

**PRE-RENOVATION ASSESSMENT REPORT
FOR ASBESTOS**

**Center Street Swing Bridge (PID 109597)
Latitude: 41°29'38" Longitude: 81°42'12"
Cleveland, Ohio 44113**

TRC Project No. 336384.0000.0000

March 02, 2020

Prepared For

WSP USA
Skylight Office Tower
1660 W. 2nd Street, Suite 820
Cleveland, Ohio 44113

Prepared By



1382 West 9th Street
Cleveland, Ohio 44113
216-344-3072

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1.0 INTRODUCTION

WSP USA (WSP) contracted TRC Environmental Corporation (TRC) to conduct a pre-demolition level asbestos survey (Survey) of the Center Street Swing Bridge located at Latitude: 41°29'38" Longitude: 81°42'12", Cleveland, Ohio 44113 (the "Site"). The Survey work was conducted in accordance with TRC Proposal No. 336384.9990.0000, dated September 4, 2019.

The purpose of the Survey was to identify friable¹ and non-friable asbestos-containing material (ACM)² that may require abatement prior to renovation of the bridge structure and associated buildings, in part or in whole.

Mr. Ryan Pulliam (ES35048), TRC Environmental Scientist, conducted the Survey on January 23, 2020. This report summarizes the Survey findings, the material conditions, bridge structure, and building conditions as they were observed on the stated date.

Copies of applicable State of Ohio asbestos certifications for the TRC individuals involved with this project are provided in Appendix I. A Site figure showing the asbestos sampling locations are provided in Appendix II.

An ACM Inventory, which provides the location, material description, TRC assigned material number, condition, estimated quantity, and specific notes (if warranted) for all materials identified at the facility is provided in Tables 1 and 2, respectively.

Laboratory reports and chain of custody records which shows the sampling locations, material description, TRC assigned material number, and sample number for all samples collected during this survey are provided in Appendix III.

2.0 SCOPE OF WORK

The scope of services for this Site survey consisted of the following tasks:

- Perform an asbestos survey to quantify ACMs and potential ACMs that were identified in the bridge structure and buildings. Materials identified as suspect ACM were sampled in accordance with Asbestos Hazard Emergency Response Act (AHERA) sampling requirements, outlined in Chapter 40 of the Code of Federal Regulations (CFR), Part 763.86. Samples collected were analyzed by a National Voluntary Laboratory Accreditation Program (NVLAP)-accredited laboratory for the presence of asbestos. Samples were analyzed using polarized light microscopy (PLM) by U.S. Environmental Protection Agency (EPA) Method 600/R-93/116.

¹ Material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure (40 CFR Part 61.141).

² The United States Environmental Protection Agency (EPA) and Occupational Safety and Health Administration (OSHA) define asbestos-containing material as material that contains more than 1% asbestos by weight.

- Prepare tables indicating sample locations, sample types, analytical results, and/or quantities of ACM.
- Prepare drawings indicating the approximate bridge structure and building configurations, sample locations, and locations of identified ACM.
- Prepare a summary report that documents the findings of this survey, detailing the items listed above including all supporting documentation, such as the chain of custody and laboratory analytical results.

2.1 Limitations

This was a comprehensive pre-demolition level inspection; however, there may be isolated areas within the structures that contain hidden ACMs, not identified within this report which were not readily visible, accessible and/or discovered during the Survey process. These areas include, but are not limited to, potential material, i.e. gaskets, located within equipment associated with the Span Drive Machinery area.

TRC recommends that if hidden suspect ACM is encountered during renovation and/or demolition activities, the material may be either; 1) assumed asbestos and abated accordingly or; 2) sampled by certified personnel and analyzed by an accredited laboratory to determine the nature of the suspect material.

3.0 REVIEW OF PRIOR ASBESTOS SURVEY REPORTS

No prior asbestos reports were made available for review.

4.0 BRIDGE STRUCTURE SUMMARY

The following presents some general information on the bridge structure that was included in the Survey. Information presented below was gleaned from the WSP September 20, 2019 *Stage I Project Plan*.

The Site primarily consists of a three-span steel truss swing bridge constructed in 1901. The Site consists of one bridge structure that is approximately 245 feet in length, with an open and concrete filled steel grid deck on steel beams, reinforced concrete piers, masonry abutments with concrete caps, one Operator's House, and one Gateman's House. The bridge structure and associated buildings are currently owned and operated by the City of Cleveland.

