

**SOUTH 4<sup>TH</sup> STREET OVER I-70  
FRA-70-BRIDGE REPAIR FY 18  
COLUMBUS, OHIO**

***LIMITED  
ASBESTOS SURVEY***

*Prepared for:*  
**Gannett Fleming Engineers and Architects, P.C.  
2500 Corporate Exchange Drive, Suite 230  
Columbus, Ohio 43231**

*Prepared By:*  
**Resource International, Inc.  
6350 Presidential Gateway  
Columbus, Ohio 43231**

**Rii Project #W-16-124**

**November 2016**



**RESOURCE INTERNATIONAL, INC.**

**ISO** | ISO 9001:2008  
Certified QMS

*An ISO 9001:2008 QMS Certified Firm*

November 23, 2016

Mr. Shane Campbell, P.E.  
Department Manager  
Gannett Fleming Engineer and Architects, P.C.  
2500 Corporate Exchange Drive, Suite 230  
Columbus, Ohio 43231

Re: Limited Asbestos Survey  
Task 6-(O), PID 102927  
FRA-70-Bridge Repair FY 18  
South 4<sup>th</sup> Street over I-70  
Rii Project No. W-16-124

Dear Mr. Campbell:

Resource International, Inc. (Rii) is submitting this Limited Asbestos Survey conducted for the South 4<sup>th</sup> Street over I-70 Bridge Project, located in Columbus, Ohio.

Our conclusions and recommendations are presented in their entirety in Section 4.0. The entire report should be read to obtain a more complete understanding of the information provided, and to aid in any decisions made or actions taken based on our findings and conclusions.

If you have any questions concerning this report, please do not hesitate to call.

Sincerely,  
**RESOURCE INTERNATIONAL, INC.**

Zachary B. Hamilton  
Environmental Scientist  
Certified Asbestos Hazard Evaluation Specialist – No. ES34150

Michelle L. Eckels, CPG, LEED GA  
Director – Environmental Services  
Certified Asbestos Hazard Evaluation Specialist – No. ES33141  
Certified Asbestos Hazard Abatement Project Designer – No. PD60600

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Planning

Engineering

Construction  
Management

Technology

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## EXECUTIVE SUMMARY

Resource International, Inc. (Rii) was retained by Gannett Fleming Engineers and Architects, P.C. (Gannett Fleming) to complete a limited asbestos survey as part of the South 4<sup>th</sup> Street over I-70 Bridge Project, located in Columbus, Ohio.

Due to safety reasons, asbestos sampling was limited to above deck bridge areas. Underneath bridge deck areas were excluded; including, utility conduits, insulation, gaskets and pipe sleeves.

Below is a summary of the materials identified as asbestos-containing within the surveyed areas and the estimated quantities.

### ASBESTOS-CONTAINING MATERIALS AND QUANTITIES

Location	Sample Material	% Asbestos	Approximate Quantity*
Inbetween metal guardrail and concrete	Dark gray caulk on guardrails (DGC)	8% chrysotile	70 sf

sf – square feet

ACM has been positively identified on the bridge structure. The dark gray caulk on guardrails, inbetween the metal guardrail and concrete, appeared deteriorated and may have a high probability of becoming friable during the removal process; therefore, this material should be treated as Regulated ACM.

**If the identified ACM is to be disturbed by the bridge renovation project, proper asbestos abatement procedures should be implemented prior to the commencement of all other renovation/demolition work. All materials identified as Regulated ACM and will be disturbed must be abated by a State of Ohio licensed abatement contractor, transported, and disposed of at a State of Ohio licensed landfill.**

Please refer to Section 4.0 for conclusions and recommendations for proper management and disposal of the materials. The entire report should be read to obtain a full understanding in order to make an informed business decision about the site.

## **1.0 INTRODUCTION**

### **1.1 GENERAL**

Resource International, Inc. (Rii) was retained by Gannett Fleming Engineers and Architects, P.C. (Gannett Fleming) to complete a limited asbestos survey as part of the South 4<sup>th</sup> Street over I-70 Bridge Project, located in Columbus, Ohio. Refer to the Site Location Map in Appendix A. The project is to repair the bridge to an adequate condition for the remaining service life until the bridge is replaced during a phase of the IR 70/71 split project. Work may include full or partial deck patching, and installing a netting as an engineering safety measure to prevent dislodged material falling from the bridge.

The limited asbestos survey included the assessment for the presence of asbestos-containing materials (ACM) identified during the sampling and evaluation that potentially will be disturbed as part of renovation.

### **1.2 SITE SUMMARY**

Rii was retained by Gannett Fleming to provide engineering and design services, not otherwise provided by Gannett Fleming, for Task 6-(O), PID 102927, FRA-70-Bridge Repair FY 18 with the Ohio Department of Transportation (ODOT) District 6. The design work includes a limited asbestos survey in order to evaluate if materials disturbed during construction are potentially ACM. The bridge is a 3-span continuous steel beam with reinforced concrete deck and abutment. The original construction drawings are dated 1963.

The asbestos sampling was limited to above deck bridge areas. Underneath bridge deck areas were excluded; including, utility conduits, insulation, gaskets and pipe sleeves. Site photographs are provided in Appendix B.



## 2.0 ASBESTOS SURVEY

The asbestos building survey was conducted to determine if ACM is present within the structure and to comply with the National Emission Standards for Hazardous Air Pollutants (NESHAP, 40 CFR 61 Subpart M) and the Ohio Environmental Protection Agency (Ohio EPA) Ohio Asbestos Emission Control Rules (Ohio Administrative Code [OAC] 3745-20). The NESHAP requires an asbestos survey prior to demolition or renovation, and classification of suspect materials into *Category I nonfriable ACM*, *Category II nonfriable ACM*, or *Regulated ACM (RACM)*.

An Ohio certified Asbestos Hazard Evaluation Specialist (AHES) visually inspected the suspect materials identified to determine the presence of ACM. The AHES inspector included Zachary Hamilton (Certification #ES34150). The field sampling was conducted on October 13, 2016.

Building materials suspect to be asbestos-containing were inspected and grouped as homogeneous if uniform in texture, color, date of application, and appears identical in other respects. A total of seven (7) homogeneous ACMs were visually inspected and sampled during the field inspection. The following table is a list of homogeneous building materials initially suspect to be ACM.

**TABLE 1 – HOMOGENEOUS MATERIALS DESCRIPTION SUMMARY**

Material Code	Homogeneous Material Description
BEJ	Brittle expansion joint
DGC	Dark gray caulk
LGC	Light gray caulk
PC	Parapet concrete
SC	Sidewalk concrete
SCC	Sidewalk curb concrete
WSP	White striping paint

## 2.1 METHODOLOGY

Materials identified as suspect ACM were bulk sampled for laboratory analysis to determine asbestos content, in accordance with 40 CFR 763.86. A total of fourteen (14) bulk samples were obtained from the subject area and analyzed. Each suspect ACM was touched to determine whether it was friable or nonfriable, and the condition of each suspect ACM was documented. Whenever possible, reasonably ascertainable quantities of suspect ACM were visually observed and recorded. The bulk samples were placed in plastic bags, sealed and labeled with a unique sample identification number and a description of material.

In accordance with the EPA sample requirements, the number of samples of each homogeneous material is based on the type of material and the application method. The number of samples taken of each material as required are listed below:

**SURFACING MATERIALS**

**TABLE 2 – SURFACING MATERIAL SAMPLING NUMBERS**

Size of Homogeneous Sampling Area	Minimum Number of Samples Required
< 1,000 ft <sup>2</sup>	3
Between 1,000 and 5,000 ft <sup>2</sup>	5
> 5,000 ft <sup>2</sup>	7

**THERMAL SYSTEM INSULATION**

For thermal system insulation a minimum of three (3) samples are required, except for 1) patch less than 6 linear or square feet (1 sample), 2) mudded fittings (elbows, tees, and valves) to be determined by the inspector, and 3) insulation which is fibrous glass, foam glass, rubber, and styrofoam can be determined as non-ACM by the inspector.

