March 7, 2021

Mr. Mark Carpenter, P.E.
District 12 Environmental Engineer
5500 Transportation Blvd
Garfield Hts., Ohio 44125

Re: **CUY-BH-FY2023 Misc (PID 105909) Asbestos Survey**
CUY-480-4.440, Columbia Road over I-480
SFN 1814109

Dear Mr. Carpenter,

EnviroScience, Inc. was contracted by the Ohio Department of Transportation to provide an asbestos survey of the CUY-480-4.440 bridge structure over Interstate 480. The bridge location coordinates are 41.4150, -81.8936.

The 273-foot long four-span continuous steel beam bridge with reinforced concrete deck and substructure will undergo replacement. Bridge inventory report information indicates the structure to have been originally built in 1980. A site location map is included in Appendix A.

Asbestos Regulations and Definitions
Prior to the demolition or renovation of a structure (including bridge structures), an asbestos inspection must be conducted by a licensed asbestos hazard evaluation specialist in accordance with National Emissions Standard for Hazardous Air Pollutants (NESHAP) Guidelines, EPA Regulation 40 CFR, Subpart M, Part 61 and OEPA asbestos regulations (OAC 3745-20). Further, the Occupational Safety and Health Administration's (OSHA's) Asbestos Standard for the Construction Industry (29 CFR 1926.1101) regulates all renovation and demolition work involving building materials which contain any amount of asbestos.

NESHAP, OEPA, and OSHA asbestos regulations define asbestos-containing material (ACM) as any material containing greater than one (1) percent asbestos as determined by polarized light microscopy. NESHAP regulations require that all materials suspected of containing asbestos be sampled to determine asbestos content or be assumed to be an ACM and, therefore, treated as such. Materials that are determined or assumed to be ACMs shall be quantified and assessed by a licensed inspector. The materials then shall be characterized and assigned one of the following designations: Friable, Category I Non-friable, and Category II Non-friable.

Friable ACM is defined by the Asbestos NESHAP regulations as any material containing more than one percent (1%) asbestos as determined using the method specified in Appendix E, Subpart E, 40 CFR Part 763, Section 1, Polarized Light Microscopy (PLM), that, when dried, can be crumbled, pulverized, or reduced to powder by hand pressure.

Non-friable ACM is any material containing more than one percent (1%) asbestos as determined using the method specified in Appendix E, Subpart E, 40 CFR Part 763, Section 1, Polarized Light Microscopy (PLM), that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM can remain on the structure during renovation/demolition if it will not be sanded, grinded, cut, abraded, or made friable by any means. The two categories of non-friable ACM are described as follows:

EnviroScience
5070 Stow Road
Stow, OH 44224
Toll Free: 800-940-4025 | Office: 330-688-0111 | Fax: 330-688-3858

- Category I Non-friable ACM - asbestos-containing packing, gaskets, resilient floor covering, and asphalt roofing products.
- Category II Non-friable ACM - any asbestos-containing material excluding Category I Non-friable ACM.

Regulated ACM (RACM) is defined as:

- Friable asbestos material.
- Category I Non-friable ACM that has become friable.
- Category I Non-friable ACM that has been or will be involved in sanding, grinding, cutting, or abrading.
- Category II Non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by forces expected to act on the material during renovation or demolition.

Asbestos Survey Summary

Bridge Plan Review - EnviroScience performed a limited review of available bridge construction plans that were compiled by the department and placed on ODOT's FTP site. Based on our review of portions of the CUY-480-4.440 plans, several banks of six (6) O.B.T and CEI conduits were shown to be affixed to the cross bracing along with box outs in the abutment wall for the conduits to pass through. The conduit material type is not identified in the plans. The plans show a smaller rack containing three (3) conduits and identifies them to be 5" Transite conduits. Two gas lines were shown in the plans to be attached to the underside of the bridge including a 6-5/8" OD line on the east side and a 4-1/2" OD line on the west side of the structure. It was also noted that the plans called out the use of ¼" gray sponge rubber or ¼" gray cellular polyvinyl chloride (PVC) sponge preformed expansion joint filler material in the parapet details.

Asbestos Survey- An asbestos survey of the subject bridge structure was conducted on 01/13/21 by C.E. Kessler, Certified Asbestos Hazard Evaluation Specialist #ES34704 and Amy Wakefield, Certified Asbestos Hazard Evaluation Specialist #ES543881.