5.0 ASBESTOS INSPECTION, SAMPLING AND ASSESSMENT PROCEDURES

5.1 Asbestos Containing Materials Terminology

The U.S. Environmental Protection Agency (EPA) defines ACMs as follows:

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

2. Non-friable ACM is any material containing more than one percent (1%) asbestos as determined using the PLM method that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. The EPA further defines two categories of non-friable ACM:
 - a. Category I (Cat I) - Category I non-friable ACM is any asbestos-containing packing, gasket, resilient floor covering or asphalt roofing product which contains more than one percent (1%) asbestos as determined using PLM, and
 - b. Category II (Cat II) - Category II non-friable ACM is any material, excluding Category I non-friable ACM, containing more than one percent (1%) asbestos as determined using PLM that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Regulated Asbestos-Containing Material (RACM) is (a) friable asbestos material, (b) Category I non-friable ACM that has become friable, (c) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (d) Category II non-friable 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 renovation or demolition operations.

The Occupational Safety and Health Administration (OSHA) define ACM, as any material containing more than one percent (1%) asbestos.

5.2 General Inspection and Sampling Procedures

The inspection was performed following the protocol outlined in the EPA AHERA found in EPA 40 CFR 763. Although the AHERA regulations were originally intended for public and private school buildings housing kindergarten through 12th grade classes, they have become the accepted industry standard for conducting asbestos investigations in all types of buildings. OSHA regulations also reference AHERA as the required method of conducting asbestos inspections in all public and commercial buildings.

All accessible areas of the bridge structure, Operator's house, and Gateman's house were visually inspected for suspect ACM. The TRC inspector first grouped suspect materials into homogeneous areas for sampling purposes; homogeneous areas consist of materials with like appearance, color, texture, and application date. A physical assessment was also conducted to determine the current condition and degree of friability. The inspection encompassed both friable and non-friable materials. The inspector then assumed that specific materials remained homogeneous (based upon the material's appearance and application) throughout the areas. In situations where materials appeared to alternate between potentially asbestos-containing and non-asbestos-containing, the inspector looked for visible differences in the materials. If differences were not apparent, professional judgment was incorporated which resulted in the assumption that all materials were asbestos containing.

5.3 Bulk Sample Collection Methods

To avoid disturbing suspect materials more than necessary and to minimize the potential release of asbestos fibers, bulk sampling was conducted in accordance with the sampling protocol identified in 40 CFR 763. Each sample collected was pre-wetted and obtained using appropriate hand tools. Samples were placed into clean sample bags which were sealed and labeled with a unique sample identification number. Care was taken to obtain a sample that was representative of all layers of the sampled material. The sampling tools were then thoroughly cleaned before collecting the next sample to avoid cross-contamination. Pertinent information, such as the date of inspection, name of the inspector, room/area description, location of the sample, type of material collected, and quantity of material present was recorded in a field sample log. Insulation materials that were determined by the inspector to be exclusively fiberglass or rubber were not sampled.

5.4 Analysis of Bulk Samples

A total of 24 bulk samples of suspect ACM were collected during the assessment, all of which were submitted to and analyzed by TRC Industrial Hygiene Laboratory (TRC Lab) located in Windsor, Connecticut. The TRC Lab is accredited through the AIHA, and the NVLAP accreditation program for PLM analysis (NVLAP code #101424-0).

The TRC Lab analyzed the bulk samples using PLM. The PLM analytical method is used for qualitative identification of six (6) different types of asbestos fibers: Chrysotile, Amosite, Crocidolite, Anthophyllite, Tremolite, and Actinolite. The method requires the laboratory to take a portion of the sample and treat it with oil having a specific refractive index. This prepared slide is then subjected to microscopic testing necessary to identify the asbestos type, as each type displays unique characteristics when subjected to these tests. Quantification of asbestos listed on the laboratory reports was determined by observing the material through a stereoscope and assigning a visual estimation.

5.5 Reporting of Analysis Results

The PLM method specifies that the asbestos content in a bulk sample shall be estimated and reported as a finite percentage (rounded to the nearest percent) within the range of 0 to 100. Minute quantities of asbestos in bulk samples may be reported as “trace” or less than one percent. The composition of the bulk sample is reported in percentages of asbestos and non-asbestos components.

5.6 Asbestos Assessment Findings

Asbestos was detected in materials sampled as part of this asbestos survey. ACM identified are listed in Table 1 below. Materials that were sampled and found to be non-detect for asbestos and are identified in Table 2 below. Laboratory reports and chain of custody records for all samples are presented in Appendix III.