**MISCELLANEOUS MATERIALS AND NON-FRIABLE MATERIALS**

Minimum of two (2) samples are required.

**2.2 ANALYTICAL RESULTS**

The bulk samples were submitted to EMSL Analytical, Inc. (EMSL) in Cinnaminson, New Jersey for analysis using polarized light microscopy (PLM). Pace Analytical laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for conducting asbestos analysis using PLM. The PLM analysis was performed in accordance with the Environmental Protection Agency (EPA) Method 600/R-93/116, as outlined in 40 CFR 763.109 Appendix A. A chain-of-custody was prepared to accompany bulk samples to the laboratory. The complete laboratory analytical report and chain of custody are provided in Appendix C.

A summary of the samples taken and materials which were identified as ACM are listed in Table 2 – Asbestos Sample Summary. Site photographs are provided in Appendix B.

**TABLE 3 – ASBESTOS SAMPLE SUMMARY**

Sample ID	Location	Sample Material	% Asbestos*
B-001	West	Brittle expansion joint	NAD
B-002	West	Brittle expansion joint	NAD
B-003	Fence post	Light gray caulk	NAD
B-004	Fence post	Light gray caulk	NAD
<b>B-005</b>	<b>Guard rail</b>	<b>Dark gray caulk</b>	<b>8% chrysotile</b>
<b>B-006</b>	<b>Guard rail</b>	<b>Dark gray caulk</b>	<b>8% chrysotile</b>
B-007	West parapet	Concrete	NAD
B-008	West parapet	Concrete	NAD
B-009	West sidewalk	Concrete	NAD
B-010	West sidewalk	Concrete	NAD
B-011	Crosswalk	White striping paint	NAD
B-012	Arrow on pavement	White striping paint	NAD
B-013	East sidewalk curb	Concrete	NAD
B-014	East sidewalk curb	Concrete	NAD

\*NAD

## 2.3 ASBESTOS CLASSIFICATIONS

ACMs are classified as either Category I nonfriable, Category II nonfriable, or Regulated Asbestos-containing Material (RACM) in accordance with the Ohio Administrative Code (OAC) 3745-20-01 and 40 CFR Part 61.141, Subpart M. Refer to below for a definition of each classification:

- **Category I Nonfriable ACM** – Asbestos-containing packings, gaskets, resilient floor covering and **asphalt roofing products** containing more than 1 percent asbestos as determined using Polarized Light Microscopy, as specified in Appendix E, Subpart E, 40 CFR Part 763, Section 1.
- **Category II Nonfriable ACM** – Any material, excluding Category I nonfriable ACM, containing more than 1 percent asbestos as determined using Polarized Light Microscopy, as specified in Appendix E, Subpart E, 40 CFR Part 763, Section 1, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.
- **Regulated ACM (RACM)** –
  - a) Friable asbestos material;
  - b) Category I nonfriable ACM that has become friable;
  - c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading; or
  - d) Category II nonfriable ACM that has a high probability of becoming

or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by 40 CFR Part 61.

The materials identified as asbestos-containing, and the appropriate material classification includes the following:

**TABLE 4 – IDENTIFIED ACM CATEGORIES**

<b>Asbestos Classification</b>	<b>Homogeneous Material Description</b>
Category II Nonfriable ACM	<ul style="list-style-type: none"><li>• Dark gray caulk on guardrails (DGC)</li></ul>

## **2.4 LIMITATIONS**

The scope of this inspection is limited to building components that were visible to the inspector/risk assessor at the time of the inspection. The project scope does not include components that may have been concealed from sight by irregular construction practices, roofing material, or hidden by temporary procedures used to secure the unit or other circumstances that would prevent visual inspection of the component.

### 3.0 QUALITY ASSURANCE/QUALITY CONTROL

Rii utilizes several procedures to ensure a high standard of care throughout the project. Such procedures include:

- All asbestos inspectors are Ohio Department of Health (ODH) certified Asbestos Hazard Evaluation Specialists.
- Disposable nitrile gloves and new, sealable, plastic bags are used to minimize cross-contamination of samples.
- Sampling equipment is cleaned between continuous uses with wet methods.
- Chain-of-custodies are completed after each survey, prior to transporting the samples to a laboratory for analysis.
- The laboratory used for analysis of asbestos samples is accredited by the National Institute of Standards and Technology under the National Voluntary Laboratory Accreditation Program (NVLAP).
- The laboratory staff checks the sample numbers with the chain-of-custody.
- A written report is developed by the inspectors, and peer-reviewed by the project manager.
- The content of the report is compared with ODH Asbestos Building Inspection Report Evaluation checklist to verify that Rii has met all sampling and reporting requirements. A copy of the ODH Asbestos Building Inspection Report Evaluation checklist is provided in Appendix F.



## 4.0 CONCLUSIONS AND RECOMMENDATIONS

Resource International, Inc. (Rii) was retained by Gannett Fleming to complete a limited asbestos survey as part of the South 4<sup>th</sup> Street over I-70 Bridge Project, located in Columbus, Ohio. This asbestos survey was conducted in order to comply with the National Emission Standards for Hazardous Air Pollutants (NESHAP, 40 CFR 61 Subpart M) and the Ohio Environmental Protection Agency (OEPA) Ohio Asbestos Emission Control Rules (Ohio Administrative Code [OAC] 3745-20). Per NESHAP and OEPA, fourteen (14) bulk samples were obtained from the facility, and categorized into seven (7) homogeneous materials. A total of one (1) of the seven (7) suspect homogeneous materials had identified asbestos fibers.

Below is a summary of the materials identified as asbestos-containing within the surveyed areas and the estimated quantities.

**TABLE 5 - ASBESTOS-CONTAINING MATERIALS AND QUANTITIES**

Location	Sample Material	% Asbestos	Approximate Quantity*
Inbetween metal guardrail and concrete	Dark gray caulk on guardrails (DGC)	8% chrysotile	70 sf

\*square feet

### 4.1 RECOMMENDATIONS FOR IDENTIFIED ACM

ACM has been positively identified on the bridge structure. The dark gray caulk on guardrails, inbetween the metal guardrail and concrete, appeared deteriorated and may have a high probability of becoming friable during the removal process; therefore, this material should be treated as Regulated ACM.

**If the identified ACM is to be disturbed by the bridge renovation project, proper asbestos abatement procedures should be implemented prior to the commencement of all other renovation/demolition work. All materials identified as Regulated ACM and will be disturbed must be abated by a State of Ohio licensed abatement contractor, transported, and disposed of at a State of Ohio licensed landfill.**

Site photographs are provided in Appendix B.

### 4.2 REGULATORY NOTIFICATION OF RENOVATION/DEMOLITION

Per Ohio Environmental Protection Agency (Ohio EPA) regulations, every **demolition** of a facility requires notification, regardless of whether asbestos is involved. Notification of the **renovation** of a facility must be submitted when the amount of regulated asbestos-containing material (RACM) stripped, removed, dislodged, cut, drilled, or similarly disturbed exceeds 260 linear feet on pipes or 160 square feet on other facility components or 35 cubic feet off facility components. Thus, if any demolition or renovation activities of the building are deemed necessary, the owner of the facility must follow the Ohio EPA standards for notification of demolition and renovation work. A copy of the Ohio EPA Notification of Demolition and Renovation form is provided in Appendix E.

