



October 24, 2018

Mr. Scott Buchanan, Vice President
 AECOM
 564 White Pond Drive
 Akron, Ohio 44320
 330-800-2730

Subject: Asbestos Inspection of the CUY 00014 06930 Bridge (SFN# 1801805/PID# 104132) on Broadview Avenue, Garfield Heights, Ohio 44125 (L&A 18-0449)

Dear Mr. Buchanan:

On September 19, 2018 Mr. Aris Neace, Ohio Department of Health (ODH) Certified Asbestos Hazard Evaluation Specialist (AHES OH #36144) and Mr. Josh Rankin (AHES OH #36263) of Lawhon & Associates, Inc. (L&A) conducted an asbestos survey of CUY 00014 06930 Bridge (SFN# 1801805/PID# 104132) on Broadview Avenue, Garfield Heights, Ohio 44125. The purpose of the survey was to determine the presence of asbestos-containing materials (ACM) located on the structure.

The survey consisted of an inspection of all accessible areas of the bridge to determine the presence, location and quantities of asbestos-containing materials. Bulk samples were collected from suspect materials that could potentially be impacted during demolition/renovation work activities. A diagram of the bridge and asbestos bulk sampling locations can be found in **Appendix B**. All available bridge plans were reviewed for this bridge and no asbestos containing materials were listed.

Suspect Materials

The materials suspected of being asbestos-containing identified during the survey are presented in Table 1 along with an indication of their friability.

Table 1: Suspected Materials

Material	Locations	Friability
Paint on Concrete	Under Bridge	Non Friable
Parapet Wall Caulking	Deck	Non Friable
Sidewalk Seam Tar	Deck	Non Friable
Wall Expansion Pad	Under Bridge, West Side	Non Friable
Footer Adhesive	Under Bridge, West Side	Non Friable
Bridge Pad	Under Bridge, West Side	Non Friable
Electrical Components	Electrical Box on Deck	Non Friable

Sample Descriptions, Locations and Results

Sample descriptions, locations, and asbestos content as determined by Polarized Light Microscopy (PLM) are presented in Table 2.

Table 2: Sample Descriptions, Locations and Results

Sample #	Sample Description and Location	Asbestos %
1	Paint on Concrete; West End, North Side	None Detected
2	Paint on Concrete; West End, South Side	None Detected
3	Paint on Concrete; Central, North Side	None Detected
4	Paint on Concrete; South End, East Side	None Detected
5	Paint on Concrete; South End, West Side	None Detected
6	Paint on Concrete; East End, North Side	None Detected
7	Paint on Concrete; East End, South Side	None Detected
8	Parapet Wall Caulking; West End, North Side	None Detected
9	Parapet Wall Caulking; South End, East Side	None Detected
10	Parapet Wall Caulking; East End, South Side	None Detected
11	Sidewalk Seam Tar; West End, North Side	None Detected
12	Sidewalk Seam Tar; South End, East Side	None Detected
13	Sidewalk Seam Tar; East End, South Side	None Detected
14	Wall Expansion Pad; North Side	None Detected
15	Wall Expansion Pad; Central	None Detected
16	Wall Expansion Pad; South Side	None Detected
17	Footer Adhesive; West End, North Side	None Detected
18	Footer Adhesive; West End, Central	None Detected
19	Footer Adhesive; West End, South Side	None Detected
20	Bridge Pad; West End, North Side	None Detected
21	Bridge Pad; West End, Central	None Detected
22	Bridge Pad; West End, South Side	None Detected

Materials Identified as Asbestos-Containing

Under the current EPA/NESHAP regulations, materials that contain greater than 1% asbestos are considered to be an asbestos-containing material (ACM). There were no materials confirmed to be asbestos containing materials as defined by EPA/NESHAP regulations.

Materials Assumed as Asbestos-Containing

Energized electrical components were not included in this effort. These materials should be assumed to contain asbestos, until further testing determines otherwise. The following is a list of materials assumed to contain asbestos because sampling could not be conducted at the time of assessment:

Table 3: Assumed Asbestos Containing Materials

Material	Location	Quantity
Electrical Components (1)	Electrical Box located near the fork in the bridge at the cross walk.	5 square feet

Notes: (1) Category II Non-Friable

Attachments

Appendix A contains the Ohio Department of Health certifications for Mr. Aris Neace and Mr. Josh Rankin.