Table 1 – Summary of Asbestos-Containing Materials (>1%)

Sample Number	Material	Sample Location(s)	Percentage / Type of Asbestos	Approx. Quantity	Condition	Type	NESHAP Category
Gateman’s House							
SB-RF-20 – SB-RF-21	Black Tar Roof Flashing Material	Roof Area of the Gateman’s House	20% Chrysotile (Roofing Tar)	100 SF	Good	M	CAT I
TSI – Thermal System Insulation; SM – Surfacing Material; M – Miscellaneous Material; RACM – Regulated ACM; Cat. I – Category I; Cat. II – Category II; SF – Square Feet; LF – Linear Feet; ND – None Detected							

Table 2 – Summary of Materials Non-Detect for Asbestos (ND to <1% ACM)

Sample Number	Material	Sample Location(s)	Percentage / Type of Asbestos	Approx. Quantity	Condition	Type	NESHAP Category
Operator’s House							
SB-DW-01 – SB-DW-03	Drywall and Joint Compound	Operator’s House Walls	ND	500 SF	Good	NA	NA
SB-TG-04 – SB-TG-06	Grey Tile Grout	Operator’s House Flooring	ND	250 SF	Good	NA	NA
SB-RS-07 – SB-RS-09	Dark Grey Roofing Shingles	Roofing Area of Operator’s House	ND	250 SF	Good	NA	NA
Gateman’s House							
SB-CT-10 – SB-CT-12	Yellow Tile and Grey Grout	Gateman’s House Bathroom Walls	ND	560 SF	Good	NA	NA
SB-SC-13 – SB-SC-15	White Skim Coat	Gateman’s House Office Ceiling	ND	100 SF	Good – Damaged	NA	NA
SB-WC-16 – SB-WC-18	Tan Window Caulking	Gateman’s House Windows	ND	75 SF	Good	NA	NA
SB-RF-19 ¹	Black Tar Roof Flashing Material	Roof Area of the Gateman’s House	ND	100 SF	Good	NA	NA

Sample Number	Material	Sample Location(s)	Percentage / Type of Asbestos	Approx. Quantity	Condition	Type	NESHAP Category
SB-FT-22 – SB-FT-24	12”x12” White/Grey Floor Tile with Dark Yellow Glue	Gateman’s House Office Flooring	ND	100 SF	Good – Damaged	NA	NA
TSI – Thermal System Insulation; SM – Surfacing Material; M – Miscellaneous Material; RACM – Regulated ACM; Cat. I – Category I; Cat. II – Category II; SF – Square Feet; LF – Linear Feet; ND – None Detected							

1: The roofing material is associated with samples SB-RF-20 – 21.

Results of the bulk sample analysis confirmed that there are ACM present on Roof Area of the Gateman’s House at the Site. In accordance with federal, state, and local regulations, ACM must be removed by a licensed asbestos abatement contractor from the structures prior to renovation and/or demolition activities that would disturb ACM. If materials not included in this survey or materials with similar physical characteristics to the identified ACM are encountered in other areas of the structure other than where it is noted in this survey report, these materials must be considered (assumed) to be asbestos containing unless an appropriate survey, sampling, and laboratory analysis of bulk samples obtained from these materials proves otherwise.

The results of this survey should not be utilized as a scope of work for abatement and remediation. Specifications and procedures tailored to this facility should be developed to define a scope of abatement and remediation work

5.7 Regulatory Requirements for Abatement of Asbestos-Containing Materials

5.7.1 Environmental Protection Agency

The EPA National Emission Standard for Hazardous Air Pollutants (NESHAP) regulation 40 CFR Part 61, Subpart M and OAC Asbestos Emission Control 374-20, 1-15 applies follows:

- Demolition: All friable ACM and regulated non-friable ACM must be removed prior to demolition. EPA Category I non-friable ACM (floor tiles/mastics, asphalt-based roofing materials, and adhesives) do not have to be abated, provided: 1) the ACM is in a non-friable condition prior to demolition; 2) standard demolition techniques are employed; and 3) the substrates that the ACM are attached to are not subjected to grinding, crushing, pulverizing, or recycling activities.
- Asbestos abatement must be conducted in accordance with all applicable regulations.
- Ten-day prior notification, submitted to the Ohio EPA, is required when applicable amounts of regulated ACM is removed.
- Asbestos abatement must be conducted in accordance with applicable regulations.

5.7.2 Occupational Safety and Health Administration

The OSHA General Industry regulation 29 CFR Part 1910.1001 requires the following:

- Building and facility owners must treat all thermal systems insulation, spray or troweled-on surfacing material, and asphalt or vinyl flooring materials installed no later than 1980 as presumed asbestos-containing materials (PACM) or have a complete inspection conducted pursuant to the requirements of AHERA. This requirement has been fulfilled as TRC conducted a pre-demolition, AHERA level asbestos inspection of the Center Street Swing Bridge located, Cleveland, Ohio 44113, as identified in this report.
- Asbestos abatement work must be conducted in accordance with applicable regulations.