All accessible portions of the CUY-480-4.440 bridge were field investigated for the presence of suspected ACMs. A visual inspection of the top and bottom sides of the structure including the deck, beams, abutments, parapets, vandal fencing, and utilities was conducted. Affixed utilities consisted of a bank of three (3) 5" Johns-Manville Transite conduit lines and a bank of six (6) PVC conduits. In addition, two gas lines were observed beneath the structure as described in the above plan review. One gas line was encased with a tarred, fibrous pipe wrap and the other was painted.

The following table summarizes the samples that were collected:

Table 1 – Sample Summary – CUY-480-4.440 Bridge SFN 1814109

Sample	Homogeneous Area	Category	Location of Sample	Positive for Asbestos?
Col-1	Pipe Wrap	Misc	4" gas line, underside of structure	No
Col-2	Pipe Wrap	Misc	Gas line	No
Col-3	Packing Material	Misc	Gas line casing through backwall	No

Table 1 – Sample Summary – CUY-480-4.440 Bridge SFN 1814109				
Sample	**Homogeneous Area**	**Category**	**Location of Sample**	**Positive for Asbestos?**
Col-4	Transite Coupler	Misc	North back wall	Yes
Col-5	Paint Coating	Misc	6" utility line, underside of structure	No
Col-6	Paint Coating	Misc	6" utility line, underside of structure	No
Col-7	6" utility line packing material	Misc	North backwall	No
Col-8	Mastic Sealant	Misc	2" electric conduit raceway - between parapet and back wall	Yes
Col-9	Butyl Sealant	Misc	Vandal fence mounting flange	No
Col-10	Joint Caulking	Misc	Parapet	No
Col-11	Joint Caulking	Misc	Parapet	No
Col-12	Joint Caulking	Misc	Parapet	No

All bulk samples collected were submitted to IATL International Asbestos Testing Laboratories of Mount Laurel, New Jersey, for analysis of asbestos content by polarized light microscopy (PLM) using the Environmental Protection Agency (EPA) Method 600/R-93/116. Appendix B includes an IATL laboratory Chain of Custody, sampling log, and laboratory analysis report. A bridge sketch and photo log are provided in Appendix C.

Conclusion and Recommendations

Lab analysis of bulk samples taken from the CUY-480-4.440 structure indicates that asbestos containing material was identified. Results are listed in the table below.

Table 2 – ACM – CUY-480-4.440 Bridge SFN 1814109				
Homogeneous Area	**Category**	**Location of Sample**	**Positive Asbestos?**	**Quantity ACM**
Mastic Sealant	Misc	Gap between parapet and abutment backwall	Yes	Less than 1 sq ft
Transite coupler	Category II	North backwall	Yes	Included in conduit footage
Transite conduit	Category II	No sample taken- underside of structure	Assumed Yes	819 LF

If suspect ACMs are revealed during demolition or renovation activities that were not identified during this survey it is recommended that work activities cease until a Certified Asbestos Hazard Evaluation Specialist can evaluate the new material(s). Any removal and subsequent disposal of the asbestos containing material during demolition operations must comply with the Ohio

Administrative code, the occupational Safety and Health Administration (OSHA) regulations and the National Emission Standard for Hazardous Air pollutants (NESHAP). Reference the Ohio Environmental Protection Agency adopted chapters 3745-20-03 & 3745-20-04 of the Ohio Administrative Code. This implements the NESHAP standards for asbestos and its removal.

Notification

An OEPA Notification of Demolition and Renovation form must be submitted ten (10) working days prior to work activities. Appendix D contains the OEPA form of which Section 1 - General Information 1, 2, 3, 4, and 5; and Section 2 - Project Address Specific Information A, B, C, and D have been completed.

Once the Contractor has been selected for the project, the remaining sections of the form shall be completed (as applicable) and the notification form submitted with the proper remittance to the following address at least 10 working days prior to starting work:

Ohio EPA, DAPC Asbestos
P.O. Box 1049
Columbus, Ohio 43216-1049

The form may also be completed/submitted via on-line at https://epa.ohio.gov/dapc/atu/asbestos.

AHES Signature

Charles E. Kessler, AICP, CAHES, CEP
Asbestos Hazard Evaluation Specialist #ES34704

Attachments

Appendix A

Figure 1. Location of Site on Highway Map of Cuyahoga County, Ohio. CUY-480-4.440.

Project Area

0 750 1,500 3,000 Feet

0 250 500 1,000 Meters

EnviroScience
Excellence In Any Environment

Date: 1/26/2021 Path: C:\Users\Anna Giordano\Desktop\GIS_CUY-480-4.440\Map1_Location.mxd

Basemap courtesy of Esri.

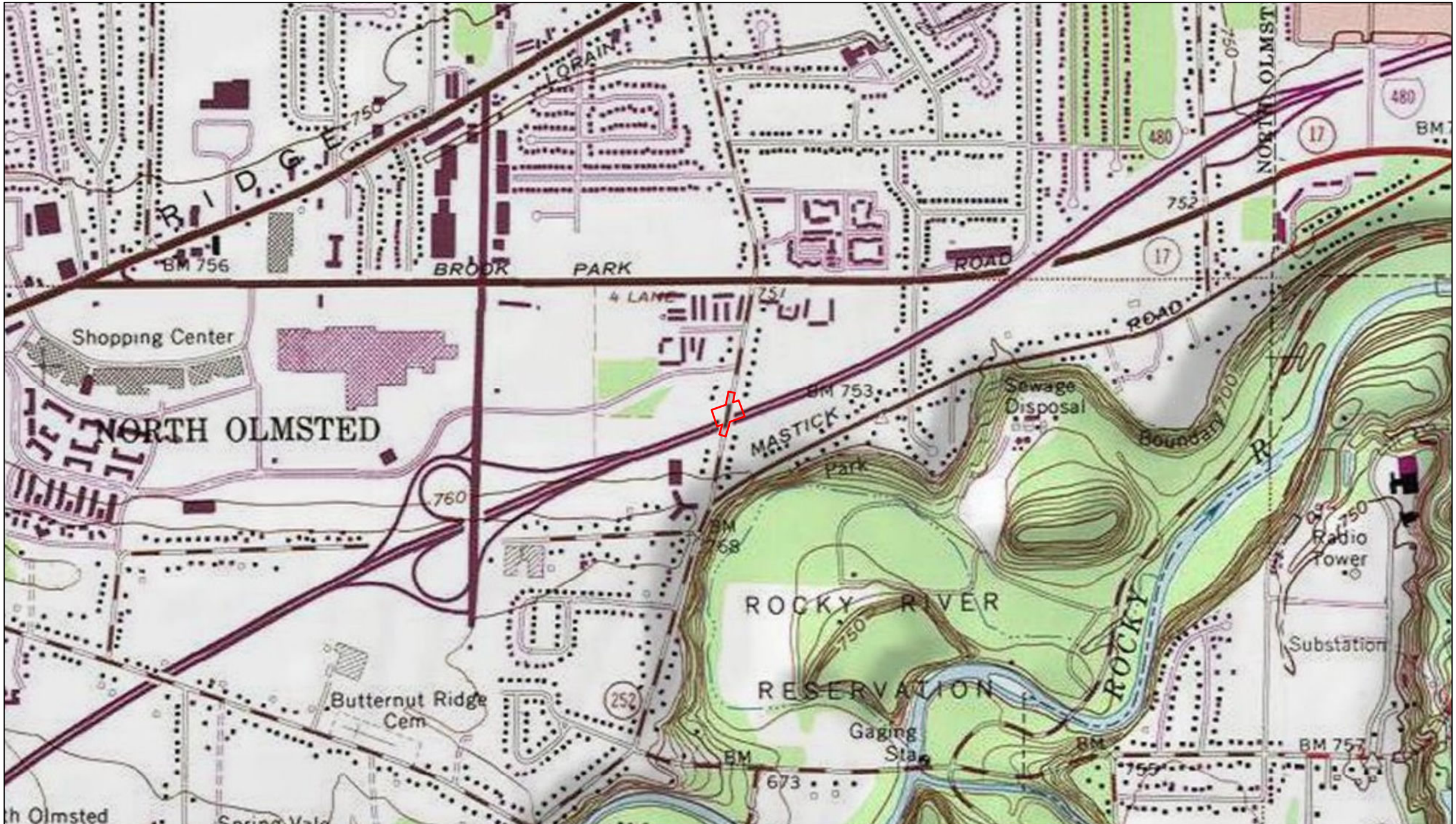

Figure 2. USGS 7.5-minute Topographic Map of North Olmsted Quadrangle. CUY-480-4.440.

Project Area

0 750 1,500 3,000 Feet

0 250 500 1,000 Meters

EnviroScience
Excellence In Any Environment

Date: 1/26/2021 Path: C:\Users\Anna Giordano\Desktop\GIS_CUY-480-4.440\Map2_Topo.mxd

Basemap courtesy of National Geographic Society (2013).

Appendix B

iATL INTERNATIONAL
ASBESTOS TESTING LABORATORIES

9000 Commerce Parkway Suite B
Mt. Laurel, New Jersey 08054
Telephone: 856-231-9449
Email: customerservice@iatl.com

CERTIFICATE OF ANALYSIS

Client: EnviroScience, Inc.
5070 Stow Road
Stow OH 44224

Client: ENV507

Report Date: 1/21/2021
Report No.: 626738 - PLM
Project: ODOT District 12 Bridges-CUY
Project No.: 33582

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 7129118
Client No.: Col-1
Analyst Observation: Silver Wrap
Client Description: Pipe Wrap
Location: 4" Gas Line
Facility:

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
15 Synthetic

Percent Non-Fibrous Material:
85

Lab No.: 7129119
Client No.: Col-2
Analyst Observation: Silver Wrap
Client Description: Pipe Wrap
Location: 4" Gas Line
Facility:

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
15 Synthetic

Percent Non-Fibrous Material:
85

Lab No.: 7129120
Client No.: Col-3
Analyst Observation: Silver/Black Wrap
Client Description: Packing
Location: 4" Gas Line Casing
Facility:

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
15 Synthetic
5 Cellulose

Percent Non-Fibrous Material:
80

Lab No.: 7129121
Client No.: Col-4
Analyst Observation: Grey Cement Product
Client Description: North Back Wall Packing
Location: Transite Coupler
Facility:

Percent Asbestos:
30 *Chrysotile*
10 *Crocidolite*

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
60

Sample received wet

Lab No.: 7129122
Client No.: Col-5
Analyst Observation: Brown/White Paint
Client Description: Paint Coating
Location: Water Line
Facility:

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Lab No.: 7129123
Client No.: Col-6
Analyst Observation: Brown/White Paint
Client Description: Paint Coating
Location: Water Line
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: 1/18/2021
Date Analyzed: 01/21/2021
Signature: David Hayes
Analyst: David Hayes

Approved By:
Frank E. Ehrenfeld, III
Laboratory Director

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Client: ENV507

Report Date: 1/21/2021
Report No.: 626738 - PLM
Project: ODOT District 12 Bridges-CUY
Project No.: 33582

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 7129124 | **Analyst Observation:** Brown/Tan Pipe Material | **Location:** 6" Pipe Casing
Client No.: Col-7 | **Client Description:** North Back Wall Packing | **Facility:**

Percent Asbestos: *None Detected*
Percent Non-Asbestos Fibrous Material: 2 Cellulose
Percent Non-Fibrous Material: 98

Sample received wet

Lab No.: 7129125 | **Analyst Observation:** Grey Sealant | **Location:** 2" Conduit - Electric
Client No.: Col-8 | **Client Description:** Mastic Sealant | **Facility:**

Percent Asbestos: ***25*** *Chrysotile*
Percent Non-Asbestos Fibrous Material: None Detected
Percent Non-Fibrous Material: 75

Lab No.: 7129126 | **Analyst Observation:** Black Sealant | **Location:** Vandel Fence Mounting Flange
Client No.: Col-9 | **Client Description:** Butyl Sealant | **Facility:**

Percent Asbestos: *None Detected*
Percent Non-Asbestos Fibrous Material: None Detected
Percent Non-Fibrous Material: 100

Lab No.: 7129127 | **Analyst Observation:** Grey Expansion Joint | **Location:** Parapet Railing
Client No.: Col-10 | **Client Description:** Joint Caulking | **Facility:**

Percent Asbestos: *None Detected*
Percent Non-Asbestos Fibrous Material: None Detected
Percent Non-Fibrous Material: 100

Lab No.: 7129128 | **Analyst Observation:** Grey Expansion Joint | **Location:** Parapet Railing
Client No.: Col-11 | **Client Description:** Joint Caulking | **Facility:**

Percent Asbestos: *None Detected*
Percent Non-Asbestos Fibrous Material: None Detected
Percent Non-Fibrous Material: 100

Lab No.: 7129129 | **Analyst Observation:** Grey Expansion Joint | **Location:** Parapet Railing
Client No.: Col-12 | **Client Description:** Joint Caulking | **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: 1/18/2021
Date Analyzed: 01/21/2021
Signature: David Hayes
Analyst: David Hayes

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

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Appendix to Analytical Report

Customer Contact: Chuck Kessler
Method: 40 CFR Appendix E to Subpart E of Part 763, interim method for the Determination of Asbestos in Bulk Insulation Samples, and USEPA 600, R93-116 as needed.

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: wchampion@iatl.com
iATL Account Representative: House Account
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 ir 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)

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Mt. Laurel, New Jersey 08054
Telephone: 856-231-9449
Email: customerservice@iatl.com

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Stow OH 44224

Client: ENV507

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Project: ODOT District 12 Bridges-CUY
Project No.: 33582

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

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. NYS customers please follow current NYSDOH ELAP requirements per policy on subject of surfacing and vermiculite, May 6, 2016, Testing Requirements for Surfacing Material Containing Vermiculite (https://www.wadsworth.org/sites/default/files/WebDoc/I198_8_02_2.pdf)

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% for most samples.

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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.
*With advance notice and confirmation by the laboratory.
**Approximately 1 Liter of sample in double-bagged container (~9x6 inch bag of sample).

iATL INTERNATIONAL
ASBESTOS TESTING LABORATORIES

9000 Commerce Parkway, Suite B • Mount Laurel, NJ 08054
Phone: 877-428-4285/856-231-9449 • Fax: 856-231-9818

Chain of Custody

–Bulk Asbestos –

Contact Information

Client Company:	EnviroScience Inc	**Project Number:**	33582
Office Address:	5070 Stow Road	**Project Name:**	ODOT District 12 Bridges- CUY
City, State, Zip:	Stow, Ohio 44224	**Primary Contact:**	Chuck Kessler
Fax Number:		**Office Phone:**	330-688-0111
Email Address:	ckessler@enviroscienceinc.com	**Cell Phone:**	330-592-9619

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: 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: 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: Non-Building Material *,** (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: January 22, 2021 (Specific date / time)

☐ Verbal ■ Email ☐ Fax

☐ 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):	C. Kessler/EnviroScience Inc	Date:	1/14/21	Time:	13:00
Received (Name / iATL):		Date:		Time:	
Sample Login (Name / iATL):	David Kaup	Date:	1/21/21	Time:	
Analysis(Name(s) / iATL):		Date:		Time:	
QA/QC Review (Name / iATL):		Date:		Time:	
Archived / Released:	QA/QC InterLAB Use:	Date:		Time:	

iATL INTERNATIONAL
Asbestos Testing Laboratories

9000 Commerce Parkway, Suite B • Mount Laurel, NJ 08054
Phone: 877-428-4285/856-231-9449 • Fax: 856-231-9818

Sample Log

–Bulk Asbestos –

Client: ODOT District 12 Project: CUY-480-4.440 Columbia Rd over I-480

Sampling Date/Time: 01/13/21 11:45

Bulk Asbestos Sample Log			
Client Sample #	iATL #	Location/Description	Notes
Col-1	7129118	4" Gas Line	Pipe Wrap
Col-2	7129119	4" Gas Line	Pipe Wrap
Col-3	7129120	4" Gas Line Casing	Packing
Col-4	7129121	Transite Coupler	North Back Wall Packing
Col-5	7129122	Water Line	Paint Coating
Col-6	7129123	Water Line	Paint Coating
Col-7	7129124	6" Pipe Casing	North Back Wall Packing
Col-8	7129125	2" Conduit- electric	Mastic Sealant
Col-9	7129126	Vandel Fence Mounting Flange	Butyl Sealant
Col-10	7129127	Parapet Railing	Joint Caulking
Col-11	7129128	Parapet Railing	Joint Caulking
Col-12	7129129	Parapet Railing	Joint Caulking

Appendix C

CUY-480-4.440

Columbia Rd over I-480

Legend

41.41500, -81.89361

Col-8 Mastic Sealant (underside between parapet and back wall)

Col-7 Pipe casing (underside)

Col-10, Col-11, Col-12 Parapet Railing Joint Caulking

Col-9 Vandal Fence Mounting Flange

Col-4 Transite Coupler

Col-5 and Col-6 Paint

Col-1 and Col-2 Pipe Wrap and Col-3 Packing Material

41.41500, -81.89361

Google Earth

N

80 ft

PHOTO 1
Looking north at CUY-480-4.440 bridge

PHOTO 2
Looking at pipe wrap over 4” gas line affixed to the underside of the structure. Sample collected of wrap material.

PHOTO 3
Gas line casing through backwall for 4 1/2” gas line. Sample taken of packing.

PHOTO 4
View looking at underside of structure. Bank of 3 Transite conduits are present.

PHOTO 5
View looking at east wall parapet railing. Sample taken of joint caulking.

PHOTO 6
View looking at the rocker and bearing pad that is all metal.

PHOTO 7
View looking north at the west side of the bridge showing fencing, sidewalk and gas line demarcation sign.

PHOTO 8
View looking down at vandal fence mounting flange. Joint caulking was sampled.

PHOTO 9
Bank of six PVC conduits on underside of structure.

PHOTO 10
View looking at the northside of structure, where mastic sealant sample from 2” electrical conduit line was taken.

PHOTO 11
View looking at transite coupler. Sample taken here.

PHOTO 12
View looking at north back wall 6 5/8” gas line packing material.

PHOTO 13
View of 6 5/8” O.D. gas line.
Paint samples taken from here.

Appendix D

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: / /	☐ Hand-Delivered

1) Notification Information (Check all that apply)

☒ Original	☐ Revision # (count):	☐ Installation	☐ Emergency	☐ Annual	☐ Cancellation	**Project County:** Cuyahoga

2) Owner, Asbestos Abatement Contractor, Billing and Fire Department Information **Revised?** ☐

Owner		
Name: Ohio Department of Transportation		Is this a company? ☐ Yes ☒ No
Address: 5500 Transportation Blvd	Contact Person: Mark Carpenter	
City: Garfield Heights	State: OH	Zip: 44125 -
Email: Mark.Carpenter@dot.state.oh.us	Phone: (216) 584 - 2089	Fax: ( ) -
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 ☐ Owner, ☐ Asbestos Abatement Contractor, or ☐ 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: Charles Kessler	Certification #: ES 34704	Expiration Date: 10 / 7 / 2021

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: ☒ PLM ☐ Point Count ☐ TEM ☐ Other Method (Explain Below):

Bulk Sampling w/point count of samples that are less than 10% asbestos containing

4) Procedures to be followed should unexpected RACM be discovered (check all that apply) **Revised?** ☐

☒ Stop work and keep wet	☐ Evacuate area	☐ Demarcate area	☐ Contact licensed abatement contractor

☐ Contact district office/local air authority

☒ Other (Explain): Notify ODOT Project Engineer and Project Superintendent

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:
☐ Implosion ☐ Fire Training ☒ Wet Methods ☒ Manual Demolition ☒ Mechanical Demolition ☐ Other (Explain):

Existing structure components will be removed by industry standard means and methods

Mail completed form and payment to:
Ohio EPA, DAPC – Asbestos
P.O. Box 1049, Columbus, OH 43216-1049

Notification of Demolition and Renovation/Abatement

Section 1: General Information

Continued

Description of affected facility components (include attachment if necessary):

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:	☐ Surfacing	☐ Mechanical	☐ Other		
Engineering Controls:	☐ Wet Methods	☐ Glove Bag	☐ NPE	☐ AFD	☐ Other:
Work Practices:	☐ Intact Removal	☐ Manual	☐ Mechanical	☐ 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: : ☐ a.m. ☐ 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: Mark Carpenter	Title: District 12 Environmental Engineer
Organization: Ohio Department of Transportation	

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 #:

A. Facility Description **Revised?** ☐

Building Name (if applicable): CUY-480-4.440	Site Location (specific): Columbia Road over I-480 SFN 1814109	
Address: Columbia Road over I-480, Coordinates: 41.41500, -81.89361		
City: North Olmstead	State: OH	Zip: 44070 -
Building Size (square feet):	No. of Floors:	Age: 41
Present Use: Highway Bridge	Prior Use: Highway Bridge	

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

☒ Demolition ☐ Renovation/Abatement – Type: ☐ Removal ☐ Repair ☐ Encapsulation ☐ Enclosure

C. Asbestos Present (check one) **Revised?** ☐

☒ Yes ☐ No ☐ No, previously abated Year Abated:

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	
		Non-friable Asbestos-Containing Material		Non-friable Asbestos-Containing Material	
	RACM	Category I	Category II	Category I	Category II
Pipes (linear feet)			819		
Surface area on other facility components (ft^2)					1
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: / /

H. Project Hold **Revised?** ☐

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