In addition, the Ohio Department of Health (ODH) requires a Prior Notification of Asbestos Hazard Abatement form to be filled out and submitted prior to any abatement activities that exceed 50 linear feet or 50 square feet. The form should be completed and submitted to ODH at least ten (10) days before beginning a planned asbestos hazard abatement project. A copy of the ODH Prior Notification of Asbestos Hazard Abatement Project is provided in Appendix E.



## 5.0 RELIABILITY OF REPORT - DISCLAIMER

This report has been prepared to document findings of this asbestos survey only, not for abatement design. Abatement design should be performed by appropriately experienced and credentialed personnel. Additional reconnaissance work, which may include minor demolition to access hidden areas and further sampling/analyses, should be expected as part of abatement design.

Our inspection excluded areas that require significant demolition of building surfaces and structures for access; therefore, should suspect asbestos-containing materials (e.g., pipe insulation, vermiculite, etc.) be discovered below the roof material or within wall systems and inaccessible pipe chases, these materials should be properly sampled and removed by an abatement contractor if necessary.

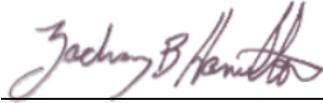
The opinions, conclusions, and recommendations presented in this report are put forth for a specific and proposed purpose and for the specific site discussed. Rii is not responsible for any other application, whether of purpose or location, of our opinions, conclusions, or recommendations, other than as specifically indicated in this report.

Conclusions reached in this report are based upon the objective data available to Rii at the time of forming the opinions as presented in this report. The accuracy of this report depends upon the accuracy of the data. The conclusions reached herein represent our opinions. Rii is not responsible for actual conditions proven to be materially at variance with the data that was available to them and upon which they relied, as presented in this report.



## 6.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

The Ohio Department of Health licenses of the personnel involved in this survey are provided in Appendix D. The environmental professionals responsible for the limited asbestos survey are as follows:



Zachary B. Hamilton  
Environmental Scientist  
Certified Asbestos Hazard Evaluation Specialist – No. ES34150



Michelle L. Eckels, CPG, LEED Green Assoc.  
Director – Environmental Services  
Certified Asbestos Hazard Evaluation Specialist – No. ES33141  
Certified Asbestos Hazard Abatement Project Designer – No. PD60600

## DEFINITION OF TERMS

Abatement – Procedures to control fiber release from Asbestos-Containing Materials (ACM). Includes removal, encapsulation, and enclosure.

Asbestos – A generic name given to a number of naturally occurring hydrated mineral silicates that possess a unique crystalline structure, are incombustible in air, and separate into fibers. Asbestos includes the asbestiform varieties of chrysotile (serpentine); crocidolite (riebeckite); amosite (cummingtonite-grunerite); anthophyllite; tremolite, and actinolite, in any combination.

ACM - Asbestos-Containing Material – Any material containing more than 1% by weight of asbestos of any type or mixture of types (AHERA, OSHA definition).

Asbestos Fiber – A particle of asbestos, 5 micrometers or longer, with a length-to-diameter ratio of at least 3 to 1 (OSHA definition).

Ballasts – Both magnetic and electronic ballasts used to regulate the current and power to a fluorescent and HID lamps. Magnetic ballasts may or may not include capacitors containing PCBs. Prior to 1978, ballasts were commonly manufactured with PCBs in the capacitor oil and in a tar-like substance that surrounds ballast components called “potting compound”. Ballasts with no PCBs, will have an identifying sticker “No PCB”.

Category I nonfriable ACM – Asbestos-containing packings, gaskets, resilient floor covering and asphalt roofing products containing more than 1 percent asbestos as determined using Polarized Light Microscopy, as specified in appendix E, subpart E, 40 CFR part 763, section 1.

Category II nonfriable ACM – Any material, excluding Category I nonfriable ACM, containing more than 1 percent asbestos as determined using Polarized Light Microscopy, as specified in appendix E, subpart E, 40 CFR part 763, section 1, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

EPA – Environmental Protection Agency.

Fluorescent Lamps – Low intensity discharge lamps that contain mercury and are commonly used in commercial and industrial lighting. Fluorescent lamps include tubes, circular and compact fluorescent lighting products, whether they use separate or integral ballast.

Friable Asbestos-Containing Material – Material that contains more than 1% asbestos by weight and that can be crumbled, pulverized, or reduced to powder, when dry, by hand pressure (ODH definition).

Hazardous Substance - a substance defined as a hazardous substance pursuant to CERCLA 42 USC part 9601(14), as interpreted by EPA regulations and the courts: (A) any substance designated pursuant to section 1321(b)(2)(A) of Title 33, (B) any element, compound, mixture, solution, or substance designated pursuant to 42 USC part 9602, (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (42 USC part 6921), (D) any toxic pollutant listed under section 1317(a) of Title 33, (E) any hazardous air pollutant listed under section 112 of the Clean Air Act (42 USC part 7412), and (F) any imminently hazardous chemical substance or mixture with respect to which the EPA Administrator has taken action pursuant to section 2606 of Title 15. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under the items listed above. The term also does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and synthetic gas).

Hazardous Waste - any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (42 USC 6921)(but not including any waste the regulation of which under the Solid Waste Disposal Act (42 USC 6901 et seq.) has been suspended by Act of Congress).

High Intensity Discharge or HID Lamps – Includes mercury, metal halide and high-pressure sodium lamps that contain mercury.

NESHAP - National Emission Standards for Hazardous Air Pollutants.

NIOSH – National Institute for Occupational Safety and Health.

ODH – Ohio Department of Health.

OSHA – Occupational Safety and Health Administration.

PCM – Phase Contrast Microscopy – An optical microscopic technique used for the counting of fibers in air samples, but which does not distinguish fiber types.

PLM – Polarized Light Microscopy – Bulk sample analysis of suspect asbestos sample using microscope equipped with dual polarizing filters to observe optical properties of the sample.

PPE – Personal Protective Equipment – Equipment worn to minimize exposure to a variety of hazards. Example of PPE includes such items as gloves, foot and eye protection, protective hearing devices, hard hats, respirators and full body suits.

RCRA - Resource Conservation and Recovery Act.



Regulated ACM (RACM) –

- a) Friable asbestos material;
- b) Category I nonfriable ACM that has become friable;
  - c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading; or
  - d) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by 40 CFR Part 61.

TCLP - Toxic Characteristic Leachate Procedure.