5.7.3 Department of Transportation

DOT regulation 40 CFR Parts 171 and 172 requires the following:

- Asbestos waste materials must be properly labeled and transported in accordance with applicable regulations.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Asbestos Containing Materials

Results of the bulk sample analysis confirmed that there are ACM present at the Site on the Roof Area of the Gateman's House as shown on Table 1 in Section 5.6. In accordance with federal, state, and local regulations, ACM must be removed by a licensed asbestos abatement contractor from the structures prior to renovation and/or demolition activities that would disturb ACM. If materials not included in this survey or materials with similar physical characteristics to the identified ACM are encountered in other areas of the structure other than where it is noted in this survey report, these materials must be considered (assumed) to be asbestos containing unless an appropriate survey, sampling, and laboratory analysis of bulk samples obtained from these materials proves otherwise.

7.0 DISCLAIMER

The content presented in this survey report is based on data collected during the site survey and information provided by the review of pertinent regulations, requirements, guidelines and commonly followed industry standards, and information provided (if any) by the Client, property owner, agents, and representatives.

The work has been conducted in an objective and unbiased manner and in accordance with generally accepted professional practice for this type of work. TRC believes the data and analysis to be accurate and relevant but cannot accept responsibility for the accuracy or completeness of available documentation or possible withholding of information by other parties. Structures or components thereof surveyed may

contain hidden surfaces or materials requiring destructive access to survey and/or sample. It is possible that additional materials could be discovered during destructive, demolition, and/or excavation activities. In the event additional materials (not identified herein) are discovered during such activities, additional survey and sampling may be necessary.

This supplemental environmentally-regulated materials survey report is designed to aid the property owner, architect, construction manager, general contractor, and asbestos abatement contractor in locating ACM. This report is not intended for and may not be utilized as a bidding document or as an abatement project specification document.

8.0 CERTIFICATION

TRC hereby certifies that the services conducted and described in this document and the findings resulting from those services reported herein have been provided in a manner consistent with the current standards of the profession, and to the best of our knowledge, comply with applicable federal, state, and local statutes, regulations, and ordinances. If there are any questions concerning information contained in this report, please contact the undersigned at (216) 344-3072.

Sincerely,

TRC Environmental Corporation

Report Prepared By:

Reviewed by:



Ryan S. Pulliam
Environmental Scientist



Brad M. Falkinburg
Office Practice Leader

APPENDIX I
CONSULTANT ASBESTOS CERTIFICATIONS



Mike DeWine, Governor
Jon Husted, Lt. Governor
Laurie A. Stevenson, Director

April 08, 2019

Ryan S Pulliam
TRC Environmental Corp
1382 W 9th Street Suite 400
Cleveland OH 44113

RE: Asbestos Hazard Evaluation Specialist
Certification Number: ES35048
Expiration Date: 04/05/2020

Dear Ryan S Pulliam:

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

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

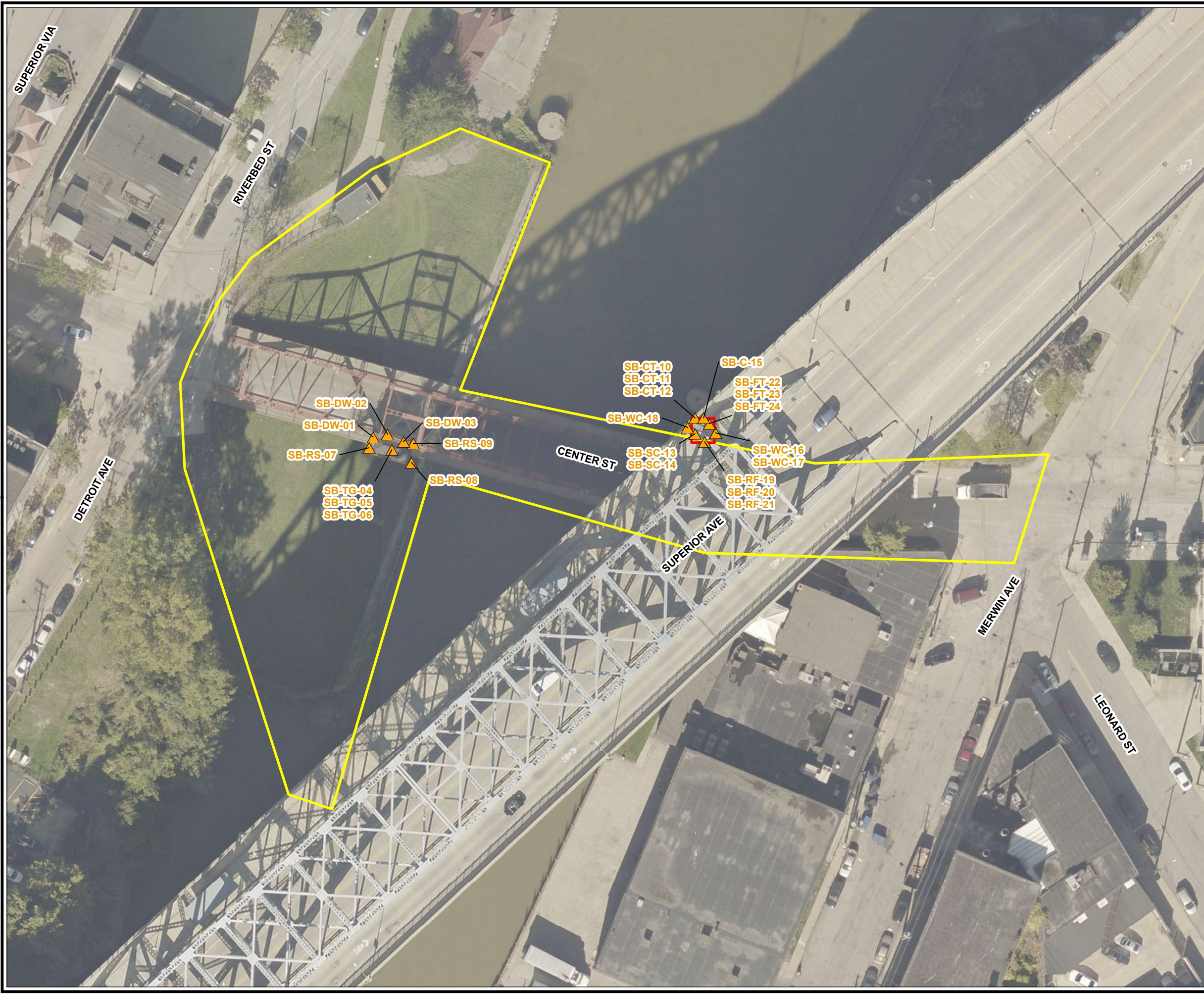
If you have any questions, please call 614-644-0226.

Sincerely,

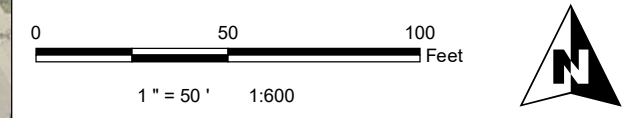
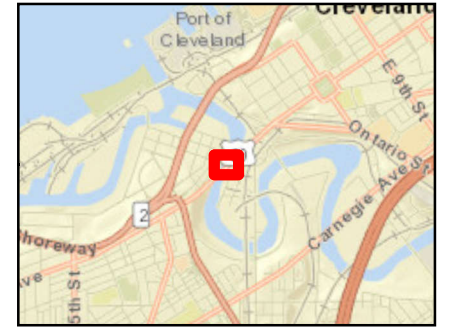
Joshua S. Koch
Manager, Business Operations Support Section
Division of Air Pollution Control



APPENDIX II
SITE FIGURE



- Project Study Area
- ▲ Sample Location
- Gateman's House Under Superior Ave, Approximate Area



**CUY-CENTER STREET SWING BRIDGE (PID 109597)
CITY OF CLEVELAND, CUYAHOGA COUNTY, OHIO**

**FIGURE 1
ASBESTOS SAMPLE LOCATION MAP**

APPENDIX III

**LABORATORY REPORT(S), CHAIN-OF-CUSTODY FORM(S)
AND OHIO EPA NOTIFICATION FORM**



BULK ASBESTOS ANALYSIS REPORT

CLIENT: WSP USA Corporation

Lab Log #: 0054722
 Project #: 336384.0000.0000
 Date Received: 01/24/2020
 Date Analyzed: 01/27/2020

Site: City of CLE, Center St. Swing Bridge

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Color	Homogenous	Multi-Layered	Layer No.		Other Matrix Materials	Asbestos %	Asbestos Type
SB-DW-01	White (joint compound)	No	Yes	1		---	ND	None
SB-DW-01	Grey (drywall)	No	Yes	2	2%	cellulose	ND	None
SB-DW-02	White (joint compound)	No	Yes	1		---	ND	None
SB-DW-02	Grey (drywall)	No	Yes	2	2%	cellulose	ND	None
SB-DW-03	White (joint compound)	No	Yes	1		---	ND	None
SB-DW-03	Grey (drywall)	No	Yes	2	2%	cellulose	ND	None
SB-TG-04	Grey (grout)	Yes	No	--		---	ND	None
SB-TG-05	Grey (grout)	Yes	No	--		---	ND	None
SB-TG-06	Grey (grout)	Yes	No	--		---	ND	None
SB-RS-07	Black (tar paper)	No	Yes	1	80%	cellulose	ND	None
SB-RS-07	Black/Dark Grey (shingle)	No	Yes	2	10%	fibrous glass	ND	None
SB-RS-08	Black (tar paper)	No	Yes	1	80%	cellulose	ND	None
SB-RS-08	Black/Dark Grey (shingle)	No	Yes	2	10%	fibrous glass	ND	None
SB-RS-09	Black (tar paper)	No	Yes	1	80%	cellulose	ND	None
SB-RS-09	Black/Dark Grey (shingle)	No	Yes	2	10%	fibrous glass	ND	None
SB-CT-10	Grey (grout)	No	Yes	1		---	ND	None
SB-CT-10	Yellow (ceramic tile)	No	Yes	2		---	ND	None
SB-CT-11	Grey (grout)	No	Yes	1		---	ND	None
SB-CT-11	Yellow (ceramic tile)	No	Yes	2		---	ND	None

TRC LABORATORY ASBESTOS ANALYTICAL ACCREDITATIONS

NVLAP Lab Code 101424-0 AIHA-LAP,LLC #100122 CT #PH-0426 ME LA-0075, LB-0071 MA #AA000052 NY #10980 WV #000622
 RI #PLM0007 TX #300354 VT #AL910359 LA#05011 VA #3333 000283 AZ #A20944 HI #L-09-004 NJ #CT004 CA #2907
 CO# AL-15020 PHIL# 461 PA#68-03387



POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type
SB-CT-12	Grey (grout)	No	Yes	1	---	ND	None
SB-CT-12	Yellow (ceramic tile)	No	Yes	2	---	ND	None
SB-SC-13	White (skim coat)	Yes	No	--	---	ND	None
SB-SC-14	White (skim coat)	Yes	No	--	---	ND	None
SB-SC-15	White (skim coat)	Yes	No	--	---	ND	None
SB-WC-16	Tan (window caulking)	Yes	No	--	---	ND	None
SB-WC-17	Tan (window caulking)	Yes	No	--	---	ND	None
SB-WC-18	Tan (window caulking)	Yes	No	--	---	ND	None
SB-RF-19	Black (tar roofing)	Yes	No	--	10% synthetic fiber	ND	None
SB-RF-20	Black (tar roofing)	Yes	No	--	---	20%	Chrysotile
SB-RF-21	Black (tar roofing)	Yes	No	--	---	20%	Chrysotile
SB-FT-22	Dark Yellow/Black (glue)	No	Yes	1	10% cellulose	ND	None
SB-FT-22	White/Grey (tile)	No	Yes	2	---	ND	None
SB-FT-23	Dark Yellow/Black (glue)	No	Yes	1	10% cellulose	ND	None
SB-FT-23	White/Grey (tile)	No	Yes	2	---	ND	None
SB-FT-24	Dark Yellow/Black (glue)	No	Yes	1	10% cellulose	ND	None
SB-FT-24	White/Grey (tile)	No	Yes	2	---	ND	None

TRC LABORATORY ASBESTOS ANALYTICAL ACCREDITATIONS

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 RI #PLM0007 TX #300354 VT #AL910359 LA#05011 VA #3333 000283 AZ #A20944 HI #L-09-004 NJ #CT004 CA #2907
 CO# AL-15020 PHIL# 461 PA#68-03387



POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type
------------	-------	------------	---------------	-----------	------------------------	------------	---------------

Reporting limit- asbestos present at 1%
 ND - asbestos was not detected
 Trace - asbestos was observed at level of less than 1%
 NA/PS - Not Analyzed / Positive Stop
 SNA- Sample Not Analyzed- See Chain of Custody for details

Note: Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. In those cases, EPA recommends, and certain states (e.g. NY) require, that negative results be confirmed by quantitative transmission electron microscopy.

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation 1982 (EPA 600/M4-82-020) Bulk Analysis Code 18/A01 and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials July 1993, R.L. Perkins and B.W. Harvey, (EPA/600/R-93/116) Bulk Analysis Code 18/A03, which utilize polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis, NVLAP Code 18/A01, effective through June 30, 2020. TRC is accredited by the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC in the Industrial Hygiene Program (IHLAP) for PLM effective through October 1, 2020. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and QC data related to the samples is available upon written request from client.

This report shall not be reproduced, except in full, without the written approval of TRC. This report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government. This report relates only to the items tested.

