NE  
Cedar Rapids, IA**

**Project Report Dated: August 10, 2017**



**I. CONTENTS**

**A. ASBESTOS INSPECTION REPORT**

- 1. LOCATION**
- 2. CONTACT PERSONS**
- 3. DATE OF INSPECTION**
- 4. FIRM PERFORMING THE INSPECTION**
- 5. LICENSING OF ACCREDITED INSPECTOR(S)**
- 6. BULK SAMPLE LABORATORY**
- 7. LABORATORY ACCREDITATION**

**B. SCOPE OF WORK / INSPECTION NOTES**

**C. SUMMARY OF ASBESTOS MATERIALS**

**D. BULK SAMPLE ANALYSIS / CHAIN OF CUSTODY**

**E. HOUSEHOLD HAZADOUS WASTES**



## **A. ASBESTOS INSPECTION REPORT DATA**

### **1. LOCATION(s)**

818 12th Street NE  
Cedar Rapids, Iowa

### **2. CLIENT CONTACT**

Mr. John Riggs  
Manager, Building Services Division  
City of Cedar Rapids  
500 15th Avenue SW, Cedar Rapids, IA 52404

### **3. DATE(s) OF INSPECTION**

July, 2017

### **4. FIRM PERFORMING INSPECTION**

Hawkeye Environmental  
814 Wood Lily Road  
Solon, IA 52333

### **5. INSPECTOR LICENSING**

State of Iowa License # (s):  
17-7513 Steve Henneberry  
16-6940 Cody Henneberry

### **6. LABORATORY USED FOR BULK SAMPLE ANALYSIS**

International Asbestos Testing Laboratories  
9000 Commerce Parkway Suite B  
Mt. Laurel, New Jersey 08054

### **7. LABORATORY ACCREDITATION**

NVLAP (Nation Voluntary Laboratory Accreditation Program)  
Lab Code: 101165-0



## B. SCOPE OF WORK

### Methods and Procedures:

**The property located at 818 12th Street NE, Cedar Rapids, Iowa** was inspected prior to scheduled demolition activities which may disturb asbestos containing building materials in accordance with NESHAPS (National Emission Standards for Hazardous Air Pollutants) regulations.

Field sampling methods were based on (NESHAPS) National Emission Standards for Hazardous Air Pollutants) protocols. Representative samples of suspect building materials were taken from Homogeneous Areas (HA-defined as similar in age, appearance and function). The purpose of this inspection was to identify quantities and locations of asbestos containing building materials prior to demolition of the structures. Bulk samples of suspect asbestos containing materials (ACM) were analyzed by Polarized Light Microscopy (PLM) with dispersion staining, as described in 40 CFR Part 763 and NESHAPS. Each sample was analyzed for the six different types of fibrous asbestos forms, of which a percentage, by volume, is estimated and summarized. If further analysis and quantification is warranted, this analysis is performed by EPA 600/R-93/116 with 400 or 600 Point Count Procedure. Further analysis of samples may also be performed at the client's request using Transmission Electron Microscopy (TEM).

Sample analysis was performed by Environmental Testing Laboratories, Inc., of Romulus, Michigan. EMSL is accredited by the National Institute for Standards and Technology for Polarized Light Microscopy analysis under their NVLAP (National Voluntary Lab Accreditation Program).

Asbestos Containing Building Materials (ACBM)s and their control during renovation or demolition activities is regulated in Iowa by the Iowa Department of Natural Resources. Specific questions about testing or abatement activities may be directed to Mr. Tom Wuehr, Iowa DNR - Air Quality Division. [Tom.Wuehr@DNR.iowa.gov](mailto:Tom.Wuehr@DNR.iowa.gov) 515-494-8212 Additional forms, guidance and technical information regarding asbestos can be found on the DNR website at:

***<http://www.iowadnr.gov/air/prof/asbestos/asbestos.html>***

A visual inspection of the Property was conducted to determine the presence, location and approximate quantities of Household Hazardous Wastes (HHW's). A table summarizing identified HHW's is included in Section F of this report.