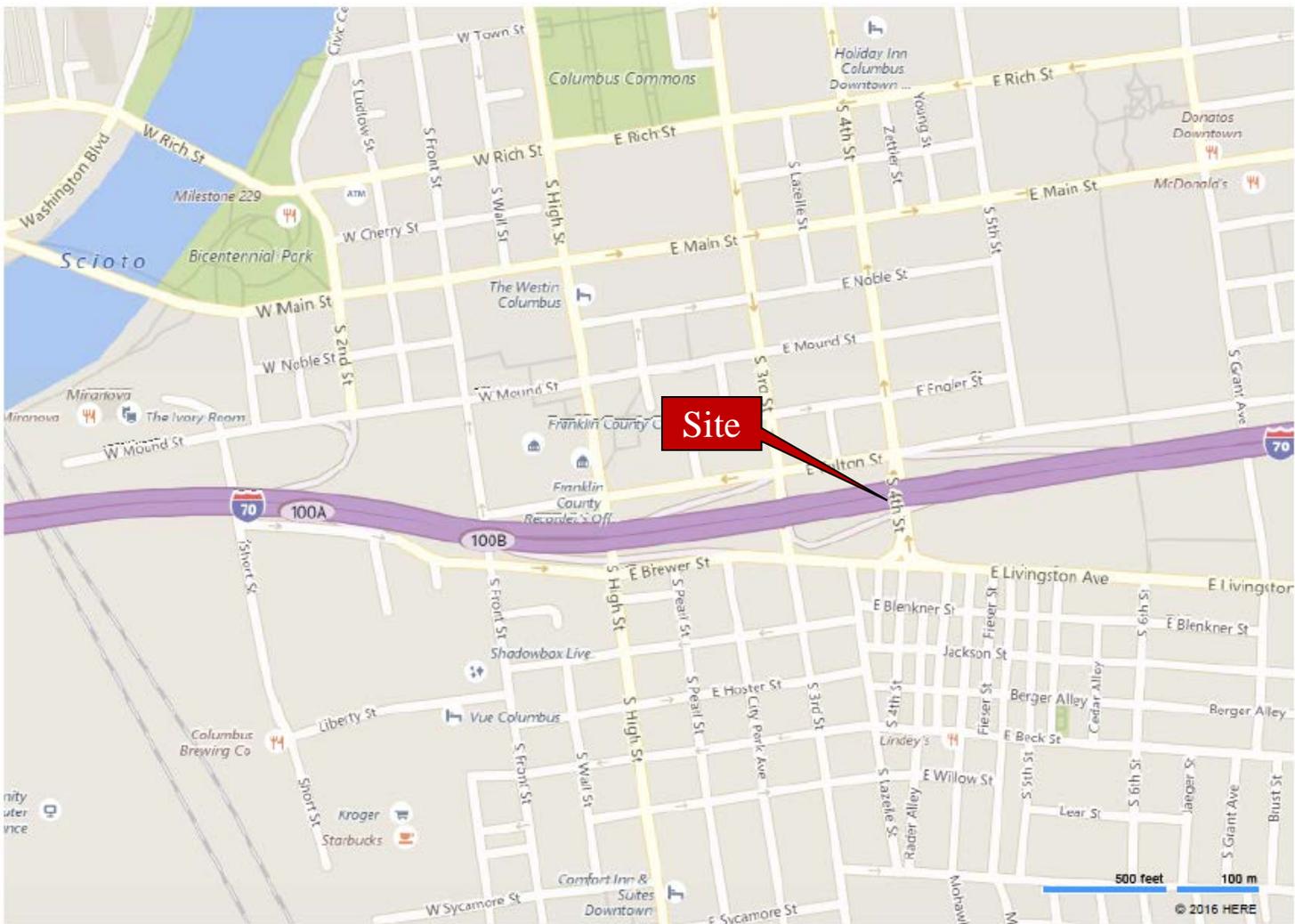
XRF - X-ray Fluorescence



# ***APPENDIX A***

## ***FIGURES***





**FIGURE 1 – REGIONAL LOCATION MAP**

**SOUTH 4<sup>TH</sup> STREET OVER I-70 BRIDGE  
 FRA-70-BRIDGE REPAIR FY 18  
 COLUMBUS, OHIO**



Rii Project  
 W-16-124



# ***APPENDIX B***

## ***SITE PHOTOGRAPHS***



## PHOTOGRAPHIC LOG

<b>Project Name:</b> Limited Asbestos Survey		<b>Location:</b> South 4 <sup>th</sup> Street over I-70 Bridge, Columbus, OH	<b>Project No.</b> W-16-124
<b>Photo No.</b> 1	<b>Date:</b> 10-13-16		
			
<b>Description:</b> South 4 <sup>th</sup> Street over I-70 bridge in Columbus, Ohio.			

## PHOTOGRAPHIC LOG

<b>Project Name:</b> Limited Asbestos Survey		<b>Location:</b> South 4 <sup>th</sup> Street over I-70 Bridge, Columbus, OH	<b>Project No.</b> W-16-124
<b>Photo No.</b> 2	<b>Date:</b> 10-13-16		
			
<b>Description:</b> Dark gray caulk on guard rails contained asbestos.			

# ***APPENDIX C***

## ***ANALYTICAL RESULTS & CHAIN-OF-CUSTODIES***





# EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-5974

<http://www.EMSL.com> / [cinnasblab@EMSL.com](mailto:cinnasblab@EMSL.com)

EMSL Order: 041628675

Customer ID: RESI25

Customer PO:

Project ID:

**Attention:** Michelle Eckels  
Resource International  
6350 Presidential Gateway  
Columbus, OH 43231

**Phone:** (614) 390-5988

**Fax:** (614) 823-4990

**Received Date:** 10/17/2016 9:30 AM

**Analysis Date:** 10/31/2016

**Collected Date:**

**Project:** W-16-124 / S. 4th Street & 70 Bridge

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-001 <small>041628675-0001</small>	West - Brittle Expansion Joint	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-002 <small>041628675-0002</small>	West - Brittle Expansion Joint	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-003 <small>041628675-0003</small>	West - Light Gray Fence Post Caulk	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-004 <small>041628675-0004</small>	West - Light Gray Fence Post Caulk	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-005 <small>041628675-0005</small>	West - Dark Gray Guard Rail Caulk	Gray Fibrous Homogeneous		92% Non-fibrous (Other)	8% Chrysotile
B-006 <small>041628675-0006</small>	West - Dark Gray Guard Rail Caulk	Gray Fibrous Homogeneous		92% Non-fibrous (Other)	8% Chrysotile
B-007 <small>041628675-0007</small>	West - Parapet Concrete	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-008 <small>041628675-0008</small>	West - Parapet Concrete	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-009 <small>041628675-0009</small>	West - Sidewalk Concrete	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-010 <small>041628675-0010</small>	West - Sidewalk Concrete	Gray/Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-011 <small>041628675-0011</small>	Crosswalk - White Road Paint	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-012 <small>041628675-0012</small>	Arrow - White Road Paint	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-013 <small>041628675-0013</small>	East - Sidewalk Curb	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-014 <small>041628675-0014</small>	East - Sidewalk Curb	Gray/Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-015 <small>041628675-0015</small>	Bridge Column - Exp. Joint	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-016 <small>041628675-0016</small>	Bridge Column - Exp. Joint	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 10/31/2016 17:10:34



# EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-5974

<http://www.EMSL.com> / [cinnasblab@EMSL.com](mailto:cinnasblab@EMSL.com)

**EMSL Order:** 041628675  
**Customer ID:** RESI25  
**Customer PO:**  
**Project ID:**

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-017 <small>041628675-0017</small>	Bridge Column - Concrete	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-018 <small>041628675-0018</small>	Bridge Column - Concrete	Gray/Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Analyst(s) \_\_\_\_\_

Alexis Kum (9)

Matthew Hermann (9)

Benjamin Ellis, Laboratory Manager  
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial report from: 10/31/2016 17:10:34



041628075

CHAIN-OF-CUSTODY



RESOURCE INTERNATIONAL, INC.

RECEIVED  
CHINA MINSON, NJ

2016 OCT 14 P 12: 33

P 2 of 2

6350 Presidential Gateway  
Columbus, Ohio 43231  
Phone: 614.823.4949  
Fax: 614.823.4990

Rii P. O. Number: \_\_\_\_\_

Project Name: \_\_\_\_\_

W-110-124

Site Location: S. 4th Street + 70 Bridge

HA No.	Bulk Sample I.D. Number	Suspect Material Type	Bulk Sample Locations	Other Homogeneous Locations	Comments and Observation:	
					Condition	Friability*
	B-011	White Road Paint	Crosswalk Arrow		Fair	NF
	B-012					
	B-013	Sidewalk curb	East EAST		Door	NF
	B-014					
	B-015	Exp Jdwnt	Bridge Column			
	B-016					
	B-017		Bridge Column			
	B-018	Concrete				

F = Friable NF = Non-friable

Relinquished by:	Date: 10-13-16	Received by: UPS	Date: _____	Turnaround: _____	Send laboratory results to: Resource International, Inc. 6350 Presidential Gateway Columbus, OH 43231
Relinquished by:	Date: _____	Received by: PMU UPS	Date: 10/17/16 0930		Email results to: michellee@resourceinternational.com Hard copy: Michelle Eckels

Comments: Analyze each distinct layer.