Analyzed by: *K. Williamson*
 Kathleen Williamson, Laboratory Manager

Reviewed by: *Cathryn Lemire*
 Cathryn Lemire, Approved Signatory

Date Issued
 01/27/2020

TRC LABORATORY ASBESTOS ANALYTICAL ACCREDITATIONS

NVLAP Lab Code 101424-0 AIHA-LAP,LLC #100122 CT #PH-0426 ME LA-0075, LB-0071 MA #AA000052 NY #10980 WV #000622
 RI #PLM0007 TX #300354 VT #AL910359 LA#05011 VA #3333 000283 AZ #A20944 HI #L-09-004 NJ #CT004 CA #2907
 CO# AL-15020 PHIL# 461 PA#68-03387

TRC ENVIRONMENTAL CORPORATION
 1382 W. 9th St., Suite 400
 Cleveland, OH 44113
 PHONE: (216) 344-3072
 E-MAIL: rpulliam@trccompanies.com



**ASBESTOS BULK SAMPLING
 CHAIN OF CUSTODY**

TRC ENVIRONMENTAL LABORATORY
 21 GRIFFIN ROAD NORTH
 WINDSOR, CT 06095
 PHONE: (860) 298-9692

LAB ID #: 54722

PROJECT NUMBER		PROJECT NAME: <i>wsp USA Corp.</i>		TURNAROUND TIME								
336384.0000		City of CLE – Center St. Swing Bridge		PARAMETERS								
SIGNATURE		INSPECTOR		MATERIAL								
		Ryan Pulliam (ES35048)										
FIELD SAMPLE NUMBER	DATE	TIME	TYPE		SAMPLE LOCATION	PLM EPA 600/R93/116 (POSITIVE STOP)	PLM EPA 600/R93/116 (w/ gravimetric reduction) (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (IF >1% & <10%)	TEM NY NOB 198.4 (IF PLM SERIES NEG)		
			COMP	GRAB								PLM:
SB-DW-01	1/23/2020	800		X	Control Room East Wall	X						White/Grey Drywall and Joint Compound
SB-DW-02	↓	↓			↓	↓						↓
SB-DW-03	↓	↓			↓	↓						↓
SB-TG-04	↓	↓			Control Room Floor East Side							Grey Ceramic Tile Grout
SB-TG-05	↓	↓			↓	↓						↓
SB-TG-06	↓	↓			Control Room Floor West Side							↓
SB-RS-07	↓	↓			Control Room Roof North Side							Black/Grey Roof Shingles
SB-RS-08	↓	↓			↓	↓						↓
SB-RS-09	↓	↓			Control Room Roof South Side							↓
SB-CT-10	↓	↓			South Service Building Bathroom							Yellow Ceramic Tile and Grey Grout
SB-CT-11	↓	↓			↓	↓						↓
SB-CT-12	↓	↓			↓	↓						↓
SB-SC-13	↓	↓			South Building Office Ceiling							White Skim Coat

Relinquished by: (Signature)	Date: 1/23/20	Received by: (Signature)	1/24/20	Relinquished by: (Signature)	Date:	Received by: (Signature)
(Printed) Ryan Pulliam	Time: 1400	(Printed) K Williamson	1000	(Printed)	Time:	(Printed)
Remarks:				Condition of Samples: Acceptable: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Page 1 of 2
				Comments:		

TRC ENVIRONMENTAL CORPORATION
 1382 W. 9th St., Suite 400
 Cleveland, OH 44113
 PHONE: (216) 344-3072
 E-MAIL: rpulliam@trecompanies.com



**ASBESTOS BULK SAMPLING
 CHAIN OF CUSTODY**

TRC ENVIRONMENTAL LABORATORY
 21 GRIFFIN ROAD NORTH
 WINDSOR, CT 06095
 PHONE: (860) 298-9692

LAB ID #: 54722

PROJECT NUMBER		PROJECT NAME:		PARAMETERS				TURNAROUND TIME					
336384.0000		City of CLE – Center St. Swing Bridge						PLM:	8hr	24hr	48hr	X	3day
SIGNATURE		INSPECTOR						TEM:	24hr	48hr	3day		5day
		Ryan Pulliam (ES35048)						MATERIAL					
FIELD SAMPLE NUMBER	DATE	TIME	TYPE		SAMPLE LOCATION	PLM EPA 600/R93/116 (POSITIVE STOP)	PLM EPA 600/R93/116 (w/ gravimetric reduction) (POSITIVE STOP)						ANALYZE BY LAYER
			COMP	GRAB									
SB-SC-14	1/23/2020	800		X	South Building Office Ceiling	X						White Skim Coat	
SB-SC-15					↓							↓	
SB-WC-16					South Building West Window							Tan Window Caulking	
SB-WC-17					↓							↓	
SB-WC-18					South Building North Window							↓	
SB-RF-19					South Service Building Roof							Black Tar Roofing Material (Flange)	
SB-RF-20					↓							↓	
SB-RF-21					↓							↓	
SB-FT-22					South Building Office Floor							White/Grey 12"x12" Floor Tile with Glue/Mastic	
SB-FT-23					↓							↓	
SB-FT-24					↓							↓	

Relinquished by: (Signature) 	Date: 1/23/20	Received by: (Signature) 	1/24/20	Relinquished by: (Signature)	Date:	Received by: (Signature)
(Printed) Ryan Pulliam	Time: 1400	(Printed) William Williamson	1000	(Printed)	Time:	(Printed)
Remarks:				Condition of Samples: Acceptable: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Page <u>2</u> of <u>2</u>
				Comments:		