## **INSPECTION NOTES**

In accordance with your request and authorization Hawkeye Environmental, LLC has performed an asbestos survey for the project referenced above. It is our understanding that the buildings will be demolished which has the potential to disturb all building materials. It is the intent of this survey to determine if any of the materials with potential for disturbance are asbestos containing.

The structure is a single family residence which is in average to poor condition for its age and state of use.

Roof or roofing systems were sampled and included in this report.

A representative number of samples were collected from all suspect asbestos building materials.

Household Hazardous Wastes present inside structures and throughout the property were identified and listed in appendix E.



**C. SUMMARY OF ASBESTOS BUILDING MATERIALS**

**818 12th Street NE**

**Surfacing Materials**

<u>Material</u>	<u>Description</u>	<u>Location</u>	<u>Quantity</u>
None			

**Thermal Systems Insulation**

<u>Material</u>	<u>Description</u>	<u>Location</u>	<u>Quantity</u>
Duct Paper	White	Furnace Duct Boots	< 25 LF

**Miscellaneous Materials**

<u>Material</u>	<u>Description</u>	<u>Location</u>	<u>Quantity</u>
Sheet Flooring	Yellow	Kitchen	140 SF

**Contractors must field verify all material quantities, locations and condition prior to bid.**



## **BULK SAMPLE ANALYSIS**

**City of Cedar Rapids  
818 12th Street NE  
Cedar Rapids, Iowa**

## CERTIFICATE OF ANALYSIS

**Client:** Hawkeye Environmental  
814 Wood Lily Road  
Solon IA 52333

**Report Date:** 8/4/2017  
**Report No.:** 542844 - PLM  
**Project:** 818 12th St NE  
**Project No.:**

**Client:** HAW824

### PLM BULK SAMPLE ANALYSIS SUMMARY

**Lab No.:** 6301539  
**Client No.:** 001

Percent Asbestos:  
*None Detected*

**Description:** White Shingle  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
35 Cellulose

**Location:** House

Percent Non-Fibrous Material:  
65

**Lab No.:** 6301540  
**Client No.:** 002

Percent Asbestos:  
*None Detected*

**Description:** Black Roof Material  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
35 Cellulose

**Location:** House

Percent Non-Fibrous Material:  
65

**Lab No.:** 6301541  
**Client No.:** 003

Percent Asbestos:  
*None Detected*

**Description:** Black Shingle  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
35 Cellulose

**Location:** Garage

Percent Non-Fibrous Material:  
65

**Lab No.:** 6301542  
**Client No.:** 004

Percent Asbestos:  
*None Detected*

**Description:** Black Tar Paper  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
80 Cellulose

**Location:** Garage

Percent Non-Fibrous Material:  
20

**Lab No.:** 6301543  
**Client No.:** 005

Percent Asbestos:  
*None Detected*

**Description:** White Shingle  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
35 Cellulose

**Location:** House Siding

Percent Non-Fibrous Material:  
65

**Lab No.:** 6301544  
**Client No.:** 006

Percent Asbestos:  
*None Detected*

**Description:** Black Tar Paper  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
90 Cellulose

**Location:** House

Percent Non-Fibrous Material:  
10

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

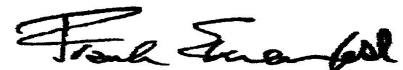
**Date Received:** 7/31/2017

**Date Analyzed:** 08/04/2017

**Signature:**

**Analyst:** Randy Caran

**Approved By:**



Frank E. Ehrenfeld, III  
Laboratory Director



## CERTIFICATE OF ANALYSIS

**Client:** Hawkeye Environmental  
814 Wood Lily Road  
Solon IA 52333

**Report Date:** 8/4/2017  
**Report No.:** 542844 - PLM  
**Project:** 818 12th St NE  
**Project No.:**

**Client:** HAW824

### PLM BULK SAMPLE ANALYSIS SUMMARY

<b>Lab No.:</b> 6301545	<b>Description:</b> White Sheetrock	<b>Location:</b> Living Rm
<b>Client No.:</b> 007	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 3 Cellulose	<u>Percent Non-Fibrous Material:</u> 97