# ***APPENDIX D***

## ***CERTIFICATIONS AND LABORATORY ACCREDITATIONS***





# OHIO DEPARTMENT OF HEALTH

246 North High Street  
Columbus, Ohio 43215

614/466-3543  
www.odh.ohio.gov

John R. Kasich/Governor

Richard Hodges/Director of Health

October 06, 2016

Zachary B Hamilton  
Resource International  
6350 Presidential Gateway  
Columbus OH 43231

RE: Asbestos Hazard Evaluation Specialist  
Certification Number: ES34150  
Expiration Date: 10/09/2017

Dear Zachary B Hamilton:

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 Health for violation of any of the requirements of 3701-34 of the Ohio Administrative Code.

If you have any questions, please call Eleanor Black, Licensure Specialist, at 614-644-0226.

Sincerely,

Bill Robbins, Section Chief  
Bureau of Licensure Operations  
Office of Health Assurance and Licensing

State of Ohio  
Department of Health  
Asbestos Program

**Asbestos Hazard Evaluation Specialist**



**Zachary B Hamilton**  
Resource International  
6350 Presidential Gateway  
Columbus OH 43231

<b>Certification Number</b>	<b>Expiration Date</b>
<b>ES34150</b>	<b>10/09/2017</b>

DOB: 02/02/1977

This certification is issued pursuant to Chapter 3710 of the Revised Code and 3701-34 of the Ohio Administrative Code

Certification Card is not valid if altered



# OHIO DEPARTMENT OF HEALTH

246 North High Street  
Columbus, Ohio 43215

614/466-3543  
www.odh.ohio.gov

John R. Kasich/Governor

Richard Hodges/Director of Health

March 31, 2016

Michelle L Eckels  
Resource International, Inc.  
6350 Presidential Gateway  
Columbus OH 43231

RE: Asbestos Hazard Evaluation Specialist  
Certification Number: ES33141  
Expiration Date: 04/10/2017

Dear Michelle L Eckels:

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 Health for violation of any of the requirements of 3701-34 of the Ohio Administrative Code.

If you have any questions, please call Kathy Butcher, Licensure Specialist, at 614-644-0226.

Sincerely,

Bill Robbins, Section Chief  
Bureau of Licensure Operations  
Office of Health Assurance and Licensing





# OHIO DEPARTMENT OF HEALTH

246 North High Street  
Columbus, Ohio 43215

614/466-3543  
www.odh.ohio.gov

John R. Kasich/Governor

Richard Hodges/Director of Health

January 27, 2016

Michelle L Eckels  
Resource International Inc  
6350 Presidential Gateway  
Columbus OH 43231

RE: Asbestos Hazard Abatement Project Designer  
Certification Number: PD60600  
Expiration Date: 01/26/2017

Dear Michelle L Eckels:

This letter and enclosed certification card approves your request to be certified as an Asbestos Hazard Abatement Project Designer. 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 Health for violation of any of the requirements of 3701-34 of the Ohio Administrative Code.

If you have any questions, please call Eleanor Black, Licensure Specialist, at 614-644-0226.

Sincerely,

Bill Robbins, Section Chief  
Bureau of Licensure Operations  
Office of Health Assurance and Licensing

State of Ohio  
Department of Health  
Asbestos Program

**Asbestos Hazard Abatement Project Designer**



**Michelle L Eckels**  
Resource International Inc  
6350 Presidential Gateway  
Columbus OH 43231

Certification Number	Expiration Date
<b>PD60600</b>	<b>01/26/2017</b>

DOB: 02/02/1970

This certification is issued pursuant to Chapter 3710 of the Revised Code and 3701-34 of the Ohio Administrative Code

Certification Card is not valid if altered.

United States Department of Commerce  
National Institute of Standards and Technology



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**Certificate of Accreditation to ISO/IEC 17025:2005**

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NVLAP LAB CODE: 101048-0

**EMSL Analytical, Inc.**  
Cinnaminson, NJ

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,  
listed on the Scope of Accreditation, for:*

**Asbestos Fiber Analysis**

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.  
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality  
management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).*

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2016-07-01 through 2017-06-30

*Effective Dates*



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*For the National Voluntary Laboratory Accreditation Program*



**SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005**

**EMSL Analytical, Inc.**

200 Route 130 North  
Cinnaminson, NJ 08077  
Mr. Ben Ellis  
Phone: 800-220-3675 Fax: 856-786-5973  
Email: bellis@emsl.com  
<http://www.emsl.com>

**ASBESTOS FIBER ANALYSIS**

**NVLAP LAB CODE 101048-0**

**Bulk Asbestos Analysis**

<u>Code</u>	<u>Description</u>
18/A01	EPA 600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

**Airborne Asbestos Analysis**

<u>Code</u>	<u>Description</u>
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

A handwritten signature in blue ink, appearing to read "Dana S. Laman".

For the National Voluntary Laboratory Accreditation Program

# ***APPENDIX E***

## ***NOTIFICATION FORMS***



Do Not Write in This Space

Postmark	Date Received	Notification No.	By
----------	---------------	------------------	----

## Ohio Department of Health Prior Notification of Asbestos Hazard Abatement Project

Read carefully all the instructions and questions prior to completing the notification form.

1. Notifications including check shall be typed and sent to the Ohio Department of Health, Attn: Revenue Processing, P.O. Box 15278, Columbus, Ohio 43215.
2. Checks shall be made payable to: Treasurer, State of Ohio, for the amount of sixty-five dollars (\$65.00).
3. Any licensed asbestos hazard abatement contractor who performs any asbestos hazard abatement projects within the State of Ohio shall submit prior notifications to the Director at least ten business days before beginning each planned asbestos hazard abatement project as required by Chapter 3701-34 of the Ohio Administrative Code.
4. Type of notification  original  revision number \_\_\_\_\_ revised line(s) number \_\_\_\_\_  
 emergency  blanket  cancellation
5. Type of abatement involving at least 50 linear feet or 50 square feet  
 removal  repair  encapsulation  enclosure  renovation

6. Owner name			
Address	City	State	ZIP
Contact	Contact telephone number (      )		

7. License number	Abatement Contractor	Expiration	
Address	City	State	ZIP
Contact	Telephone number (      )		

8. Certification number	Name of asbestos hazard abatement specialist for project	Expiration
-------------------------	--	------------

9. Project information—Building name			
Address	City	State	County
Site location ( <i>specific</i> )			

10. Project description			
Type of asbestos material	<input type="checkbox"/> surfacing	<input type="checkbox"/> mechanical	<input type="checkbox"/> other _____
Asbestos removal from	<input type="checkbox"/> pipe	<input type="checkbox"/> boiler	<input type="checkbox"/> other _____
Engineering controls	<input type="checkbox"/> AFD	<input type="checkbox"/> glove bag	<input type="checkbox"/> other _____

11. Estimate of asbestos containing material	
linear feet	square feet

12. Abatement dates							
set up		abatement			completion (acm work only)		
Hours of operation							
Days of the week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday

13. Approved landfill—Name						EPA permit number	
City					State	Telephone number	

14. Name of person filing this notice						Date	
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**OHIO ENVIRONMENTAL PROTECTION AGENCY  
INSTRUCTIONS FOR COMPLETING  
NOTIFICATION OF DEMOLITION AND RENOVATION FORM**

**General Information**

**Who must submit this notification?** [OAC 3745-20-03 and 40 CFR 61.145(b)]

- The owner or operator means any person who leases, operates, controls, or supervises the facility being demolished or renovated, or any person who owns, leases, operates, controls or supervises the demolition or renovation (activity), or both.