Notification of Demolition and Renovation/Abatement

Section 1: General Information

Division of Air Pollution Control

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

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

<input checked="" type="checkbox"/> Original	<input type="checkbox"/> Revision # (count):	<input type="checkbox"/> Installation	<input type="checkbox"/> Emergency	<input type="checkbox"/> Annual	<input type="checkbox"/> Cancellation	Project County: Cuyahoga
<input type="checkbox"/> NESHAP Residential Exemption						

2) Owner, Asbestos Abatement Contractor, Billing and Fire Department Information

Revised?

Owner						
Name: City of Cleveland					Is this a company? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Address:			Contact Person:			
City:	State: Ohio		Zip: 44113 -			
Email:	Phone: () -		Fax: () -			
Asbestos Abatement Contractor (if applicable)						
Name:		License #: AC		Expiration Date: / /		
Address:			Contact Person:			
City:	State:		Zip: -			
Email:	Phone: () -		Fax: () -			
Billing Contact (Entity paying for original notification)						
Is this contact associated with the <input checked="" type="checkbox"/> Owner, <input type="checkbox"/> Asbestos Abatement Contractor, or <input type="checkbox"/> Demolition Contractor (if not installation)?						
Address:			Contact Person:			
City:	State:		Zip: -			
Email:	Phone: () -		Fax: () -			
Fire Department (if applicable)						
Name:						
Address:			Contact Person:			
City:	State:		Zip: -			
Email:	Phone: () -		Fax: () -			

3) Ohio Asbestos Hazard Evaluation Specialist and Evaluation Procedure

Revised?

Evaluation Specialist: Ryan Pulliam	Certification #: ES 35048	Expiration Date: 4 / 5 / 2020
Procedure, including analytical methods, employed to detect the presence of and to estimate the quantity of regulated asbestos-containing material (RACM) and Category I and Category II non-friable asbestos-containing material: <input checked="" type="checkbox"/> PLM <input type="checkbox"/> Point Count <input type="checkbox"/> TEM <input type="checkbox"/> Other Method (Explain Below):		

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

Revised?

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

5) Planned Demolition (check all that apply)

Revised?

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

Notification of Demolition and Renovation/Abatement

Section 1: General Information

Continued

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

(Revised 4/19)

Page 1 of 3

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

Revised?

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

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

7) Asbestos Waste Transporter (if applicable)

Revised?

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

8) Asbestos Waste Disposal Site (if applicable)

Revised?

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

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

Revised?

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

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

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

Revised?

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

11) Attestation

Revised?

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

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

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

(Revised 4/19)

Page 2 of 3



Notification of Demolition and Renovation/Abatement

Section 2: Project Address Specific Information

Division of Air Pollution Control

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

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

Building Name (if applicable): Center Street Swing Bridge		Site Location (specific): Latitude: 41*29'38" Longitude: 81*42'12"	
Address:			
City: Cleveland	State: OH	Zip: 44113 -	
Building Size (square feet): 250 & 100	No. of Floors: 1 & 2	Age: 119	
Present Use: Roadway/Bridge		Prior Use: N/A	

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

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

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

	Material to be Removed				Material NOT to be Removed	
	RACM	Non-friable Asbestos-Containing Material		Non-friable Asbestos-Containing Material		
		Category I	Category II	Category I	Category II	
Pipes (linear feet)						
Surface area on other facility components (ft ²)		100				
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 2) 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?

Asbestos Abatement Offsite/On Hold as of Date: / /	Asbestos Abatement On Site/Off Hold, Work Resume Date: / /
Demolition Offsite/On Hold as of Date: / /	Demolition On Site/Off Hold, Work Resume Date: / /

APPENDIX IV
SELECT PHOTOGRAPHS

Photograph Log



Photo 1: View of Center Street Swing Bridge



Photo 2: View of Operators House Facing West



Photo 3: View of Drywall and Joint Compound Located in the in Operator's House




Photo 4: View of Tile Grout Located in the Operator's House



Photo 5: View of Roofing Shingles Located on the Operator's House



Photo 6: View of Gateman's House Located on the South Side of the Bridge

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Name & Address:	
336384.0000	Ryan Pulliam	1 of 2	WSP USA	Center Street Swing Bridge Cleveland, OH 44113	


Photograph Log



Photo 7: Skim Coat Located in the Office of the Gateman's House



Photo 8: View of Yellow Tile and Grout in Bathroom of the Gateman's House

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Name & Address:	
336384.0000	Ryan Pulliam	2 of 2	WSP USA	Center Street Swing Bridge Cleveland, OH 44113	