Appendix B contains the Bulk Sample Diagram.

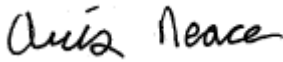
Appendix C contains the laboratory results and chain-of-custody documentation for the asbestos bulk samples collected.

Appendix D contains the Ohio Environmental Protection Agency Notification of Demolition and Renovation.

Summary

On September 19, 2018 Mr. Aris Neace, Ohio Department of Health (ODH) Certified Asbestos Hazard Evaluation Specialist (AHES OH #36144) and Mr. Josh Rankin (AHES OH #36263) of Lawhon & Associates, Inc. (L&A) conducted an asbestos survey of CUY 00014 06930 Bridge (SFN# 1801805/PID# 104132) on Broadview Avenue, Garfield Heights, Ohio 44125. Energized electrical components were assumed to contain asbestos, until further testing determines otherwise. If you have any questions, please contact Aris Neace or Jordan Mederer at (614) 481-8600.

Sincerely,



Aris Neace
Environmental Technician



Jordan Mederer
Department Manager

APPENDIX A
OHIO DEPARTMENT OF HEALTH CERTIFICATIONS



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

March 14, 2018

Michael A Neace
Lawhon & Associates, Inc.
1441 King Ave.
Columbus OH 43212

RE: Asbestos Hazard Evaluation Specialist
Certification Number: ES36144
Expiration Date: 03/24/2019

Dear Michael A Neace:

This letter and enclosed certification card approves your request to be certified as an Asbestos Hazard Evaluation Specialist. You must present your card upon request at any project site while performing duties. Copies of cards are not acceptable as proof of certification.

This certification may be revoked by the Director of the Environmental Protection Agency for violation of any of the requirements of 3745-22 or 3745-20 of the Ohio Administrative Code.

If you have any questions, please call 614-644-0226.

Sincerely,

Mark Needham
Manager, Asbestos Program
Division of Air Pollution Control

50 West Town Street • Suite 700 • P.O. Box 1049 • Columbus
epa.ohio.gov • (614) 644-3020 • (614) 644-318

State of Ohio
Environmental Protection Agency
Asbestos Program

Asbestos Hazard Evaluation Specialist



Michael A Neace
Lawhon & Associates, Inc.
1441 King Ave.
Columbus OH 43212



Certification Number
ES36144

Expiration Date
03/24/2019

This certification is issued pursuant to Revised Code Chapter 3710 and Administrative Code Chapter 3745-22. This card is not valid if altered.

The InService Training Network

Asbestos Building Inspector and Management Planner Refresher Courses



Michael A. Neace

has successfully completed the Asbestos Building Inspector and Management Planner Refresher Courses and passed by at least 70% the course examinations for accreditation under Section 206 of the Toxic Substance Control Act, Title II, and Indiana 326 IAC 18-2
Provided by: The InService Training Network, Inc., 6813 Flags Center, Columbus, OH 43229 (614) 895-9323

Course Dates: February 21, 2018

Examination Date: February 21, 2018

Course Director: _____

Course Location: Columbus, Ohio

Kurt Varga

Expiration Date: February 21, 2019

Certificate Numbers: ITNIR-6341 & ITNMPR-6341



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

March 26, 2018

Joshua Rankin
Lawhon & Associates, Inc
1441 King Ave
Columbus OH 43212

RE: Asbestos Hazard Evaluation Specialist
Certification Number: ES36263
Expiration Date: 03/26/2019

Dear Joshua Rankin:

This letter and enclosed certification card approves your request to be certified as an Asbestos Hazard Evaluation Specialist. You must present your card upon request at any project site while performing duties. Copies of cards are not acceptable as proof of certification.

This certification may be revoked by the Director of the Environmental Protection Agency for violation of any of the requirements of 3745-22 or 3745-20 of the Ohio Administrative Code.

If you have any questions, please call 614-644-0226.