The Ohio EPA notification of demolition and renovation form is required for:

- Every demolition of a facility, regardless of whether asbestos is involved. This includes all structures that will be intentionally burned for fire training purposes.
- A renovation when the amount of regulated asbestos-containing material (RACM) stripped, removed, dislodged, cut, drilled, or similarly disturbed exceeds 260 linear feet on pipes or 160 square feet on other facility components or 35 cubic feet off facility components.

**When must I submit this notification?**

ORIGINAL: The original notification must be **postmarked** or **hand delivered** to the Ohio EPA district office or local air agency with jurisdiction in the county where the operations will occur at least 10 working days (Monday-Friday excluding weekends) before operations begin. Please see example table below to help determine when to submit the original notification.

***E-mail or FAX notification is not acceptable for original notification.***

July

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3 day 1	4 day 2	5 day 3	6
7	8 day 4	9 day 5	10 day 6	11 day 7	12 day 8	13
14	15 day 9	16 day 10	17 *	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Post mark date (and Day 1 of 10-day clock): July 3<sup>rd</sup>.

Note: Holidays are counted when they fall on a working day.

Completion of 10-day prior notification period: July 16<sup>th</sup>.

\* First day work can commence (day following the 10<sup>th</sup> working day): July 17<sup>th</sup>.

REVISIONS: The notification must be updated if the amount of RACM changes by at least 20 percent, any changes in work schedules (dates or hours), any change in owner or operator, or any change in the name or location of selected waste disposal site. A revised notification may be provided by phone, email, or fax, followed in writing.

EMERGENCY DEMOLITION OR RENOVATIONS: The notification must be submitted as early as possible before, but not later than, the following working day from start of renovation or demolition activities. The notification must include the supplemental information required in Sections 14 or 15.

**Where do I send my notification?**

Send the notification directly to the Ohio EPA district office or local air agency with jurisdiction in the county where the operations will occur. A list of the counties and a jurisdiction map is available online at [www.epa.ohio.gov/dapc/atu/asbestos.aspx](http://www.epa.ohio.gov/dapc/atu/asbestos.aspx)

**How does Ohio EPA assess fees?** [ORC 3745.11(G)]

An owner or operator who is responsible for an asbestos demolition or renovation project shall pay the fees set forth in the following schedule. This applies when thresholds are greater than or equal to: 260 linear feet; 160 square feet; or 35 cubic feet.

- Each notification \$75 plus,
- Asbestos removal \$3/unit (1 unit = any combination of linear feet or square feet equal to fifty) and/or
- Asbestos cleanup \$4/cubic yard

The Ohio EPA will bill the facility owner or operator on a quarterly basis. Please be aware that some local air agencies may have additional fees.

## Who can help answer questions about completing this notification?

Contact the Ohio EPA district office or local air agency with jurisdiction in the county where the operations will occur. A list of these jurisdictions and the appropriate contacts is available at [www.epa.ohio.gov/dapc/atu/asbestos.aspx](http://www.epa.ohio.gov/dapc/atu/asbestos.aspx)

## Line-by-line Instructions

**Operator Project #** -- this is an optional space provided for the person submitting the notice to indicate their project or job number.

1. Check the type of notification:
  - "Original" is the first notification submitted for a project; hard copy is required to be post-marked or hand-delivered 10 working-days prior to start of work.
  - "Revision" is any notification submitted after the original due to any change in the information on the form; required if the amount of RACM changes by at least 20 percent, any changes in work schedules (dates or hours), any change in owner or operator, or any change in the name or location of selected waste disposal site. Revisions shall be numbered chronologically with Revision #1 being the first time any items on the notification form were changed. If revision is marked, please include the Revision # and specify the Sections of the form in which items were revised.
  - "Cancellation" is submitted to indicate a project has been cancelled and work will not be completed.
2. Describe the building(s) or structure(s) affected by the operations. If the project includes more than one structure, be sure to complete and include the Multi-Structure Attachment Form with your Ohio EPA notification form. Include building size in square feet, specific site location, number of floors, and age in years. Also include the present and prior use (i.e., industrial, commercial, institutional, residential, vacant, etc.) of the building(s).
3. Identify the type of operation. Definitions of these terms can be found in OAC 3745-20-01. Please note emergency demolitions and renovations require additional information, see Sections 14 and 15.
  - "Demolition" means the wrecking, or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.
  - "Emergency demolition" means any demolition operation conducted under a written order issued by a state or local governmental agency because a facility is structurally unsound and in danger of imminent collapse.
  - "Renovation" means altering a facility or one or more facility components in any way, including the stripping or removal of regulated asbestos-containing material from a facility component. Operations in which load-supporting structural members are wrecked or taken out are demolitions.
  - "Emergency renovation operation" means a renovation operation that was not planned but results from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden. This term includes operations necessitated by non-routine failures of equipment.
  - "Fire Training" refers to the demolition of a facility by intentional burning. All asbestos containing material, including Category I and Category II nonfriable ACM, must be removed in accordance with OAC 3745-20 before burning. Additional requirements also apply; please contact the DO/LAA with jurisdiction for additional information. <http://epa.ohio.gov/portals/41/sb/publications/BurningHouse.pdf>
  - "Courtesy" means you are submitting the notification of a demolition/renovation of a non-facility or abatement project below regulatory thresholds.

- “Annual” refers to planned renovation operations over a calendar year involving a series of non-scheduled operations that are collectively greater than the threshold limits; these notifications must be submitted in the month prior to the beginning of the calendar year.
4. Declare whether or not asbestos is present in any quantity. This includes assumed asbestos containing materials such as roofing and flooring. Also specify if the facility was previously abated and year when previous asbestos abatement occurred (if applicable).
  5. Provide all owner/operator contact information.
    - Specify if this project is part of a larger project or urban demolition (installation).
      - If Yes, list contact information for Entity Coordinating Larger Project in next line (Owner/Coordinating Entity).
      - If No, list the property owner information in next line (Owner/Entity Coordinator)
    - Specify if this notification include more than one structure.
      - If Yes, ensure the Multi-Structure Attachment Form has been completed per Section 2; attach this to your notification form.
    - In the “Owner/Coordinating Entity” line, list the property owner [individual(s) who own(s) the property at the time of demolition/renovation (Note, this may be a government or private entity)] if answered No above; or list the Coordinating Entity (i.e., land bank, municipality, etc.) for the larger project if answered Yes above. Include address, contact name, phone, fax, and email for the listed Owner/Coordinating Entity.
    - Specify the name, address, contact name, phone, fax, email, and Ohio Department of Health license number (ACXXXX) for the “Asbestos Abatement Contractor” (if regulated asbestos containing material(s) is being abated).
    - Specify the name, address, contact name, phone, fax, email, for the “Onsite Demolition Contactor” (if demolition is taking place) or “Fire Department” (if demolition of a facility is by intentional burning).
  6. Include the Asbestos Hazard “Evaluation Specialist Name”, “License # (ESXXXX)”, and “procedure used to detect and analyze asbestos”. Analytical methods could include the collection of samples and sample analyses by polarized light microscopy (PLM) with dispersion staining. For samples that test under 10% asbestos content: An owner or operator may (a) elect to assume material to be greater than 1% asbestos, or, (b) require verification by point counting in which the point counting result will supercede the PLM estimation; Both choice and result should be stated on the notification. Explain any other method(s) used. All owners/operators should have the records of the asbestos assessment and analyses (inspection/survey report) on-site during active operations for reference and inspection. Such records would include a list of materials assessed, locations sampled and the sample results; this information can be found within the asbestos inspection report.
  7. Specify the amount of regulated asbestos-containing material (RACM) to be removed as follows: linear feet on pipes, square feet (surface area) on facility components, and total cubic feet or cubic yards (volume) on or off all facility components. Asbestos containing demolition debris and related materials shall be quantified in cubic feet/yards (volume). Estimate the approximate amount of Category I and Category II non-friable asbestos-containing material in the affected part of the facility that will be removed before demolition. Estimate the approximate amount of Category I and Category II non-friable asbestos-containing material in good condition in the affected part of the facility that will not be removed before demolition. If multiple addresses per notification, the combined total of all sites shall be listed in this table and individual quantities for each site shall be provided in the Multi-Structure Attachment Form.
  8. Specify the starting and ending dates for demolition or renovation even when no asbestos containing materials are present. Should the demolition or renovation not begin on the start date listed, a revised notification form shall be submitted prior to the listed start date. Please note, start date must be at least 10 working-days after postmark or hand-deliver date.
  9. Specify the scheduled dates for asbestos removal, the hours of operation, and the days of the week that asbestos removal operations will be active onsite. Please note, start date must be at least 10 working-days after postmark or hand-deliver date.
  10. Describe the demolition or renovation which will occur and the methods or operations that will be employed. Briefly describe the methods to be used to conduct the demolition or renovation. For renovations, these methods may include glove bag removal, hand stripping or scraping of asbestos containing materials. For demolitions, methods may include a wrecking ball, bulldozer, implosion, or unbolting panels or sections and carefully lowering to the ground. Examples of affected facility components may include pipe wrap, floor tile, sprayed-on insulation, transite, etc.