<b>Lab No.:</b> 6301546	<b>Description:</b> White Tape	<b>Location:</b> Living Rm
<b>Client No.:</b> 008	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 100 Cellulose	<u>Percent Non-Fibrous Material:</u> None Detected


<b>Lab No.:</b> 6301547	<b>Description:</b> White Joint Compound	<b>Location:</b> Living Rm
<b>Client No.:</b> 009	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

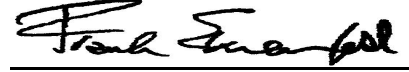
<b>Lab No.:</b> 6301548	<b>Description:</b> White Joint Compound	<b>Location:</b> Bathroom
<b>Client No.:</b> 010	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

<b>Lab No.:</b> 6301549	<b>Description:</b> White Joint Compound	<b>Location:</b> Kitchen
<b>Client No.:</b> 011	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

<b>Lab No.:</b> 6301550	<b>Description:</b> Black Tar Paper	<b>Location:</b> Int.
<b>Client No.:</b> 012	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 90 Cellulose	<u>Percent Non-Fibrous Material:</u> 10

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

**Date Received:** 7/31/2017  
**Date Analyzed:** 08/04/2017  
**Signature:**   
**Analyst:** Randy Caran

**Approved By:**   
Frank E. Ehrenfeld, III  
Laboratory Director

## CERTIFICATE OF ANALYSIS

**Client:** Hawkeye Environmental  
814 Wood Lily Road  
Solon IA 52333

**Report Date:** 8/4/2017  
**Report No.:** 542844 - PLM  
**Project:** 818 12th St NE  
**Project No.:**

**Client:** HAW824

### PLM BULK SAMPLE ANALYSIS SUMMARY

<p><b>Lab No.:</b> 6301551 <b>Client No.:</b> 013</p> <p><u>Percent Asbestos:</u> <i>None Detected</i></p>	<p><b>Description:</b> Brown/Orange/Red/Green Vinyl Sheet Flooring <b>Facility:</b></p> <p><u>Percent Non-Asbestos Fibrous Material:</u> 75 Cellulose</p>	<p><b>Location:</b> Stairs</p> <p><u>Percent Non-Fibrous Material:</u> 25</p>
--	---	---

<p><b>Lab No.:</b> 6301552 <b>Client No.:</b> 014</p> <p><u>Percent Asbestos:</u> <b>35 Chrysotile</b></p>	<p><b>Description:</b> Yellow Vinyl Sheet Flooring <b>Facility:</b></p> <p><u>Percent Non-Asbestos Fibrous Material:</u> None Detected</p>	<p><b>Location:</b> Kitchen</p> <p><u>Percent Non-Fibrous Material:</u> 65</p>
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<p><b>Lab No.:</b> 6301553 <b>Client No.:</b> 015</p> <p><u>Percent Asbestos:</u> <i>None Detected</i></p>	<p><b>Description:</b> Off-White Vinyl Sheet Flooring <b>Facility:</b></p> <p><u>Percent Non-Asbestos Fibrous Material:</u> 10 Cellulose</p>	<p><b>Location:</b> Kitchen</p> <p><u>Percent Non-Fibrous Material:</u> 90</p>
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<p><b>Lab No.:</b> 6301554 <b>Client No.:</b> 016</p> <p><u>Percent Asbestos:</u> <i>None Detected</i></p>	<p><b>Description:</b> Grey Vinyl Sheet Flooring <b>Facility:</b></p> <p><u>Percent Non-Asbestos Fibrous Material:</u> 25 Cellulose 5 Fibrous Glass</p>	<p><b>Location:</b> Bathroom</p> <p><u>Percent Non-Fibrous Material:</u> 70</p>
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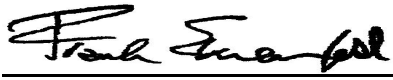
<p><b>Lab No.:</b> 6301555 <b>Client No.:</b> 017</p> <p><u>Percent Asbestos:</u> <i>None Detected</i></p>	<p><b>Description:</b> Grey Plaster <b>Facility:</b></p> <p><u>Percent Non-Asbestos Fibrous Material:</u> 2 Cellulose</p>	<p><b>Location:</b> Bathroom</p> <p><u>Percent Non-Fibrous Material:</u> 98</p>
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<p><b>Lab No.:</b> 6301556 <b>Client No.:</b> 018</p> <p><u>Percent Asbestos:</u> <i>None Detected</i></p>	<p><b>Description:</b> White Plaster <b>Facility:</b></p> <p><u>Percent Non-Asbestos Fibrous Material:</u> None Detected</p>	<p><b>Location:</b> Bathroom</p> <p><u>Percent Non-Fibrous Material:</u> 100</p>
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Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

**Date Received:** 7/31/2017  
**Date Analyzed:** 08/04/2017

**Signature:**   
**Analyst:** Randy Caran

**Approved By:**   
Frank E. Ehrenfeld, III  
Laboratory Director

## CERTIFICATE OF ANALYSIS

**Client:** Hawkeye Environmental  
814 Wood Lily Road  
Solon IA 52333

**Report Date:** 8/4/2017  
**Report No.:** 542844 - PLM  
**Project:** 818 12th St NE  
**Project No.:**

**Client:** HAW824

### PLM BULK SAMPLE ANALYSIS SUMMARY

<b>Lab No.:</b> 6301557	<b>Description:</b> Grey Plaster	<b>Location:</b> Stairwell
<b>Client No.:</b> 019	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 2 Cellulose	<u>Percent Non-Fibrous Material:</u> 98

<b>Lab No.:</b> 6301558	<b>Description:</b> White Plaster	<b>Location:</b> Stairwell
<b>Client No.:</b> 020	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

<b>Lab No.:</b> 6301559	<b>Description:</b> Grey/Gold Plaster	<b>Location:</b> Living Rm
<b>Client No.:</b> 021	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>PC Trace Actinolite</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100


This sample contains vermiculite mineral. It is not vermiculite attic insulation, but may be considered for possible future analysis by EPA 600-04-004. See attached.

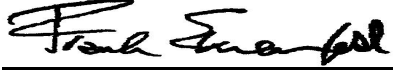
<b>Lab No.:</b> 6301560	<b>Description:</b> White Plaster	<b>Location:</b> Living Rm
<b>Client No.:</b> 022	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

<b>Lab No.:</b> 6301561	<b>Description:</b> White/Brown Insulation	<b>Location:</b>
<b>Client No.:</b> 023	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 100 Fibrous Glass	<u>Percent Non-Fibrous Material:</u> Trace

<b>Lab No.:</b> 6301562	<b>Description:</b> White Insulation	<b>Location:</b>
<b>Client No.:</b> 024	<b>Facility:</b>	
<u>Percent Asbestos:</u> <i>65 Chrysotile</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 35 Cellulose	<u>Percent Non-Fibrous Material:</u> None Detected

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

**Date Received:** 7/31/2017  
**Date Analyzed:** 08/04/2017  
**Signature:**   
**Analyst:** Randy Caran

**Approved By:**   
Frank E. Ehrenfeld, III  
Laboratory Director

## CERTIFICATE OF ANALYSIS

**Client:** Hawkeye Environmental  
814 Wood Lily Road  
Solon IA 52333

**Report Date:** 8/4/2017  
**Report No.:** 542844 - PLM  
**Project:** 818 12th St NE  
**Project No.:**

**Client:** HAW824

### PLM BULK SAMPLE ANALYSIS SUMMARY

**Lab No.:** 6301563  
**Client No.:** 025

Percent Asbestos:  
*None Detected*

**Description:** Brown Ceiling Tile  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
100 Cellulose

**Location:** Garage

Percent Non-Fibrous Material:  
Trace

**Lab No.:** 6301564  
**Client No.:** 026

Percent Asbestos:  
*None Detected*

**Description:** White/Brown 6x4 Ceiling Tile  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
100 Cellulose

**Location:** Porch

Percent Non-Fibrous Material:  
Trace

**Lab No.:** 6301565  
**Client No.:** 027

Percent Asbestos:  
*None Detected*

**Description:** Off-White Glazing  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
None Detected

**Location:** Window

Percent Non-Fibrous Material:  
100

**Lab No.:** 6301566  
**Client No.:** 028

Percent Asbestos:  
*None Detected*

**Description:** Grey Insulation  
**Facility:**

Percent Non-Asbestos Fibrous Material:  
100 Fibrous Glass

**Location:**

Percent Non-Fibrous Material:  
Trace

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

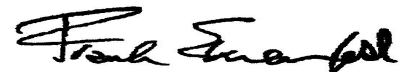
**Date Received:** 7/31/2017

**Date Analyzed:** 08/04/2017

**Signature:**

**Analyst:** Randy Caran

**Approved By:**



Frank E. Ehrenfeld, III  
Laboratory Director

## CERTIFICATE OF ANALYSIS

**Client:** Hawkeye Environmental  
814 Wood Lily Road  
Solon IA 52333

**Report Date:** 8/4/2017  
**Report No.:** 542844 - PLM  
**Project:** 818 12th St NE  
**Project No.:**

**Client:** HAW824

### Appendix to Analytical Report

**Customer Contact:** Steve Henneberry  
**Analysis:** US EPA 600, R93-116

This appendix seeks to promote greater understanding of any observations, exceptions, special instructions, or circumstances that the laboratory needs to communicate to the client concerning the above samples. The information below is used to help promote your ability to make the most informed decisions for you and your customers. Please note the following points of contact for any questions you may have.

**iATL Customer Service:** customerservice@iatl.com  
**iATL Office Manager:** cdavis@iatl.com  
**iATL Account Representative:** Shirley Clark  
**Sample Login Notes:** See Batch Sheet Attached  
**Sample Matrix:** Bulk Building Materials  
**Exceptions Noted:** See Following Pages

#### General Terms, Warrants, Limits, Qualifiers:

General information about iATL capabilities and client/laboratory relationships and responsibilities are spelled out in iATL policies that are listed at [www.iATL.com](http://www.iATL.com) and in our Quality Assurance Manual per ISO 17025 standard requirements. The information therein is a representation of iATL definitions and policies for turnaround times, sample submittal, collection media, blank definitions, quantification issues and limit of detection, analytical methods and procedures, sub-contracting policies, results reporting options, fees, terms, and discounts, confidentiality, sample archival and disposal, and data interpretation.

iATL warrants the test results to be of a precision normal for the type and methodology employed for each sample submitted. iATL disclaims any other warrants, expressed or implied, including warranty of fitness for a particular purpose and warranty of merchantability. iATL accepts no legal responsibility for the purpose for which the client uses test results. Any analytical work performed must be governed by our Standard Terms and Conditions. Prices, methods and detection limits may be changed without notification. Please contact your Customer Service Representative for the most current information.

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA LAP LLC, or any agency of local, state or province governments nor of any agency of the U.S. government.

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

#### Information Pertinent to this Report:

Analysis by US EPA 600 93-116: Determination of Asbestos in Bulk Building Materials by Polarized Light Microscopy (PLM).

#### Certifications:

- NIST-NVLAP No. 101165-0
- NY-DOH No. 11021
- AIHA-LAP, LLC No. 100188

Quantification at <0.25% by volume is possible with this method. (PC) Indicates Stratified Point Count Method performed. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed (ex. analyze until positive instructions). Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, PLM is not consistently reliable in detecting asbestos in non-friable organically bound (NOB) materials. Quantitative transmission electron microscopy (TEM) is currently the only method that can pronounce materials as non-asbestos containing.

Analytical Methodology Alternatives: Your initial request for analysis may not have accounted for recent advances in regulatory requirements or advances in technology that are routinely used in similar situations for other qualified projects. You may have the option to explore additional analysis for further information. Below are a few options, listed as the matrix followed by the appropriate methodology. Also included are links to more information on our website.

Bulk Building Materials that are Non-Friable Organically Bound (NOB) by Gravimetric Reduction techniques employing PLM and TEM: ELAP 198.6 (PLM-NOB), ELAP 198.4 (TEM-NOB)

Loose Fill Vermiculite Insulation, Attic Insulation, Zonolite (copyright), etc.: US EPA 600 R-4/004 (multi-tiered analytical process)  
Sprayed On Insulation/Fireproofing with Vermiculite (SOF-V): ELAP 198.8 (PLM-SOF-V)>

Soil, sludge, sediment, aggregate, and like materials analyzed for asbestos or other elongated mineral particles (ex. erionite, etc.): ASTM D7521, CARB 435, and other options available

## CERTIFICATE OF ANALYSIS

**Client:** Hawkeye Environmental  
814 Wood Lily Road  
Solon IA 52333

**Report Date:** 8/4/2017  
**Report No.:** 542844 - PLM  
**Project:** 818 12th St NE  
**Project No.:**

**Client:** HAW824

Asbestos in Surface Dust according to one of ASTM's Methods (very dependent on sampling collection technique – by TEM): ASTM D 5755, D5756, or D6480

Various other asbestos matrices (air, water, etc.) and analytical methods are available.

### Disclaimers / Qualifiers:

There may be some samples in this project that have a "NOTE:" associated with a sample result. We use added disclaimers or qualifiers to inform the client about something that requires further explanation. Here is a list with highlighted disclaimers that may be pertinent to this project. For a full explanation of these and other disclaimers, please inquire at [customerservice@iatl.com](mailto:customerservice@iatl.com).

- 1) Note: No mastic provided for analysis.
- 2) Note: Insufficient mastic provided for analysis.
- 3) Note: Insufficient material provided for analysis.
- 4) Note: Insufficient sample provided for QC reanalysis.
- 5) Note: Different material than indicated on Sample Log / Description.
- 6) Note: Sample not submitted.
- 7) Note: Attached to asbestos containing material.
- 8) Note: Received wet.
- 9) Note: Possible surface contamination.
- 10) Note: Not building material. 1% threshold may not apply.
- 11) Note: Recommend TEM-NOB analysis as per EPA recommendations.
- 12) Note: Asbestos detected but not quantifiable.
- 13) Note: Multiple identical samples submitted, only one analyzed.
- 14) Note: Analyzed by EPA 600/R-93/116. Point Counting detection limit at 0.080%.
- 15) Note: Analyzed by EPA 600/R-93/116. Point Counting detection limit at 0.125%.

### Recommendations for Vermiculite Analysis:

Several analytical protocols exist for the analysis of asbestos in vermiculite. These analytical approaches vary depending upon the nature of the vermiculite mineral being tested (e.g. un-processed gänge, homogeneous exfoliated books of mica, or mixed mineral composites). Please contact your client representative for pricing and turnaround time options available.

iATL recommends initial testing using the EPA 600/R-93/116 method. This method is specifically designed for the analysis of asbestos in bulk building materials. It provides an acceptable starting point for primary screening of vermiculite for possible asbestos.

Results from this testing may be inconclusive. EPA suggests proceeding to a multi-tiered analysis involving wet separation techniques in conjunction with PLM and TEM gravimetric analysis (EPA 600/R-04/004).