Sincerely,

Mark Needham
Manager, Asbestos Program
Division of Air Pollution Control

50 West Town Street • Suite 700 • P.O. Box 1049 • Columb
epa.ohio.gov • (614) 644-3020 • (614) 644-318

State of Ohio
Environmental Protection Agency
Asbestos Program

Asbestos Hazard Evaluation Specialist



Joshua Rankin
Lawhon & Associates, Inc
1441 King Ave
Columbus OH 43212

Certification Number
ES36263

Expiration Date
03/26/2019

DOB: 09/04/1992

This certification is issued pursuant to Revised Code Chapter 3710 and Administrative Code Chapter 3745-22. This card is not valid if altered.

The InService Training Network

Asbestos Building Inspector Initial Course



Joshua Rankin

has successfully completed the Asbestos Building Inspector Initial Course and passed by at least 70%
the course examination for accreditation under Section 206 of the Toxic Substance Control Act, Title II, and Indiana 326 IAC 18-2
Provided by: The InService Training Network, Inc., 6813 Flags Center, Columbus, OH 43229 (614) 895-9323

Course Dates: February 26 - 28, 2018

Examination Date: February 28, 2018

Course Director: _____

Kurt Varga

Course Location: Columbus, Ohio

Expiration Date: February 28, 2019

Certificate Number: ITN-II-1903

The InService Training Network

Asbestos Management Planner Initial Course



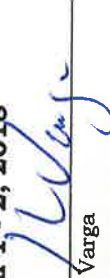
Joshua Rankin

has successfully completed the Asbestos Management Planner Initial Course and passed by at least 70% the course examination for accreditation under Section 206 of the Toxic Substance Control Act, Title II, and Indiana 326 18-2
Provided by: The InService Training Network, Inc., 6813 Flags Center, Columbus, OH 43229 (614) 895-9323

Course Dates: March 1 - 2, 2018

Examination Date: March 2, 2018

Course Director:

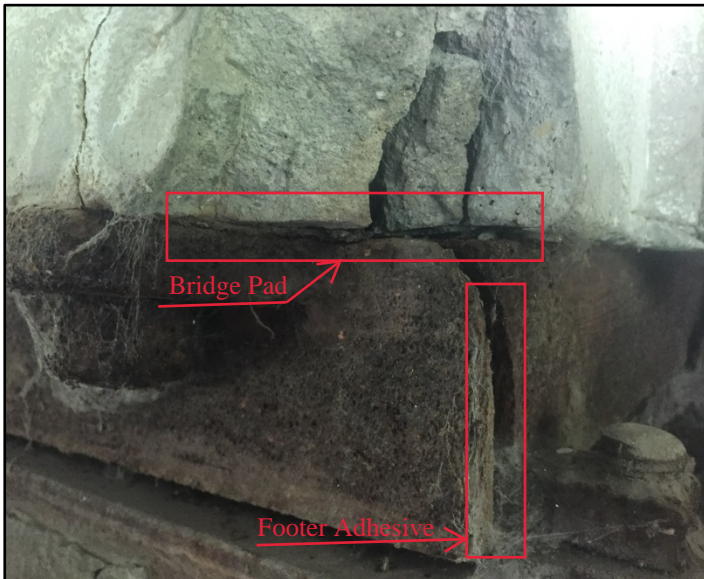
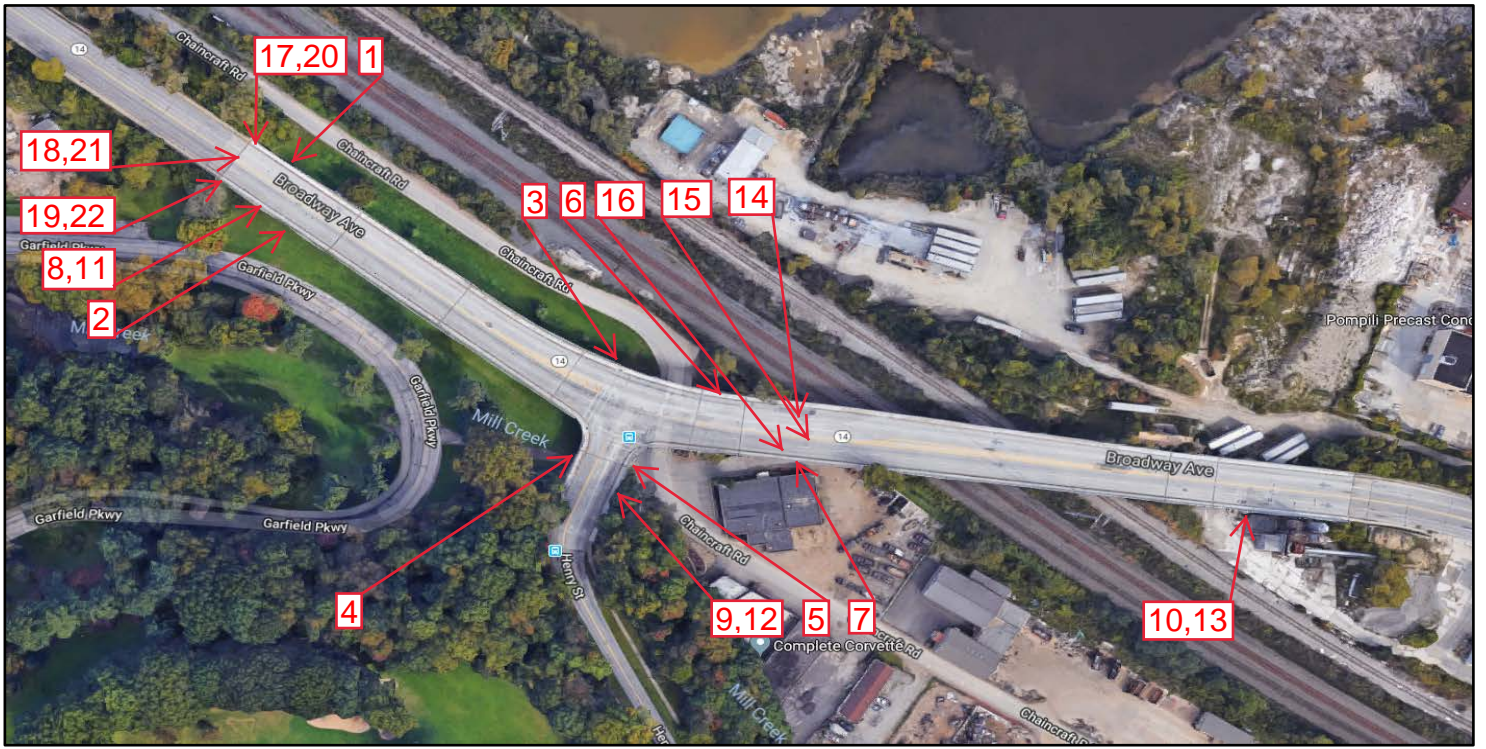

Kurt Varga


Course Location: Columbus, Ohio

Expiration Date: March 2, 2019

Certificate Number: ITN-MI-1903

APPENDIX B
BULK SAMPLE DIAGRAM





Lawhon & Associates, Inc.
ENVIRONMENTAL CONSULTING AND ENGINEERING SERVICES

Columbus
 Cleveland
 Dayton

Bulk Sample Diagram
Inventory Bridge Number: CUY-14-6.93
Structure File Number: 1801805
Date Sampled: September 19, 2018
Surveyors: Aris Neace, AHES 36144
 Josh Rankin, AHES 36263
Signatures:

Aris Neace Josh Rankin

APPENDIX C
LABORATORY RESULTS AND CHAIN OF CUSTODY

CERTIFICATE OF ANALYSIS

Client: Lawhon & Associates Inc.
1441 King Avenue
Columbus OH 43212

Report Date: 9/27/2018
Report No.: 573443 - PLM
Project: CUY-14-6.93
Project No.: 18-0449

Client: LAW411

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6610884
Client No.: 1

Analyst Observation: Grey Paint
Client Description: Paint On Concrete

Location: West End, North Side-Under Bridge
Facility:

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Lab No.: 6610885
Client No.: 2

Analyst Observation: Grey Paint
Client Description: Paint On Concrete

Location: West End, South Side-Under Bridge
Facility:

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Lab No.: 6610886
Client No.: 3

Analyst Observation: Grey Paint
Client Description: Paint On Concrete

Location: Central, North Side-Under Bridge
Facility:

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Lab No.: 6610887
Client No.: 4

Analyst Observation: Grey Paint
Client Description: Paint On Concrete

Location: South End, East Side-Under Bridge
Facility:

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Lab No.: 6610888
Client No.: 5

Analyst Observation: Grey Paint
Client Description: Paint On Concrete

Location: South End, West Side-Under Bridge
Facility:

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Lab No.: 6610889
Client No.: 6

Analyst Observation: Grey Paint
Client Description: Paint On Concrete

Location: East End, North Side-Under Bridge
Facility:

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 9/21/2018
Date Analyzed: 09/27/2018
Signature:
Analyst: Ellen Smith

Approved By:
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: Lawhon & Associates Inc.
1441 King Avenue
Columbus OH 43212

Report Date: 9/27/2018
Report No.: 573443 - PLM
Project: CUY-14-6.93
Project No.: 18-0449

Client: LAW411

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6610890 **Analyst Observation:** Grey Paint
Client No.: 7 **Client Description:** Paint On Concrete **Location:** East End, South Side-Under Bridge
Facility:
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
None Detected None Detected 100

Lab No.: 6610891 **Analyst Observation:** Grey Caulk
Client No.: 8 **Client Description:** Parapet Wall Caulking **Location:** West End, North Side-Deck
Facility:
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
None Detected None Detected 100


Lab No.: 6610892 **Analyst Observation:** Grey Caulk
Client No.: 9 **Client Description:** Parapet Wall Caulking **Location:** South End, East Side-Deck
Facility:
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
None Detected None Detected 100


Lab No.: 6610893 **Analyst Observation:** Grey Caulk
Client No.: 10 **Client Description:** Parapet Wall Caulking **Location:** East End, South Side-Deck
Facility:
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
None Detected None Detected 100

Lab No.: 6610894 **Analyst Observation:** Black/Grey Tar
Client No.: 11 **Client Description:** Sidewalk Seam Tar **Location:** West End, North Side-Deck
Facility:
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
None Detected None Detected 100

Lab No.: 6610895 **Analyst Observation:** Grey/Black Tar
Client No.: 12 **Client Description:** Sidewalk Seam Tar **Location:** South End, East Side-Deck
Facility:
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
None Detected None Detected 100

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 9/21/2018
Date Analyzed: 09/27/2018
Signature: 
Analyst: Ellen Smith

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: Lawhon & Associates Inc.
1441 King Avenue
Columbus OH 43212


Report Date: 9/27/2018
Report No.: 573443 - PLM
Project: CUY-14-6.93
Project No.: 18-0449

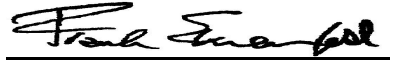
Client: LAW411

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6610896 Client No.: 13	Analyst Observation: Black/Grey Tar Client Description: Sidewalk Seam Tar	Location: East End, South Side-Deck Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6610897 Client No.: 14	Analyst Observation: Grey Fibrous Client Description: Wall Expansion Pad	Location: East End, North Side-Under Bridge Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 95 Cellulose	<u>Percent Non-Fibrous Material:</u> 5
Lab No.: 6610898 Client No.: 15	Analyst Observation: Grey Fibrous Client Description: Wall Expansion Pad	Location: East End, Central-Under Bridge Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 95 Cellulose	<u>Percent Non-Fibrous Material:</u> 5
Lab No.: 6610899 Client No.: 16	Analyst Observation: Grey Fibrous Client Description: Wall Expansion Pad	Location: East End, South Side-Under Bridge Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 95 Cellulose	<u>Percent Non-Fibrous Material:</u> 5
Lab No.: 6610900 Client No.: 17	Analyst Observation: Brown Adhesive Client Description: Footer Adhesive	Location: West End, North Side-Under Bridge Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 2 Cellulose	<u>Percent Non-Fibrous Material:</u> 98
Lab No.: 6610901 Client No.: 18	Analyst Observation: Brown Adhesive Client Description: Footer Adhesive	Location: West End, Central-Under Bridge Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 1 Cellulose	<u>Percent Non-Fibrous Material:</u> 99

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 9/21/2018
Date Analyzed: 09/27/2018
Signature: 
Analyst: Ellen Smith

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: Lawhon & Associates Inc.
1441 King Avenue
Columbus OH 43212


Report Date: 9/27/2018
Report No.: 573443 - PLM
Project: CUY-14-6.93
Project No.: 18-0449

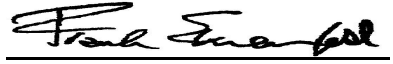
Client: LAW411

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6610902 Client No.: 19	Analyst Observation: Brown Adhesive Client Description: Footer Adhesive	Location: West End, South Side-Under Bridge Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 2 Cellulose	<u>Percent Non-Fibrous Material:</u> 98
Lab No.: 6610903 Client No.: 20	Analyst Observation: Brown Non-Fibrous Client Description: Bridge Pad	Location: West End, North Side-Under Bridge Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6610904 Client No.: 21	Analyst Observation: Brown Non-Fibrous Client Description: Bridge Pad	Location: West End, Central-Under Bridge Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6610905 Client No.: 22	Analyst Observation: Brown Non-Fibrous Client Description: Bridge Pad	Location: West End, South Side-Under Bridge Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 9/21/2018
Date Analyzed: 09/27/2018
Signature: 
Analyst: Ellen Smith

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: Lawhon & Associates Inc.
1441 King Avenue
Columbus OH 43212

Report Date: 9/27/2018
Report No.: 573443 - PLM
Project: CUY-14-6.93
Project No.: 18-0449

Client: LAW411

Appendix to Analytical Report

Customer Contact:

Method: 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 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
- NYSDOH-ELAP 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. PC Trace represents a <0.25% amount. 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)

CERTIFICATE OF ANALYSIS

Client: Lawhon & Associates Inc.
1441 King Avenue
Columbus OH 43212

Report Date: 9/27/2018
Report No.: 573443 - PLM
Project: CUY-14-6.93
Project No.: 18-0449

Client: LAW411

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

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.

- 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%.
- 16) Note: This sample contains >10% vermiculite mineral. See Appendix for Recommendations for Vermiculite Analysis.

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).

For New York State customers, NYSDOH requires disclaimers and qualifiers for various vermiculite containing samples that direct analysis via ELAP198.6 and ELAP198.8 for samples that contain >10% vermiculite mineral where ELAP198.6 may be used to evaluate the asbestos content of the material. However, any test result using ELAP198.6 will be reported with the following disclaimer: "ELAP198.6 method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing >10% vermiculite."

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, United States Geological Survey (USGS) www.minerals.usgs.gov/minerals/, US EPA 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.

CERTIFICATE OF ANALYSIS

Client: Lawhon & Associates Inc.
1441 King Avenue
Columbus OH 43212

Client: LAW411

Report Date: 9/27/2018
Report No.: 573443 - PLM
Project: CUY-14-6.93
Project No.: 18-0449

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).

Sent To: IATL

No 11711

VIA: FedEx

Page 1 of 2

Date: 9/19/18

Turn around: 5 day

ASBESTOS BULK SAMPLE CHAIN-OF-CUSTODY RECORD

Project Name:	Project No.:	Project Contact:	Sampler (print):	Signature
CUY-14-6.93	18-0449	Aris Neace	→	Aris Neace
Sample I.D. No.	Homog. Area No.	Sample / Homogeneous Area Description	Sample Location	Remarks
1	1	Paint on Concrete, under bridge	West End, North side	6610884 Under Bridge
2	1		West End, South side	6610885
3	1		Central, North side	6610886
4	1		South End, East side	6610887
5	1		South End, West side	6610888
6	1		East End, North side	6610889
7	1		East End, South side	6610890
8	2	Parapet wall Caulking	West End, North side	6610891 Deck
9	2		South End, East side	6610892
10	2		East End, South side	6610893
11	3	Side Walk Seum Tar	West End, North side	6610894
12	3		South End, East side	6610895
13	3		East End, South side	6610896
14	4	Wall Expansion Pad, under bridge	East End, North side	6610897 Under Bridge
15	4		East End, Central	6610898
16	4		East End, South side	6610899
17	5	Footer Adhesive	West End, North side	6610900 Under Bridge
18	5		West End, Central	6610901

SAMPLE ANALYSIS BY EPA METHOD 600/R-93/116 UNLESS OTHERWISE NOTED.

Stop 1st Positive Analyze All Samples

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
<i>Aris Neace</i>	9/19/18 9:00	<i>[Signature]</i>	9/27/2018

APPENDIX D
OHIO ENVIRONMENTAL PROTECTION AGENCY
NOTICE OF DEMOLITION AND RENOVATION



Notification of Demolition and Renovation/Abatement

Section 1: General Information

Division of Air Pollution Control

Work on projects cannot begin until 10 working days after a COMPLETE original notification form, **including payment**, is submitted to Ohio EPA. Instructions and a worksheet for fee calculation are available at epa.ohio.gov/asbestos. This form can be completed, and payment made, at ebiz.epa.ohio.gov. Questions? asbestos@epa.ohio.gov or (614) 466-0061.

Ohio EPA Use Only	Notification #:	Postmarked: / /	Received: / /	<input type="checkbox"/> Hand-Delivered
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1) Notification Information (Check all that apply)

<input checked="" type="checkbox"/> Original	<input type="checkbox"/> Revision # (count):	<input type="checkbox"/> Installation	<input type="checkbox"/> Emergency	<input type="checkbox"/> Annual	<input type="checkbox"/> Cancellation	County:
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2) Owner, Asbestos Abatement Contractor, Billing and Fire Department Information

Revised?

Owner					
Name: ODOT District 12					Is this a company? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Address: 5500 Transportation Blvd.			Contact Person:		
City: Garfield Heights		State: OH		Zip: 44125 -	
Email:		Phone: (216) 581 - 2100		Fax: (216) 584 - 2274	
Asbestos Abatement Contractor (if applicable)					
Name:		License #: AC		Expiration Date: / /	
Address:			Contact Person:		
City:		State:		Zip: -	
Email:		Phone: () -		Fax: () -	
Billing Contact					
Is this contact associated with the <input type="checkbox"/> Owner, <input type="checkbox"/> Asbestos Abatement Contractor, or <input type="checkbox"/> Demolition Contractor (if not installation)?					
Address:			Contact Person:		
City:		State:		Zip: -	
Email:		Phone: () -		Fax: () -	
Fire Department (if applicable)					
Name:					
Address:			Contact Person:		
City:		State:		Zip: -	
Email:		Phone: () -		Fax: () -	

3) Ohio Asbestos Hazard Evaluation Specialist and Evaluation Procedure

Revised?

Evaluation Specialist: Aris Neace	Certification #: ES 36144	Expiration Date: 3 / 24 / 2019
Procedure, including analytical methods, employed to detect the presence of and to estimate the quantity of regulated asbestos-containing material (RACM) and Category I and Category II non-friable asbestos-containing material: <input checked="" type="checkbox"/> PLM <input type="checkbox"/> Point Count <input type="checkbox"/> TEM <input type="checkbox"/> Other Method (Explain Below):		

4) Procedures to be followed should unexpected RACM be discovered (check all that apply)

Revised?

<input checked="" type="checkbox"/> Stop work and keep wet	<input checked="" type="checkbox"/> Evacuate area	<input checked="" type="checkbox"/> Demarcate area	<input checked="" type="checkbox"/> Contact licensed abatement contractor
<input checked="" type="checkbox"/> Contact district office/local air authority			
<input type="checkbox"/> Other (Explain):			

5) Planned Demolition (check all that apply)

Revised?

Describe demolition work to be performed and method(s) to be employed, including demolition techniques to be used: <input type="checkbox"/> Implosion <input type="checkbox"/> Fire Training <input type="checkbox"/> Wet Methods <input type="checkbox"/> Manual Demolition <input type="checkbox"/> Mechanical Demolition <input type="checkbox"/> Other (Explain):
Description of affected facility components (include attachment if necessary):

Notification of Demolition and Renovation/Abatement

Section 1: General Information

Continued

Mail completed form and payment to:
Ohio EPA, DAPC – Asbestos
50 W. Town St., 7th Floor or P.O. Box 1049
Columbus, OH 43216-1049

6) Asbestos Description and Engineering Controls (if asbestos is being abated) Revised?

For the material listed in each project, describe the type(s) of ACM to be abated, engineering controls and work practices to be used to minimize emissions and ensure proper waste handling:

Type of ACM to be abated:	<input type="checkbox"/> Surfacing	<input checked="" type="checkbox"/> Mechanical	<input type="checkbox"/> Other		
Engineering Controls:	<input checked="" type="checkbox"/> Wet Methods	<input type="checkbox"/> Glove Bag	<input type="checkbox"/> NPE	<input type="checkbox"/> AFD	<input type="checkbox"/> Other:
Work Practices:	<input checked="" type="checkbox"/> Intact Removal	<input type="checkbox"/> Manual	<input type="checkbox"/> Mechanical	<input type="checkbox"/> Other:	

7) Asbestos Waste Transporter (if applicable) Revised?

Transporter #1 Name:					
Address:			Contact Person:		
City:	State:		Zip:		-
Email:	Phone: () -		Fax: () -		
Transporter #2 Name (if applicable):					
Address:			Contact Person:		
City:	State:		Zip:		-
Email:	Phone: () -		Fax: () -		

8) Asbestos Waste Disposal Site (if applicable) Revised?

Name:					
Address:			Contact Person:		
City:	State:		Zip:		-
Email:	Phone: () -		Fax: () -		

9) Emergency Demolition (complete if you checked "Emergency" above and "Demolition" for any project) Revised?

A copy of the issued order, including the following information, **must be attached** to this notification.

Government Official Issuing Order:	Title:
Agency:	Authority of Order (Citation of Code):
Date of Order: / /	Demolition Date: / /

10) Emergency Renovation/Abatement (complete if you checked "Emergency" above and "Renovation/Abatement" for any project) Revised?

Date of Emergency: / /	Time of Emergency: : <input type="checkbox"/> a.m. <input type="checkbox"/> p.m.
Description of Sudden, Unexpected Event:	
Explanation of how the event caused unsafe conditions or equipment damage:	

11) Attestation Revised?

In accordance with Ohio Administrative Code rule 3745-20-03(A)(4)(p), I certify that at least one person trained as required by paragraph (B) of rule 3745-20-04 of the Administrative Code will supervise the stripping and removal described by this notification. I acknowledge that the submission of false or misleading statements is prohibited by law and I certify that facts contained in this notification are true, accurate, and complete.

Signature:	Date: / /
Name:	Title:
Organization:	



Notification of Demolition and Renovation/Abatement

Section 2: Project Address Specific Information

Division of Air Pollution Control

Please complete Section 2 for the address included with this notification. If the project is an "Installation" per OAC 3745-20, complete a separate Section 2 page for each address associated with this notification.

Ohio EPA Use Only	Project ID #: _____
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A. Facility Description Revised?

Building Name (if applicable): CUY-14-6.93		Site Location (specific): 41.255513, -81.360843	
Address:		County:	
City: Garfield Heights		State: OH	Zip: 44125 -
Building Size (square feet): 84,711		No. of Floors:	Age: 89
Present Use: Bridge		Prior Use:	

B. Type of Operation (check all that apply) Revised?

<input checked="" type="checkbox"/> Demolition	<input checked="" type="checkbox"/> Renovation/Abatement – Type: <input checked="" type="checkbox"/> Removal <input checked="" type="checkbox"/> Repair <input checked="" type="checkbox"/> Encapsulation <input checked="" type="checkbox"/> Enclosure
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C. Asbestos Present (check one) Revised?

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> No, previously abated	Year Abated: _____
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D. Approximate Amount of Asbestos-Containing Materials (complete table below and Section 1 #6 if asbestos is present) Revised?

	Material to be Removed				Material NOT to be Removed	
	RACM	Non-friable Asbestos-Containing Material		Non-friable Asbestos-Containing Material		
		Category I	Category II	Category I	Category II	
Pipes (linear feet)						
Surface area on other facility components (ft ²)			5			
Volume if length or area cannot be measured (ft ³)						

E. Asbestos Abatement Schedule and Abatement Specialist (original notification is required 10 working days prior to the start of work) Revised?

Setup Date: / /		Abatement Date: / /			Complete Date: / /		
(Shift 1) Time start/end on site	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Abatement Specialist Name:				Certification #: AS		Expiration Date: / /	
(Shift 1) Time start/end on site	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Abatement Specialist Name:				Certification #: AS		Expiration Date: / /	

F. Demolition Contractor (if applicable) Revised?

Name:		
Address:		Contact Person:
City:	State:	Zip: -
Email:	Phone: () -	Fax: () -

G. Demolition Schedule (original notification is required 10 working days prior to the start of work) Revised?

Start Date: / /	Complete Date: / /
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H. Project Hold Revised?

Hold Begin Date: / /	Work Resume Date: / /
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