11. Describe the work practices and engineering controls to be used for abating (removing) each type of material listed in Section 7. Examples of work practices and engineering controls to prevent asbestos emissions at the site could include: the use of water or wetting agents, negative pressure enclosure, glove bag removal; placing into leak-tight containers or wrapping with twelve (12) mil thick polyethylene plastic sheeting which is properly labeled prior to disposal, etc. Examples of removal and waste handling procedures to prevent non-friable material from becoming friable would include: removing by sections or units taking care not to crumble, pulverize, or reduce to powder, using water to prevent any emissions, placing into leak-tight containers or wrapping with twelve (12) mil thick plastic which is properly labeled prior to disposal (including name or waste generator and location at which the waste was generated), etc.

Examples:

- A. *Wet methods to be used before, during and after removal of 2500 sq. ft. of acoustical plaster. Material will be placed into double 6-mil poly bags, properly labeled, and taken to an approved landfill.*
- B. *Full containment, negative air, adequately wet, proper PPE, double bagging when removing 600 sq. ft. of boiler breeching, 4 boiler door gaskets, and 35 flange gaskets. Bagged material will be properly labeled and taken to an EPA-approved landfill.*

12. Provide the names, addresses, and contact information of any asbestos waste transporters. Note you must also complete a Waste Shipment Record prior to consigning any asbestos containing waste materials (ACWM).
13. Provide the name, physical address, and contact information for the asbestos waste disposal site. Note it may be different from the mailing address. Check Ohio EPA website listed below for an updated list of approved asbestos accepting waste disposal sites. [www.epa.ohio.gov/dapc/atu/asbestos.aspx](http://www.epa.ohio.gov/dapc/atu/asbestos.aspx)

14. This section must be completed for emergency demolitions that meet the definitions and requirements of the regulation. **If a facility is not in imminent danger of collapse, it is not an emergency demolition even though it may be ordered to be demolished due to hazardous conditions.** Provide the name, title and agency of the state or local governmental representative who has ordered the demolition. The Authority of Order is the applicable state or local regulation under which the demolition order has been issued. You **MUST ATTACH** a copy of the demolition order to the notification.

15. This section shall be completed for emergency renovations that meet criteria described at 40 CFR 61.141 and OAC 3745-20-01. You **MUST ATTACH** a separate sheet including the four items listed on the notification form.

16. Describe the procedures to be followed in the event unexpected regulated asbestos containing (RACM) is found or nonfriable asbestos becomes material (RACM).

Examples:

- A. *Stop work, evacuate area, and demarcate the area.*
- B. *Wetting of ACM with amended water and using wet cleaning methods.*

Should the discovery of unexpected RACM change the original amount of asbestos to be abated by 20 percent or more, you must submit a revised notification pursuant to OAC 3745-20-03. A revised demolition/renovation notification must reflect the change in the amount of affected asbestos-containing material. The revised notification must also reflect the new asbestos removal start date, if applicable.

17. If asbestos is being removed or abated, you must certify a NESHAP trained person will be available during normal business hours at the demolition or renovation site. Signature must be by an authorized representative of the owner or operator.
18. In accordance with OAC 3745-20-03(E), all notifications (original and revised) shall identify the name, title, and organization of the person submitting the notification, and shall be signed and dated by the person submitting the notification.

**The asbestos regulations, notification forms, guidance, local contacts, and other information can be found on Ohio EPA's asbestos program web site at [www.epa.ohio.gov/dapc/atu/asbestos.aspx](http://www.epa.ohio.gov/dapc/atu/asbestos.aspx)**



# Notification of Demolition and Renovation Form

## Single & Multi-Structure

Division of Air Pollution Control

Operator Project # :	<i>For Official Use Only</i>						
	<input type="checkbox"/> Hand-Delivered	Postmark : / /	Received by Office : / /	Notification # :			
<b>1</b>	<b>Notification Type (check one)</b>						
	<input type="checkbox"/> Original	<input type="checkbox"/> Revision # :      Section #s Revised:	Offsite/Hold : <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Cancellation			
<b>2</b>	<b>Facility Description (include building name, number and floor or room number). If more than one structure, use Multi-Structure Attachment form</b>						
Building Name (if applicable) :			Site Location :				
Address :			County :				
City :			State :      OH	Zip :			
Building Size (ft <sup>2</sup> ) :			No. of Floors :	Age (years) :			
Present Use :			Prior Use :				
<b>3</b>	<b>Type of Operation (check one)</b>						
<input type="checkbox"/> Demolition <input type="checkbox"/> Emergency Demolition <input type="checkbox"/> Renovation <input type="checkbox"/> Emergency Renovation <input type="checkbox"/> Fire Training <input type="checkbox"/> Annual <input type="checkbox"/> Courtesy							
<b>4</b>	<b>Is Asbestos Present? (check one)</b>						
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No, previously abated              Year Abated (if applicable) :							
<b>5</b>	<b>Owner/Coordinating Entity, Asbestos Abatement Contractor and Onsite Demolition Contractor Information</b>						
Is this project part of a larger project or urban demolition (installation)?			Does this notification include more than one structure?				
<input type="checkbox"/> Yes (list contact information for coordinating entity below)			<input type="checkbox"/> Yes (complete the Multi-Structure Attachment Form)				
<input type="checkbox"/> No (list contact information for property owner below)			<input type="checkbox"/> No				
<b>Owner/Coordinating Entity :</b>							
Address :			Email :				
City :			State :	Zip :			
Contact :			Phone : (      ) -	Fax : (      ) -			
<b>Asbestos Abatement Contractor (if applicable)</b>			<b>On-site Demolition Contractor or Fire Department (if applicable)</b>				
Name :			Name :				
Address :			Address :				
City :	State :	Zip :	City :	State :	Zip :		
Contact :			License # : AC				
Phone : (      ) -	Fax : (      ) -		Phone : (      ) -	Fax : (      ) -			
Email :			Email :				
<b>6</b>	<b>Ohio Asbestos Hazard Evaluation Specialist and Evaluation Procedure</b>						
Evaluation Specialist :			License # : ES	Expiration Date : / /			
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 nonfriable asbestos-containing material: <input type="checkbox"/> PLM <input type="checkbox"/> Point Count <input type="checkbox"/> TEM <input type="checkbox"/> Other Method (Explain Below) :							
<b>7</b>	<b>Approximate Amount of Asbestos-Containing Materials (complete table below and Section 11 if asbestos is present)</b>						
	Material to be Removed				Material NOT to be Removed		
	RACM	Nonfriable Asbestos-Containing Material		Nonfriable Asbestos-Containing Material			
		Category I	Category II	Category I	Category II		
Pipes (linear feet)							
Surface Area (ft <sup>2</sup> )							
Facility Components							
<input type="checkbox"/> ft <sup>3</sup> <input type="checkbox"/> yd <sup>3</sup>							
<b>8</b>	<b>Scheduled Dates of Demolition or Renovation (original notification is required 10 working days prior to the start of work)</b>						
Start : / /			Complete : / /				
<b>9</b>	<b>Asbestos Removal Dates and Work Hours (if applicable, for asbestos removal only)</b>						
Start : / /			Complete : / /				
Hours Onsite	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	—	—	—	—	—	—	—