Further information on this method and other vermiculite and asbestos issues can be found at the following: Agency for Toxic Substances and Disease Registry (ATSDR) [www.atsdr.cdc.gov](http://www.atsdr.cdc.gov), United States Geological Survey (USGS) [www.minerals.usgs.gov/minerals/](http://www.minerals.usgs.gov/minerals/), US EPA [www.epa.gov/asbestos](http://www.epa.gov/asbestos). The USEPA also has an informative brochure "Current Best Practices for Vermiculite Attic Insulation" EPA 747F03001 May 2003, that may assist the health and remediation professional.

The following is a summary of the analytical process outlines in the EPA 600/R-04/004 Method:

- 1) **Analytical Step/Method:** Initial Screening by PLM, EPA 600R-93/116  
**Requirements/Comments:** Minimum of 0.1 g of sample. ~0.25% LOQ for most samples.
- 2) **Analytical Step/Method:** Wet Separation by PLM Gravimetric Technique, EPA R-04/004  
**Requirements/Comments:** Minimum 50g\*\* of dry sample. Analysis of "Sinks" only.
- 3) **Analytical Step/Method:** Wet Separation by PLM Gravimetric Technique, EPA R-04/004  
**Requirements/Comments:** Minimum 50g\*\* of dry sample. Analysis of "Floats" only.
- 4) **Analytical Step/Method:** Wet Separation by TEM Gravimetric Technique, EPA R-04/004  
**Requirements/Comments:** Minimum 50g\*\* of dry sample. Analysis of "Sinks" only.
- 5) **Analytical Step/Method:** Wet Separation by TEM Gravimetric Technique, EPA R-04/004  
**Requirements/Comments:** Minimum 50g\*\* of dry sample. Analysis of "Suspension" only.

LOQ, Limit of Quantitation estimates for mass and volume analyses.

\*With advance notice and confirmation by the laboratory.

\*\*Approximately 1 Liter of sample in double-bagged container (~9x6 inch bag of sample).

## Chain of Custody

-Bulk Asbestos-

<b>Contact Information</b>	
<b>Client Company:</b> <u>Hawkeye Environmental</u>	<b>Project Number:</b> _____
<b>Office Address:</b> <u>814 Wood Lily Road</u>	<b>Project Name:</b> <u>818 12<sup>th</sup> ST NE</u>
<b>City, State, Zip:</b> <u>Solon, IA 52333</u>	<b>Primary Contact:</b> <u>Steve Henneberry</u>
<b>Fax Number:</b> _____	<b>Office Phone:</b> <u>319-333-7420</u>
<b>Email Address:</b> <u>Steve@HawkeyeEnv.com</u>	<b>Cell Phone:</b> <u>319-551-4441</u>

<b>PLM Instructions:</b>	
<input checked="" type="checkbox"/> PLM: Bulk Asbestos Building Materials EPA 600 R-93/116, 1993	
<input type="checkbox"/> PLM: Bulk Asbestos Building Materials EPA 600 M-4/82-020, 1982	
<input type="checkbox"/> PLM: Bulk Asbestos Building Materials NIOSH 9002, 1985	
<input type="checkbox"/> PLM: Bulk Asbestos Building Materials NYSDOH-ELAP 198.1, 2002	
<input type="checkbox"/> PLM: Bulk Asbestos Building Materials NYSDOH-ELAP 198.6, 2010	
<input type="checkbox"/> TEM: Bulk Asbestos Building Materials NYSDOH-ELAP 198.4, 2009	
<input type="checkbox"/> PLM: Point Counting	<input type="checkbox"/> PLM: Analyze Until Positive (Positive Stop)
<input type="checkbox"/> PC: via ELAP 198.1	<input type="checkbox"/> AUP: by Homogenous Area as Noted
<input type="checkbox"/> PC: 400 Points	<input type="checkbox"/> AUP: by Material Type as Noted
<input type="checkbox"/> PC: 800 Points *	<input type="checkbox"/> PLM: NOB via 198.6
<input type="checkbox"/> PC: 1600 Points *	<input type="checkbox"/> PLM: Friable via EPA-600 2.3
<input type="checkbox"/> PLM: Instructions for Multi-Layered Samples	<input type="checkbox"/> If <1% by PLM, to TEM via 198.4 *
<input type="checkbox"/> Analyze and Report All Separable Layers per EPA 600	<input type="checkbox"/> If <1% by PLM, Hold for Instructions
<input type="checkbox"/> Report Composite for Drywall Systems per NESHAP	<input type="checkbox"/> PLM: Non-Building Material *** (Dust, Wipe, Tape)
<input type="checkbox"/> Report All Layers and Composite Where Applicable	<input type="checkbox"/> Soil or Vermiculite Analysis *
<input type="checkbox"/> Only Analyze and Report Specifically Noted Layer	<input type="checkbox"/> CARB 435
<b>Special Instructions:</b> _____	
<small>* Additional charge and turnaround may be required    ** Alternative Method (ex: EPA 600/R-04/004) may be recommended by Laboratory</small>	

<b>Turnaround Time</b>	
Preliminary Results Requested Date: _____	<input type="checkbox"/> Verbal <input checked="" type="checkbox"/> Email <input type="checkbox"/> Fax
<small>Specific date / time</small> <input type="checkbox"/> 10 Day <input type="checkbox"/> 5 Day <input checked="" type="checkbox"/> 3 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> 1 Day* <input type="checkbox"/> 12 Hour** <input type="checkbox"/> 6 Hour** <input type="checkbox"/> RUSH**	
<small>* End of next business day unless otherwise specified. ** Matrix Dependent. ***Please notify the lab before shipping***</small>	

<b>Chain of Custody</b>			
Relinquished (Name/Organization): <u>Cody Henneberry</u>	Date: <u>7-28-17</u>	Time: <u>5:00 PM</u>	
Received (Name / iATL): _____	Date: _____	Time: _____	
Sample Login (Name / iATL): _____	Date: _____	Time: _____	
Analysis(Name(s) / iATL): _____	Date: <u>8/24/17</u>	Time: _____	
QA/QC Review (Name / iATL): _____	Date: <u>8-7-17</u>	Time: _____	
Archived / Released: _____	QA/QC InterLAB Use: _____	Date: _____	Time: _____
<small>III 31 2017</small>			

## Sample Log

### -Bulk Asbestos -

Client: Hawkeye Environmental

Project: 818 12<sup>th</sup> St. NE

Sampling Date/Time: 7-28-17

Bulk Asbestos Sample Log			
Client Sample #	iATL #	Location/Description	Notes
B01	0301539	shingle (house)	black/white
B02	0301540	tar paper (house)	black
B03	0301541	shingle (garage)	black
B04	0301542	tar paper (garage)	black
B05	0301543	asphalt siding (house)	blk/wht/red
B06	0301544	tar paper (house)	black
B07	0301545	drywall (living room)	gray
B08	0301546	" tape (" ")	white
B09	0301547	" joint compound (" ")	"
B10	0301548	" " " (bathroom)	"
B11	0301549	" " " (kitchen)	"
B12	0301550	vapor barrier (int.)	black
B13	0301551	" " (under floor - stairs)	"
B14	0301552	floor tile (kitchen)	beige
B15	0301553	linoleum (" ")	white
B16	0301554	" (bathroom)	tan



## Sample Log

-Bulk Asbestos -

Client: Hawkeye Environmental

Project: 818 12th St. NE

Sampling Date/Time: 7-28-17

Bulk Asbestos Sample Log			
Client Sample #	iATL #	Location/Description	Notes
017	0301500	plaster (bathroom)	gray
018	0301500	skimcoat ( " )	white
019	0301500	plaster (stairwell)	gray
020	0301500	skim coat ( " )	white
021	0301500	plaster (living Rm)	gray
022	0301500	skim coat ( " " )	white
023	0301501	light backing	gray
024		Duct Paper	gray
025	0301502	pressboard (garage)	brown
026	0301503	3x4 ceiling tile (porch)	white
027	0301504	window glazing	gray/brown
028	0301506	blown-in insulation	brown