<b>10</b>	<b>Planned Demolition or Renovation Work (check all that apply)</b>				
Description of planned demolition or renovation work to be performed and method(s) to be employed, including demolition or renovation 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 Below) :					
Description of affected facility components (include attachment if necessary) :					
<b>11</b>	<b>Asbestos Description and Engineering Controls (if asbestos is being abated)</b>				
For the amount of each material listed in Section 7, describe the type(s) of ACM to be abated as well as engineering controls and work practices to be used to minimize emissions and ensure proper waste handling :					
<b>12</b>	<b>Asbestos Waste Transporters (if applicable)</b>				
Asbestos Waste Transporter #1			Asbestos Waste Transporter #2		
Name :			Name :		
Address :			Address :		
City :		State :	City :		State :
		Zip :			Zip :
Contact :			Contact :		
Phone : (    ) -		Fax : (    ) -		Phone : (    ) -	
				Fax : (    ) -	
Email :			Email :		
<b>13</b>	<b>Asbestos Waste Disposal (if applicable)</b>				
Asbestos Waste Disposal Site :			Contact :		
Address :			Email :		
City :		State :	City :		State :
		Zip :			Zip :
Phone : (    ) -			Fax : (    ) -		
<b>14</b>	<b>Emergency Demolition (complete this section if you checked Emergency Demolition in Section 3)</b>				
A copy of the issued order, including the following information, <b>must be attached</b> to this notification					
Government Official Issuing Order :			Title :		
Agency :			Authority of Order (Citation of Code) :		
Date of Order :    /    /			Demolition Date :    /    /		
<b>15</b>	<b>Emergency Renovation (complete this section if you checked Emergency Renovation in Section 3)</b>				
A separate sheet with the following information <b>must be attached</b> to this notification					
Date of Emergency :    /    /			Time of Emergency :		
Description of Sudden, Unexpected Event :					
Explanation of how the event caused unsafe conditions or equipment damage :					
<b>16</b>	<b>Procedures to be followed should unexpected RACM be discovered (check all that apply)</b>				
<input type="checkbox"/> Stop work and keep wet		<input type="checkbox"/> Evacuate area		<input type="checkbox"/> Contact licensed abatement contractor	
<input type="checkbox"/> Contact district office/local air authority		<input type="checkbox"/> Demarcate area		<input type="checkbox"/> Other (Explain Below) :	
<b>17</b>	<b>Asbestos Abatement Signature (only sign below if asbestos is being removed)</b>				
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.					
Signature :			Date :    /    /		
Name, Title and Organization (please print)					
<b>18</b>	<b>Demolition and Renovation Signature (required for all original and revised notifications)</b>				
I acknowledge the existence of laws prohibiting the submission of false or misleading statements and I certify that facts contained in this notification are true, accurate, and complete.					
Signature :			Date :    /    /		
Name, Title and Organization (please print)					
<i>Original notification must be mailed or hand-delivered at least 10 working days (Monday – Friday excluding weekends) before demolition or renovation begins, except emergency demolitions and emergency renovations which must be submitted as soon as possible before operations begin, but no later than the following work day.</i>					

*Note: This form to be completed and attached to Notification Form when project involves more than one structure*

**Project Name:**

**Date Submitted:**

**Revision #:**

Project Details		Structure 1	Structure 2	Structure 3	Structure 4	Structure 5
<b>Structure Details</b>	Site Address (include street, city, and zip)					
	Building Name					
	Present Use					
	Past Use					
<b>Asbestos Quantities</b>	RACM	Sf	Sf	Sf	Sf	Sf
		Lf	Lf	Lf	Lf	Lf
		Cf	Cf	Cf	Cf	Cf
	Cat. I NF to be Removed	Sf	Sf	Sf	Sf	Sf
	Cat. II NF to be Removed	Sf	Sf	Sf	Sf	Sf
	Cat. I NF to Remain	Sf	Sf	Sf	Sf	Sf
	Cat. II NF to Remain	Sf	Sf	Sf	Sf	Sf
<b>Work Schedule</b>	Asbestos Removal Start Date	/ /	/ /	/ /	/ /	/ /
	Asbestos Removal Complete Date	/ /	/ /	/ /	/ /	/ /
	Demolition/Renovation Start Date	/ /	/ /	/ /	/ /	/ /
	Demolition/Renovation Complete Date	/ /	/ /	/ /	/ /	/ /
<b>Revised</b>	Check box if details were revised	<input type="checkbox"/>				

# ***APPENDIX F***

## ***ODH ASBESTOS BUILDING INSPECTION REPORT EVALUATION CHECKLIST***



**Ohio Department of Health  
Asbestos Building Inspection Report Evaluation**

Evaluator Name	Date of Evaluation		
AHES Name	Certification #		
AHES Employer	Telephone #		
Address	City	State	Zip
Owner/Client/Customer Name	Address	Telephone #	
Site Address	City	State OH	Zip

OAC Sampling and Reporting Requirements	Yes	No	NA	OAC Citation
Bulk samples collected in accordance with 40 CFR Part 763.86 – <b>Pg. 2 of report</b>				3701-34-06 (C)(9)
Date of inspection – <b>Pg. 2 of report</b>				3701-34-06 (C)(10) (a)
Address of site – <b>Cover letter of report</b>				3701-34-06 (C)(10) (b)
Name, address, and phone # of the owner, client, or customer – <b>Cover letter of report</b>				3701-34-06 (C) (10) (c)
Name, signature and AHES # of the person writing the report – <b>Pg. 9 of report</b>				3701-34-06 (C)(10) (d)
Blueprint, diagram, or written description that clearly identifies each location, type of material, and approximate square or linear footage of homogeneous areas where material was confirmed to be ACM.- <b>Appendix C</b>				3701-34-06 (C)(10) (e)
The exact location where each bulk sample was collected – <b>Appendix C</b>				3701-34-06 (C)(10) (e)
Date of collection – <b>Pg. 2 of report</b>				3701-34-06 (C)(10) (e)
Homogeneous areas and footages where friable and nonfriable suspected ACM is assumed to be ACM - <b>Tables 1-2</b>				3701-34-06 (C)(10) (e)
Description of the manner used to determine sampling locations – <b>Pg. 2 of report</b>				3701-34-06 (C)(10) (f)
Name, signature and AHES # of each person collecting samples – <b>Pg. 9 of report</b>				3701-34-06 (C)(10) (f)
Copy of the bulk sample analysis report – <b>Appendix C of report</b>				3701-34-06 (C)(10) (g)
Name and address of any lab that analyzed the bulk samples - <b>Appendix C of report</b>				3701-34-06 (C)(10) (g)
Date of analysis - <b>Appendix C of report</b>				3701-34-06 (C)(10) (g)
Name and signature of the person performing the analysis - <b>Appendix C of report</b>				3701-34-06 (C)(10) (g)

Notes: