



December 29, 2017

Ms. Roxanne Case  
 Grant Manager  
 Ingham County Land Bank  
 3024 Turner Street  
 Lansing, Ingham County, Michigan 48906

Re: Pre-Demolition Regulated Materials Survey  
 1000 W Saginaw St, Lansing, Ingham County, MI

Dear Ms. Case:

The Mannik & Smith Group, Inc. (MSG) is pleased to present Ingham County with the results of the limited pre-demolition regulated materials survey (RMS) performed at 1000 W Saginaw St, Lansing, Ingham County, Michigan (hereinafter referred to as the "Site") by Kory McKay (Accreditation Number A47903).

**SUMMARY**

Building Information	
Property Address	1000 W Saginaw St, Lansing, MI
Parcel #	33-01-01-08-481-151
No. Stories	3
Square Footage (approx.)	2,500 SF
Siding	Wood
Basement	Yes
Garage	Yes attached



Asbestos Containing Material				
Location	Material Group	Friable/Non Friable	Asbestos	Quantity
RM-14	Green tile	Non Friable	10% Chrysotile	275 SF
RM-2	Sink undercoating	Non Friable	10% Chrysotile	3 SF
RM-2, RM-4, RM-5	Tan tile	Non Friable	10% Chrysotile	375 SF
RM-9	Brown linoleum	Non Friable	20% Chrysotile	120 SF
Roof	Roof tar	Non Friable	20% Chrysotile	275 SF

Hazardous Materials		
Location	Material Description	Quantity
RM-16	1 Gallon paint can	6

TECHNICAL SKILL.  
 CREATIVE SPIRIT.

Universal Waste Inventory		
Location	Material Description	Quantity
Basement, Exterior	CFL bulb	2
RM-1	Television	1
RM-6, RM-13	Fluorescent bulb	6
RM-13, RM-16	Fire extinguisher	2
RM-5, RM-14	Thermostat	2
RM-11, RM-12, Basement	Smoke detector	3

## PURPOSE AND SCOPE OF WORK

The purpose of the RMS was to identify, quantify and document the location of regulated materials that may be encountered during demolition of the on-site structure. To accomplish this purpose, MSG performed the following scope of work:

- 1) Pre-demolition asbestos-containing material (ACM) survey.
- 2) Universal wastes, hazardous materials, and other regulated wastes survey.

## METHODOLOGIES

The RMS was conducted on December 20, 2017. Methodologies employed during the completion of each task of the RMS are detailed below.

### ACM Survey Procedures

The ACM survey was performed in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763. The National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations govern demolition and renovation activities in which asbestos is present. The NESHAP rule distinguishes between Regulated Asbestos-Containing Materials (RACM) that would readily release asbestos fibers when damaged or disturbed and those materials that are unlikely to result in significant fiber release during demolition activities. The purpose of this survey is to determine if ACM within the Site building are RACM and thus, subject to the NESHAP, and to comply with the Michigan Occupational Safety and Health Administration (MIOSHA) and guidelines set forth in the Occupational Safety and Health Administration (OSHA) Regulations Standards 29 CFR 1910.1101.

RACM, as defined by NESHAP, is classified into four parts, (1) friable asbestos material, (2) Category I non-friable ACM (packing, gaskets, floor tile and roofing products) that has become friable, (3) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (4) Category II non-friable ACM (all other ACM products) 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.

The suspect ACM identified during this survey was grouped into homogeneous materials (i.e. similar materials which are uniform in color and texture) and:

- Described and quantified it in linear feet (LF) or square feet (SF);
- Identified and classified as friable or non-friable;
- Assessed as being in good, fair or poor condition;
- Assigned an EPA classification type (surfacing material, thermal system insulation or miscellaneous);
- Classified as RACM or non-RACM; and
- Sampled, or identified as presumed ACM (PACM).

MSG performed services associated with the ACM survey in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time,

and in the same or similar locality. The ACM survey included a systematic visual inspection of readily accessible areas of the Site building. Destructive sampling methods were used and suspect ACM samples were collected by State of Michigan Accredited Asbestos Inspector, Kory McKay (Accreditation Number A47903). Based on the quantity of each classification of material, MSG collected samples of each suspect ACM in accordance with EPA guidelines.

### **Universal Wastes and Hazardous Material Survey Procedures**

MSG identified and inventoried universal wastes and hazardous materials by a visual reconnaissance of the Site. Materials were identified, described, and quantified to the extent possible; however, no equipment or containers were opened and/or sampled as part of this survey.

A hazardous material, as defined in OSHA 29 CFR 1910.1200, is any item or chemical which is a "health hazard" or "physical hazard", including the following:

- Chemicals that are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, hepatotoxins, nephrotoxins, neurotoxins, agents that act on the hematopoietic system, and agents that damage the lungs, skin, eyes, or mucous membranes;
- Chemicals that are combustible liquids, compressed gases, explosives, flammable liquids, flammable solids, organic peroxides, oxidizers, pyrophorics, unstable (reactive) or water-reactive;
- Chemicals that, in the course of normal handling, use or storage, may produce or release dusts, gases, fumes, vapors, mists or smoke which have any of the above characteristics; and
- Any item or chemical which, when being transported or moved, is a risk to public safety or an environmental hazard, and is regulated as such by one or more of the following:
  - DOT - Department of Transportation; Hazardous Materials Regulations (49 CFR 100-180);
  - IMO - International Maritime Organization; International Maritime Dangerous Goods (IMDG) Code;
  - IATA - International Air Transport Association; Dangerous Goods Regulations;
  - ICAO - International Civil Aviation Organization; Technical Instructions; and
  - AF - Air Force "INTERSERVICE" Manual, Preparing Hazmat for Military Air Shipments (AFMAN 24-204).

Hazardous materials may also include:

- Any item or chemical listed in the United States Environmental Protection Agency (USEPA) *List of Hazardous Substances and Reportable Quantities*, dated September 1992.
- Noticeable as inventory under the reporting requirements of the Hazardous Chemical Reporting (40 CFR Part 302).
- An environmental release under the reporting requirements of the Toxic Chemical Release Reporting: Community Right To Know (40 CFR Part 372) or under Part 201, Environmental Remediation of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 201) and Part 213, Leaking Underground Storage Tanks (Part 213).

These would include chemicals with special characteristics which, in the opinion of the manufacturer, can cause harm to people, plants, or animals when released by spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other receptacles).

Universal wastes are waste that comes primarily from consumer products containing mercury, lead, cadmium or other substances that are hazardous to human health and the environment. These items cannot be discarded in household trash nor disposed of in landfills but have less stringent handling and disposal requirements than hazardous waste streams. In Michigan, universal wastes are regulated by the MDEQ Office of Waste Management and Radiological Protection under Part 111 of Act 451 and the federal Resource Conservation and Recovery Act (RCRA) of 1976 under 40 CFR Part 273. Universal waste is also regulated by the US Department of Transportation (US DOT) under 49 CFR Parts 171 through 180. Most of

the universal waste requirements overseen by the DEQ are addressed by R 299.9228 of Part 111 of 1994 P.A. 451, as amended and 40 CFR Part 273. These regulations are designed to encourage proper collection, recycling, treatment, or disposal of these wastes.

Examples of universal waste are mercury-containing equipment (e.g. thermostats, barometers, manometers, temperature and pressure gauges, and mercury switches), nickel-cadmium and spent lead-acid batteries, lamps (e.g. incandescent, fluorescent, high intensity discharge, neon, mercury vapor, and high pressure sodium and metal halide), pesticides, polychlorinated biphenyl (PCB) containing transformers and light ballasts, stored chemical and/or petroleum products, etc. In Michigan, Part 111 also includes pharmaceutical and consumer electronics as additional types of universal wastes.

### **Other Regulated Materials**

This RMS also included identifying and inventorying other regulated materials which may pose physical or chemical concerns during demolition of the Site building(s) including chlorofluorocarbon (CFC) containing devices, tanks, vessels, equipment, and building materials that may contain or become contaminated with hazardous materials.

Specifically, CFC containing devices are regulated Under Title VI of the Clean Air Act (CAA). The Stratospheric Protection Division of the EPA manages programs protecting the stratospheric ozone layer. Title 40, Part 82 of the Code of Federal Regulations contains the EPA regulations protecting the ozone layer. The RMS survey of the premises identified and quantified any CFC containers and CFC containing equipment, which could include the following:

- Drinking fountains, air conditioners, refrigerators
- Air conditioners in control panels and other process equipment
- Water and air chillers
- Roof top and stand-alone air conditioners
- Cafeteria equipment: freezers, walk-in coolers/freezers
- CFC canisters and cylinders

In Michigan, underground storage tanks are regulated under the authority of Part 211, Underground Storage Tank Regulations, of Act 451 of 1994, as amended, and the Michigan Underground Storage Tank Rules (MUSTR). Therefore, this survey included whether any evidence of underground storage tanks and related piping and dispensers were present at the Site.

MSG also surveyed for the presence of equipment, other storage tanks, and materials that may contain or be contaminated by regulated chemicals. These include, but may not be comprehensive of:

- Above ground storage tanks
- Oil-containing equipment (hydraulic equipment, blowers, fans, motors, elevators, compressors, etc.)
- Fire brick
- Contaminated building materials (concrete, block walls, wood, plaster, etc.) with staining, odor or other signs of a hazardous chemical release

## **SURVEY RESULTS**

The following subsections include a discussion of the RMS results. Photographs of the residence are located in the *Attachment A, Photo Log*. The results of this report are valid as of the report date, subject to the limitations presented in *Attachment B, Limitations*.

### **ACM Survey Results**

MSG identified eighteen (18) homogenous materials that were suspect as asbestos containing during the ACM survey. Forty (40) bulk samples were collected from these suspect homogeneous materials and were submitted to Apex Research, Inc. for laboratory analysis of Bulk Materials by Polarized Light Microscopy



using USEPA Method 600/R-93/116. Apex is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) to analyzed bulk samples for asbestos content. Of the aforementioned suspect homogenous materials identified during this ACM survey, laboratory analysis found five (5) homogenous materials (samples 3-1, 7-1, 9-1, 13-1 and 18-1) contained greater than 1% asbestos. The EPA defines ACM as materials containing greater than 1% asbestos.

A point-count quantification procedure (PCQM) allows for lower detection limits than calibrated visual estimation (CVES), which is the quantification method widely used in asbestos analysis via Polarized Light Microscopy (PLM). If the asbestos content is found to contain less than 10% asbestos as determined by a method other than point counting by PLM, it can only be treated as non-ACM if verified to contain less than 1% by the PCQM. If not point-counted, the sample must be assumed to be greater than 1% and thus considered and treated as ACM. It is MSG's experience that point counting samples with an estimated PLM asbestos content of more than 3% does not yield significantly different analytical results. No samples were point counted.

Suspect ACM sample locations are depicted on the attached figure. See *Table 1, Asbestos Sampling Results* for a listing of homogeneous materials identified by MSG during this survey. A copy of the analytical reports including chains of custody is attached in *Attachment C, Analytical Reports and Chains of Custody*.

#### **Universal Wastes, Hazardous Materials, and Other Regulated Materials Survey Results**

Universal wastes, hazardous materials, and/or other regulated materials wastes were identified within the Site building. Quantities identified are provided in *Table 2, Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory*.

### **CONCLUSIONS AND RECOMMENDATIONS**

#### **Asbestos Containing Materials**

Of the eighteen (18) homogenous materials collected as part of the ACM survey, five (5) homogenous materials contained asbestos greater than 1% (samples 3-1, 7-1, 9-1, 13-1 and 18-1) with these five (5) homogenous materials being classified as RACM. All materials containing ACM must be disposed of in a licensed landfill.

Prior to demolition, a notification of intent to demolish shall be made to the Michigan Department of Environmental Quality Air Quality Division (MDEQ-AQD) and Licensing and Regulatory Affairs (LARA), Asbestos Program. Notification, according to the procedure described by the NESHAP, Title 40 of the Code of Federal Regulations, Part 61, Subpart M, Notification, for renovation and demolition projects should be followed. A copy of this notification form is provided in *Attachment D, Notification of Intent to Renovate/Demolish*. This form shall be completed by the contractor who completes the demolition.

If additional suspect ACMs are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, shall be surveyed, tested, and abated if warranted. If suspect ACMs are determined to be RACM that would be disturbed during demolition activities, the RACM must be properly removed by a licensed asbestos abatement contractor.

Category I and Category II Non-Friable ACM may often be left in place during demolition activities if the ACM is not subjected to sanding, grinding, cutting, or abrading or has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material during the course of demolition.

#### **Universal Wastes, Hazardous Materials, and Other Regulated Materials**

The universal waste, hazardous materials, and other regulated materials (see Table 2) must be properly characterized (as necessary) and properly removed from the Site building for recycling and/or disposed of in accordance with Parts 111, 115, or 147 of Michigan Public Act 451 of 1994, as amended. If additional

universal wastes, hazardous materials, and other regulated materials are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, these materials shall be characterized (as necessary) and properly removed in accordance with the above-mentioned regulations.

If you have any questions or concerns regarding the above information please contact us at 517-316-9232.

Sincerely,



Kory McKay  
Environmental Scientist  
Accreditation Number A47903



Charlie Bush  
Senior Project Manager  
Accreditation Number A34293

Attachments

FIGURE





TECHNICAL SKILL.  
CREATIVE SPIRIT.

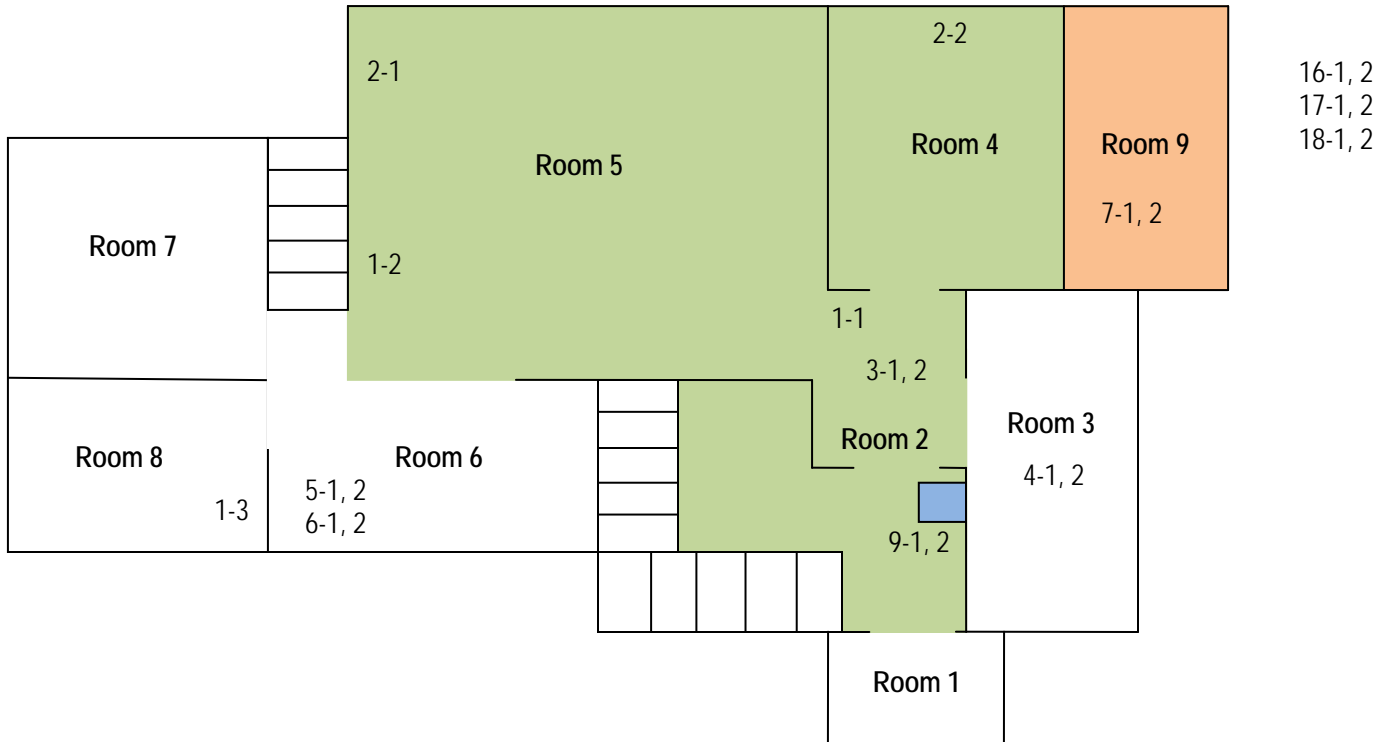
721 N. Capitol Avenue, Suite 2, Lansing, Michigan 48906 Tel: 517.316.9232 Fax: 517.316.9233 www.MannikSmithGroup.com


Address: 1000 W Saginaw St

Date: December 22, 2017

Drawing not to scale

1<sup>st</sup> Floor



 Sink Under Coating (3 SF)

 Tan Tile (375 SF)

 Brown Linoleum (120 SF)

#-# = Asbestos Sample



TECHNICAL SKILL.  
CREATIVE SPIRIT.

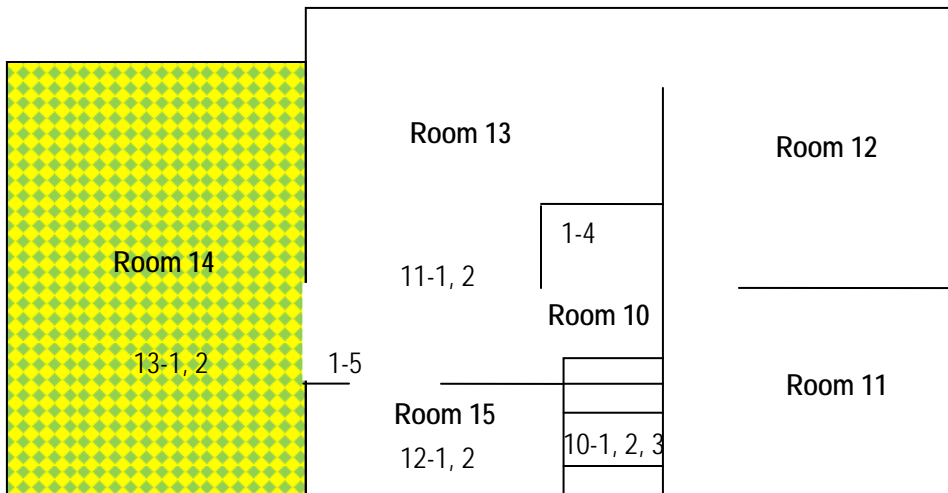
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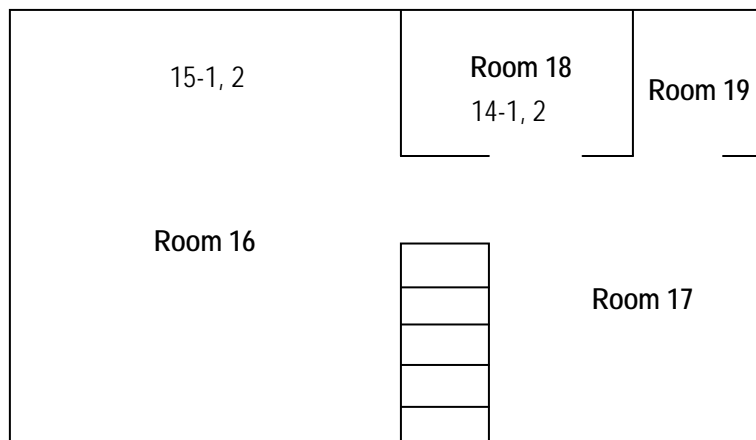
Date: December 22, 2017

Drawing not to scale

2<sup>nd</sup> Floor



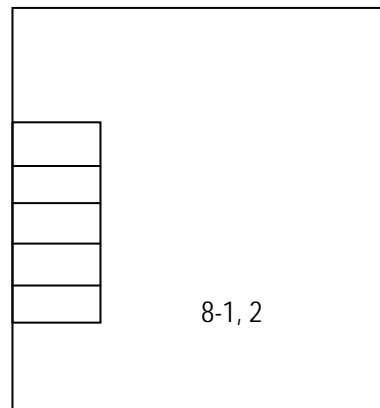
3<sup>rd</sup> Floor



Green Tile (275 SF)

Roof Tar (275 SF)

Basement



#-# = Asbestos Sample

TABLES



**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		1000 W Saginaw St								
Survey Date		December 20, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-2	1	AS 1-1	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	4800 SF
RM-6	1	AS 1-2	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	4800 SF
RM-8	1	AS 1-3	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	4800 SF
RM-10	2	AS 1-4	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	4800 SF
RM-10	2	AS 1-5	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	4800 SF
RM-5	1	AS 2-1	HA-2	Window glaze	Non-Friable	Good	Miscellaneous	No	No	425 SF
RM-4	1	AS 2-2	HA-2	Window glaze	Non-Friable	Good	Miscellaneous	No	No	425 SF
RM-2	1	AS 3-1	HA-3	Tan tile	Non-Friable	Good	Miscellaneous	Yes	10% Chrysotile	375 SF
RM-2	1	AS 3-2	HA-3	Tan tile	Non-Friable	Good	Miscellaneous	Yes	NA	375 SF
RM-3	1	AS 4-1	HA-4	Cream Linoleum	Non-Friable	Good	Miscellaneous	No	No	80 SF
RM-3	1	AS 4-2	HA-4	Cream Linoleum	Non-Friable	Good	Miscellaneous	No	No	80 SF
RM-6	1	AS 5-1	HA-5	Faux wood Linoleum	Non-Friable	Good	Miscellaneous	No	No	150 SF
RM-6	1	AS 5-2	HA-5	Faux wood Linoleum	Non-Friable	Good	Miscellaneous	No	No	150 SF
RM-6	1	AS 6-1	HA-6	Yellow Linoleum	Non-Friable	Good	Miscellaneous	No	No	150 SF
RM-6	1	AS 6-2	HA-6	Yellow Linoleum	Non-Friable	Good	Miscellaneous	No	No	150 SF

**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		1000 W Saginaw St								
Survey Date		December 20, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-9	1	AS 7-1	HA-7	Brown Linoleum	Non-Friable	Good	Miscellaneous	Yes	20% Chrysotile	120 SF
RM-9	1	AS 7-2	HA-7	Brown Linoleum	Non-Friable	Good	Miscellaneous	Yes	NA	120 SF
Basement	B	AS 8-1	HA-8	Basement cement	Non-Friable	Good	Miscellaneous	No	No	300 SF
Basement	B	AS 8-2	HA-8	Basement cement	Non-Friable	Good	Miscellaneous	No	No	300 SF
RM-2	1	AS 9-1	HA-9	Sink under coating	Non-Friable	Good	Miscellaneous	Yes	10% Chrysotile	3 SF
RM-2	1	AS 9-2	HA-9	Sink under coating	Non-Friable	Good	Miscellaneous	Yes	NA	3 SF
RM-10	2	AS 10-1	HA-10	Plaster	Non-Friable	Good	Miscellaneous	No	No	80 SF
RM-10	2	AS 10-2	HA-10	Plaster	Non-Friable	Good	Miscellaneous	No	No	80 SF
RM-10	2	AS 10-3	HA-10	Plaster	Non-Friable	Good	Miscellaneous	No	No	80 SF
RM-13	2	AS 11-1	HA-11	Faux wood tile	Non-Friable	Good	Miscellaneous	No	No	260 SF
RM-13	2	AS 11-2	HA-11	Faux wood tile	Non-Friable	Good	Miscellaneous	No	No	260 SF
RM-15	2	AS 12-1	HA-12	Beige tile sandwich	Non-Friable	Good	Miscellaneous	No	No	50 SF
RM-15	2	AS 12-2	HA-12	Beige tile sandwich	Non-Friable	Good	Miscellaneous	No	No	50 SF
RM-14	2	AS 13-1	HA-13	Green tile	Non-Friable	Good	Miscellaneous	Yes	10% Chrysotile	275 SF
RM-14	2	AS 13-2	HA-13	Green tile	Non-Friable	Good	Miscellaneous	Yes	NA	275 SF



**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		1000 W Saginaw St								
Survey Date		December 20, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-18	3	AS 14-1	HA-14	Faux marble tile	Non-Friable	Good	Miscellaneous	No	No	50 SF
RM-18	3	AS 14-2	HA-14	Faux marble tile	Non-Friable	Good	Miscellaneous	No	No	50 SF
RM-16	3	AS 15-1	HA-15	White tile	Non-Friable	Good	Miscellaneous	No	No	170 SF
RM-16	3	AS 15-2	HA-15	White tile	Non-Friable	Good	Miscellaneous	No	No	170 SF
Roof	E	AS 16-1	HA-16	Shingles	Non-Friable	Good	Miscellaneous	No	No	600 SF
Roof	E	AS 16-2	HA-16	Shingles	Non-Friable	Good	Miscellaneous	No	No	600 SF
Roof	E	AS 17-1	HA-17	Garage shingles	Non-Friable	Good	Miscellaneous	No	No	400 SF
Roof	E	AS 17-2	HA-17	Garage shingles	Non-Friable	Good	Miscellaneous	No	No	400 SF
Roof	E	AS 18-1	HA-18	Roof tar	Non-Friable	Good	Miscellaneous	Yes	20% Chrysotile	275 SF
Roof	E	AS 18-2	HA-18	Roof tar	Non-Friable	Good	Miscellaneous	Yes	NA	275 SF

**Table 2**  
**Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory**  
 1000 W Saginaw St  
 Lansing, Ingham County, Michigan

<b>Universal Waste Inventory</b>		
Location	Type of Waste	Approximate Quantity
Basement, Exterior	CFL bulb	2
RM-1	Television	1
RM-6, RM-13	Fluorescent bulb	6
RM-13, RM-16	Fire extinguisher	2
RM-5, RM-14	Thermostat	2
RM-11, RM-12, Basement	Smoke detector	3
<b>Hazardous Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
RM-16	1 Gallon paint can	6
<b>Other Regulated Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
-	-	-

**ATTACHMENT A**

**PHOTO LOG**



Property Photos



1000 W Saginaw St, Front of House



Back of House

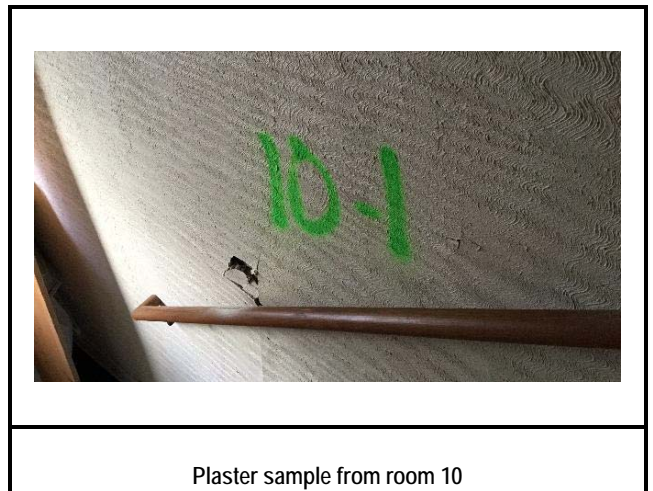
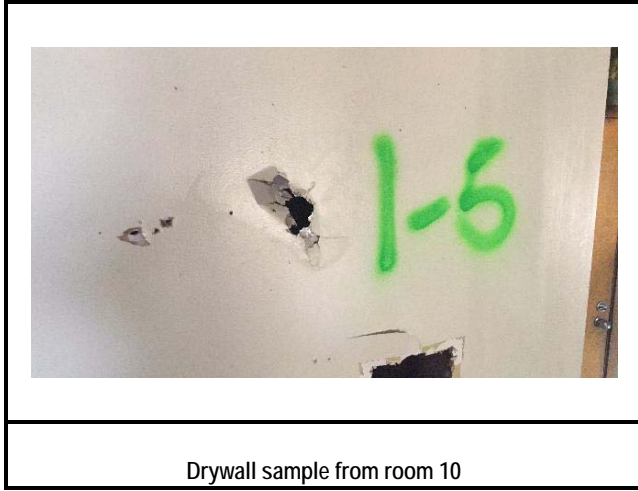


Side of House



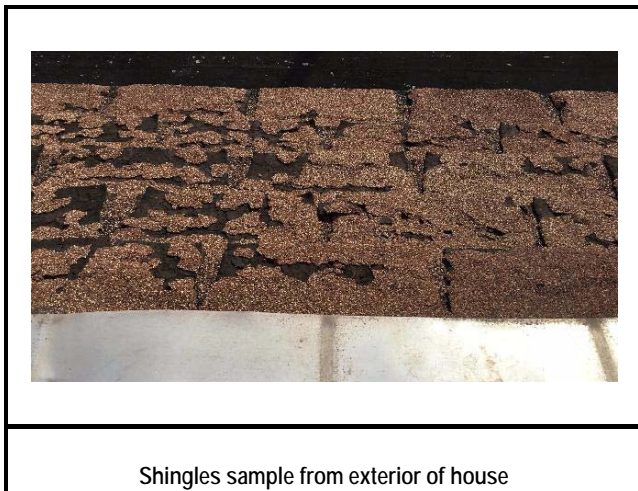
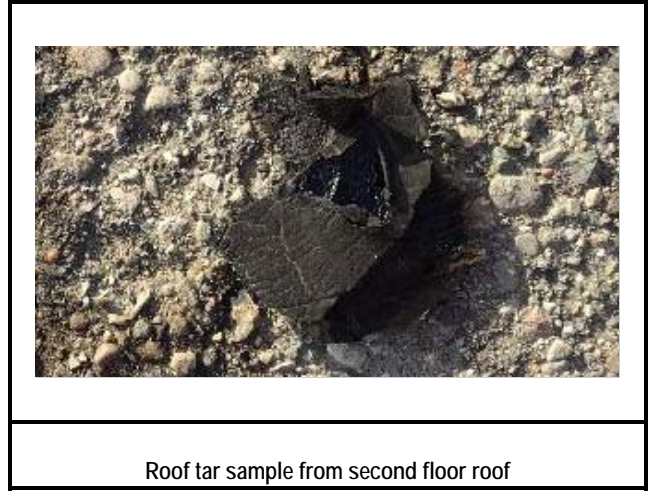
Side of House

Sample Photos





Sample Photos



# ATTACHMENT B

## LIMITATIONS





## REGULATED MATERIALS SURVEY LIMITATIONS

The Mannik & Smith Group, Inc. (MSG) performed its services associated with this Regulated Materials Survey (RMS) in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763, Occupational Safety and Health Administration (OHSA) 29 CFR 1926.62, and in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. This RMS and related documentation are site-specific, which means they pertain to the conditions of the site surveyed.

Unless otherwise noted, MSG's RMS is limited to accessible areas. Areas determined to be not structurally sound, safely reached, limited by excessive accumulated obstructions, require specialized equipment to access, in operable windows, etc., are not included in this survey. There may be areas where regulated materials, such as suspected asbestos-containing materials (SACM) and lead containing paint cannot be viewed and/or tested. MSG shall not be responsible for identifying all SACM, lead containing paint, or other hazardous materials located in inaccessible locations, including but not limited to, above a plaster ceiling, behind a wall, embedded in concrete, buried, confined spaces, unsafe areas, or otherwise not readily identifiable.

Destructive sampling will only be conducted when permission has been granted by the owner. Destructive survey locations are limited to areas where hidden SACM, lead containing paint, or other hazardous materials is reasonably thought to be present and sampling can be conducted in a safe manner. If regulated materials are found during the course of demolition and/or renovation activities that are not listed in this report, the material should be assumed as asbestos-containing, lead containing, or hazardous until it can be sampled and analyzed at an accredited laboratory and safe work practices should always be used if those areas are to be disturbed.

MSG has prepared a logical assessment program to reduce the client's risk of discovering unknown regulated materials and/or hazardous substances. The presence of subsurface regulated materials and/or hazardous substances is based solely on surface observations and/or information provided by others. Descriptions of subsurface conditions provided in this report are not warranted to be complete or accurate. This risk may be reduced by more extensive exploration on the site, but even with additional exploration, it is not possible to completely eliminate the risk of discovering regulated materials and/or hazardous conditions. It cannot and should not be assumed that samples collected and conditions observed at the time of the RMS are representative of an area that has not been sampled and/or tested.

In preparing this report, MSG may have relied on information obtained from or provided by others. MSG makes no representation or warranty regarding the accuracy or completeness of this information gathered through outside sources or subcontracted services. No warranty, guarantee, or certification of any kind, expressed or implied, at common law or created by statute, is extended, made, or intended by rendering these environmental consulting services or by furnishing this written report. Environmental conditions and regulations are subject to constant change and reinterpretation. One should not assume that any on-site conditions and/or regulatory statutes or rules will remain constant after MSG has completed the scope of work for this project. Furthermore, because the facts stated in this report are subject to professional interpretation, differing conclusions could be reached by other environmental professionals.

The report is intended to offer support to a building owner, construction manager, general contractor, abatement contractor, architect, and/or other parties authorized by the owner in generally locating asbestos-containing materials (ACM), lead containing paint, universal and hazardous wastes, and/or other regulated materials. This report does not have the required components to serve as an Asbestos Project Design document, Asbestos and/or Lead Containing Paint Abatement Work Plan, and/or a Health and Safety Plan. Therefore, this report should not be utilized as a project specification document. The results, findings, conclusions, and recommendations expressed in



this report are based only on conditions that were noted during this survey. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated. Quantities have been conservatively estimated and sampling locations have been described representatively; however, current site conditions should be field-verified by contractors bidding on and/or prior to abatement work.

**ATTACHMENT C**

**ANALYTICAL REPORTS AND CHAINS OF CUSTODY**





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1000 W. Saginaw St.  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73859  
Date Collected: 12/20/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73859 - 01 Cust. #: AS 14-1 Material: Faux Marble Tile Location: Room 18 Appearance: green,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 73859 - 01a Cust. #: AS 14-1 Material: Glue Location: Room 18 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73859 - 02 Cust. #: AS 14-2 Material: Faux Marble Tile Location: Room 18 Appearance: green,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1000 W. Saginaw St.  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73859  
Date Collected: 12/20/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73859 - 02a Cust. #: AS 14-2 Material: Glue Location: Room 18 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73859 - 03 Cust. #: AS 15-1 Material: White Tile Location: Room 16 Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73859 - 03a Cust. #: AS 15-1 Material: Glue Location: Room 16 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-73859  
Date Collected: 12/20/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73859 - 04 Cust. #: AS 15-2 Material: White Tile Location: Room 16 Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73859 - 04a Cust. #: AS 15-2 Material: Glue Location: Room 16 Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73859 - 05 Cust. #: AS 1-4 Material: Drywall Location: Room 10 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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ARI Report # 17-73859  
Date Collected: 12/20/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73859 - 06 Cust. #: AS 1-5 Material: Drywall Location: Room 10 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 73859 - 07 Cust. #: AS 12-1 Material: Beige Tile Sandwich Location: Room 15 Appearance: brown, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73859 - 07a Cust. #: AS 12-1 Material: Glue Location: Room 15 Appearance: clear, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73859 - 07b Cust. #: AS 12-1 Material: Linoleum Location: Room 15 Appearance: white, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 73859 - 08 Cust. #: AS 12-2 Material: Beige Tile Sandwich Location: Room 15 Appearance: brown, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73859 - 08a Cust. #: AS 12-2 Material: Glue Location: Room 15 Appearance: clear, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Collected: 12/20/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73859 - 08b Cust. #: AS 12-2 Material: Linoleum Location: Room 15 Appearance: white, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 73859 - 09 Cust. #: AS 11-1 Material: Faux Wood Tile Location: Room 13 Appearance: brown, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 73859 - 09a Cust. #: AS 11-1 Material: Glue Location: Room 13 Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Collected: 12/20/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73859 - 10 Cust. #: AS 11-2 Material: Faux Wood Tile Location: Room 13 Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 73859 - 10a Cust. #: AS 11-2 Material: Glue Location: Room 13 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73859 - 11 Cust. #: AS 13-1 Material: Green Tile Location: Room 14 Appearance: green,fibrous,homogenous Layer: 1 of 3	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%

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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73859 - 11a Cust. #: AS 13-1 Material: Mastic Location: Room 14 Appearance: black, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 73859 - 11b Cust. #: AS 13-1 Material: Tar Paper Location: Room 14 Appearance: black, fibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 73859 - 12 Cust. #: AS 13-2 Material: Green Tile Location: Room 14 Appearance: Layer: 1 of 3	Asbestos Present:  <b>NOT ANALYZED</b>	

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Date Collected: 12/20/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73859 - 12a Cust. #: AS 13-2 Material: Mastic Location: Room 14 Appearance: black,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73859 - 12b Cust. #: AS 13-2 Material: Tar Paper Location: Room 14 Appearance: black,fibrous,homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 73859 - 13 Cust. #: AS 10-2 Material: Plaster - Base Coat Location: Room 10 Appearance: grey,fibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%

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ARI Report # 17-73859  
Date Collected: 12/20/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73859 - 14 Cust. #: AS 10-3 Material: Texture Location: Room 10 Appearance: white, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 5% Other - 95%
Lab ID #: 73859 - 14a Cust. #: AS 10-3 Material: Plaster - Base Coat Location: Room 10 Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 1% Other - 99%
Lab ID #: 73859 - 15 Cust. #: AS 10-1 Material: Texture Location: Room 10 Appearance: white, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 1% Other - 99%

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Date Collected: 12/20/17  
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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73859 - 15a Cust. #: AS 10-1 Material: Plaster - Base Coat Location: Room 10 Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 73859 - 16 Cust. #: AS 16-1 Material: Shingles Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 73859 - 17 Cust. #: AS 16-2 Material: Shingles Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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ARI Report # 17-73859  
Date Collected: 12/20/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73859 - 18 Cust. #: AS 9-1 Material: Sink Undercoating Location: Room 2 Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%
Lab ID #: 73859 - 19 Cust. #: AS 9-2 Material: Sink Undercoating Location: Room 2 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73859 - 20 Cust. #: AS 1-1 Material: Drywall Location: Room 2 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Date Collected: 12/20/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73859 - 21 Cust. #: AS 3-1 Material: Tan Tile Location: Room 2 Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%
Lab ID #: 73859 - 21a Cust. #: AS 3-1 Material: Mastic Location: Room 2 Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73859 - 22 Cust. #: AS 3-1 Material: Tan Tile Location: Room 2 Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	

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Date Collected: 12/20/17  
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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73859 - 22a Cust. #: AS 3-1 Material: Mastic Location: Room 2 Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73859 - 23 Cust. #: AS 4-1 Material: Cream Linoleum Location: Room 3 Appearance: white,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 73859 - 24 Cust. #: AS 4-2 Material: Cream Linoleum Location: Room 3 Appearance: white,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%

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Date Collected: 12/20/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73859 - 25 Cust. #: AS 7-1 Material: Brown Linoleum Location: Room 9 Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 20%	Other - 80%
Lab ID #: 73859 - 26 Cust. #: AS 7-2 Material: Brown Linoleum Location: Room 9 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73859 - 27 Cust. #: AS 2-2 Material: Window Glaze Location: Room 4 Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 2% Other - 98%

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Date Collected: 12/20/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73859 - 28 Cust. #: AS 2-1 Material: Window Glaze Location: Room 5 Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 2% Other - 98%
Lab ID #: 73859 - 29 Cust. #: AS 1-2 Material: Drywall Location: Room 6 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 73859 - 30 Cust. #: AS 5-1 Material: Faux Wood Linoleum Location: Room 6 Appearance: brown, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1000 W. Saginaw St.  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73859  
Date Collected: 12/20/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73859 - 30a Cust. #: AS 5-1 Material: Glue Location: Room 6 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73859 - 31 Cust. #: AS 5-2 Material: Faux Wood Linoleum Location: Room 6 Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73859 - 31a Cust. #: AS 5-2 Material: Glue Location: Room 6 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1000 W. Saginaw St.  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73859  
Date Collected: 12/20/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73859 - 32 Cust. #: AS 6-1 Material: Yellow Linoleum Location: Room 6 Appearance: yellow, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 73859 - 33 Cust. #: AS 6-2 Material: Yellow Linoleum Location: Room 6 Appearance: yellow, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 73859 - 34 Cust. #: AS 1-3 Material: Drywall Location: Room 8 Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1000 W. Saginaw St.  
Project # I1440002

**Report To:**  
Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73859  
Date Collected: 12/20/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73859 - 34a Cust. #: AS 1-3 Material: Joint Compound Location: Room 8 Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73859 - 35 Cust. #: AS 17-1 Material: Garage Shingles Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 73859 - 36 Cust. #: AS 17-2 Material: Garage Shingles Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1000 W. Saginaw St.  
Project # I1440002

**Report To:**  
Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73859  
Date Collected: 12/20/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73859 - 37 Cust. #: AS 8-1 Material: Basement Cement Location: Basement Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73859 - 38 Cust. #: AS 8-2 Material: Basement Cement Location: Basement Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73859 - 39 Cust. #: AS 18-1 Material: Roof Tar/Felt Location: Roof Appearance: black,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 15%	Other - 85%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1000 W. Saginaw St.  
Project # I1440002

**Report To:**  
Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73859  
Date Collected: 12/20/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73859 - 39a Cust. #: AS 18-1 Material: Roof Cement Location: Roof Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>YES</b> Chrysotile - 20%	Other - 80%
Lab ID #: 73859 - 40 Cust. #: AS 18-2 Material: Roof Tar Location: Roof Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0

## APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: 2193 Association Drive, Suite 200  
 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/20/2017 5:00  
 Project: 1000 W SAGINAW ST  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

## Lab Use Only

Log-In: \_\_\_\_\_

Report: \_\_\_\_\_

Fax: \_\_\_\_\_

Verbal: \_\_\_\_\_

Email: \_\_\_\_\_

Turn Around Time: (circle one) \*\*\*Terms and conditions on the other side.

Rush 24 Hour  
 48 Hour 72 Hour  
 Other: TTP yes / no  
 (Test Till Positive)

Samples received after 3pm  
logged in next morning

## Circle analyses required, indicate type and quantity

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	AS 14-1	RM-18 - Faux marble tile	Bag	HA-14	
2	AS 14-2	RM-18 - Faux marble tile	Bag	HA-14	
3	AS 15-1	RM-16 - White tile	Bag	HA-15	
4	AS 15-2	RM-16 - White tile	Bag	HA-15	
5	AS 1-4	RM-10 - Drywall	Bag	HA-1	
6	AS 1-5	RM-10 - Drywall	Bag	HA-1	
7	AS 12-1	RM-15 - Beige tile sandwich	Bag	HA-12	
8	AS 12-2	RM-15 - Beige tile sandwich	Bag	HA-12	
9	AS 11-1	RM-13 - Faux wood tile	Bag	HA-11	
10	AS 11-2	RM-13 - Faux wood tile	Bag	HA-11	
11	AS 13-1	RM-14 - Green tile	Bag	HA-13	
12	AS 13-2	RM-14 - Green tile	Bag	HA-13	

Relinquished By: [Signature]Received By: [Signature]

Relinquished By: \_\_\_\_\_ Received By: \_\_\_\_\_

Date: 12/21/17

Time/Date: 12/21/17 DEC 21 2017

Date: \_\_\_\_\_ Time/Date: \_\_\_\_\_

Revision R4 Date: May/2017

APEX RESEARCH



73859

### APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



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 Address: 2193 Association Drive, Suite 200  
 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/20/2017 5:00  
 Project: 1000 W SAGINAW ST  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) \*\*\*Terms and conditions on the other side.

Rush \_\_\_\_\_ 24 Hour \_\_\_\_\_  
 48 Hour \_\_\_\_\_ **72 Hour** \_\_\_\_\_  
 Other: \_\_\_\_\_ TTP **yes** / no \_\_\_\_\_  
 (Test Till Positive)

Samples received after 3pm logged in next morning

Circle analyses required, indicate type and quantity

Asbstos:    Bulk   X   Wipe    Point Count    PCM     
 Lead / Cad / Chrome: Air    Paint    Wipe (ASTM)    Bulk     
 Mold: Bulk    Air    BioSIS    Tape     
 TEM: Bulk    NIOSH    EPA Level II    Other   

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
13	AS 10-2	RM-10 - Plaster	Bag	HA-10	
14	AS 10-3	RM-10 - Plaster	Bag	HA-10	
15	AS 10-1	RM-10 - Plaster	Bag	HA-10	
16	AS 16-1	Roof - Shingles	Bag	HA-16	
17	AS 16-2	Roof - Shingles	Bag	HA-16	
18	AS 9-1	RM-2 - Sink under coating	Bag	HA-9	
19	AS 9-2	RM-2 - Sink under coating	Bag	HA-9	
20	AS 1-1	RM-2 - Drywall	Bag	HA-1	
21	AS 3-1	RM-2 - Tan tile	Bag	HA-3	
22	AS 3-2	RM-2 - Tan tile	Bag	HA-3	
23	AS 4-1	RM-3 - Cream Linoleum	Bag	HA-4	
24	AS 4-2	RM-3 - Cream Linoleum	Bag	HA-4	

Relinquished By: [Signature]

Received By: [Signature] RECEIVED

Relinquished By: \_\_\_\_\_ Received By: \_\_\_\_\_

Date: 12/21/17

Time/Date: 12/21/17 DEC 21 2017

Date: \_\_\_\_\_ Time/Date: \_\_\_\_\_

Revision R4 Date: May/2017

73859

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 Project: **1000 W SAGINAW ST**  
 Project #: **I1440002**  
 Contact Person: **Charlie Bush**  
 Email: **cbush@manniksmithgroup.com**

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) \*\*\*Terms and conditions on the other side.

Rush \_\_\_\_\_ 24 Hour  
 48 Hour \_\_\_\_\_ **72 Hour**  
 Other: \_\_\_\_\_ TTP **yes / no**  
 (Test Till Positive)

Samples received after 3pm  
 logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
25	AS 7-1	RM-9 - Brown Linoleum	Bag	HA-7	
26	AS 7-2	RM-9 - Brown Linoleum	Bag	HA-7	
27	AS 2-2	RM-4 - Window glaze	Bag	HA-2	
28	AS 2-1	RM-5 - Window glaze	Bag	HA-2	
29	AS 1-2	RM-6 - Drywall	Bag	HA-1	
30	AS 5-1	RM-6 - Faux wood Linoleum	Bag	HA-5	
31	AS 5-2	RM-6 - Faux wood Linoleum	Bag	HA-5	
32	AS 6-1	RM-6 - Yellow Linoleum	Bag	HA-6	
33	AS 6-2	RM-6 - Yellow Linoleum	Bag	HA-6	
34	AS 1-3	RM-8 - Drywall	Bag	HA-1	
35	AS 17-1	Roof - Garage shingles	Bag	HA-17	
36	AS 17-2	Roof - Garage shingles	Bag	HA-17	

Relinquished By: 12/21/17  
 Date: \_\_\_\_\_

Received By: [Signature]  
 Time/Date: 12/21/17

Relinquished By: \_\_\_\_\_ Received By: \_\_\_\_\_  
 Date: \_\_\_\_\_ Time/Date: \_\_\_\_\_

Revision R4 Date: May/2017

**APEX RESEARCH**

73859

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 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/20/2017 5:00  
 Project: 1000 W SAGINAW ST  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) \*\*\*Terms and conditions on the other side.

Rush \_\_\_\_\_ 24 Hour \_\_\_\_\_  
 48 Hour \_\_\_\_\_ 72 Hour \_\_\_\_\_  
 Other: \_\_\_\_\_ TTP ves / no  
 (Test Till Positive)

Samples received after 3pm  
 logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk X Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
37	AS 8-1	Basement - Basement cement basement	Bag	HA-8	
38	AS 8-2	Basement - Basement cement basement	Bag	HA-8	
39	AS 18-1	Roof - Roof tar	Bag	HA-18	
40	AS 18-2	Roof - Roof tar	Bag	HA-18	

Relinquished By: [Signature]  
 Date: 12/21/17

Received By: [Signature]  
 Time/Date: 12/21/17

Relinquished By: \_\_\_\_\_ Received By: \_\_\_\_\_  
 Date: \_\_\_\_\_ Time/Date: \_\_\_\_\_

RECEIVED

DEC 21 2017

APEX RESEARCH

Revision R4 Date: May/2017

**ATTACHMENT D**

**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH**



# NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
(MDEQ) AIR QUALITY DIVISION  
NESHAP, 40 CFR Part 61, Subpart M



MICHIGAN DEPARTMENT OF LICENSING AND  
REGULATORY AFFAIRS (LARA), ASBESTOS PROGRAM,  
P.A. 135 OF 1986, AS AMENDED, Section 220 (1-4) or (8)

### DEQ/LARA USE ONLY

Postmark Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Rec'd Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Emergency Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Valid No. \_\_\_\_\_

OK  Send Def Ltr. Date of Def Ltr. \_\_\_\_/\_\_\_\_/\_\_\_\_

FOLLOW UP \_\_\_\_/\_\_\_\_/\_\_\_\_ Spoke w/ \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Notification No. \_\_\_\_\_ Trans No. \_\_\_\_\_

### Calculate LARA Asbestos Project Fee: (1% Project Fee)

Total Project Cost: \_\_\_\_\_ x 0.01 = \_\_\_\_\_

Type of Contractor: \_\_\_\_\_ License No.: \_\_\_\_\_

Licensing Authority: \_\_\_\_\_

### 1. NOTIFICATION:

Date of Notification: \_\_\_\_\_

Date of Revision(s): \_\_\_\_\_

Notification Type:  Original  Revised  Canceled  Annual

#### Mark appropriate boxes: (both DEQ and LARA may apply):

#### DEQ (NESHAP) [260 ln. ft./160 sq. ft. or more is threshold]

Planned Renovation – 10 **working** days notice

Emergency Renovation

Scheduled Demolition – 10 **working** days notice

Intentional Burn – 10 **working** days notice

Ordered Demolition

#### LARA (MIOSHA) [Will not accept annual notifications]

Demo, Reno, Encap. (>10 ln. ft./15 sq. ft.) 10 **calendar** days notice

Emergency Renovation/Encapsulation

### 2. PROJECT SCHEDULE:

**START DATE** **END DATE**

\* Renovation \_\_\_\_\_

+Asb. Removal \_\_\_\_\_

+Demolition: \_\_\_\_\_

Encapsulation: \_\_\_\_\_

**Work Schedule:** Please indicate the anticipated days of the week and work hours for the purpose of scheduling a compliance inspection.

**Days of the Week** **Work Hours**

Asb. Removal: \_\_\_\_\_

Demolition: \_\_\_\_\_

Encapsulation: \_\_\_\_\_

\* Includes setup, build enclosure, asbestos removal, demobilizing, etc.

+Include **only** those dates you are conducting asbestos removal/demo.

Check here if this is a multi-phased project, attach a schedule showing the start/end date of each phase.

### 3. ABATEMENT CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 4. DEMOLITION CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 5. FACILITY OWNER: ("Facility" includes Bridges)

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 6. FACILITY DESCRIPTION:

Facility Name: \_\_\_\_\_

Location Address/Description: \_\_\_\_\_

\_\_\_\_\_ If Apt. # of units: \_\_\_\_\_

City/Twp. \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

County: \_\_\_\_\_ Nearest Crossroad: \_\_\_\_\_

Size: (sq. ft.) \_\_\_\_\_ No. of Floors: \_\_\_\_\_ Floor No.: \_\_\_\_\_

Age: \_\_\_\_\_ Present Use: \_\_\_\_\_ Prior Use: \_\_\_\_\_

Specific Location(s) in Facility: \_\_\_\_\_

### 7. DISPOSAL SITE:

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

Location Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

### 8. WASTE TRANSPORTER 1:

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

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

### WASTE TRANSPORTER 2:

### 9. ORDERED DEMOLITIONS: (See NESHAP regulations for definition of "Ordered Demolition.") A copy of the official Order must accompany this notification.

Gov't Agency Ordering Demo: \_\_\_\_\_

Name/Title of Person Signing Order: \_\_\_\_\_

Date of Order: \_\_\_\_\_ Date Ordered to Begin: \_\_\_\_\_

### 10. IS ASBESTOS PRESENT? Yes No To be removed prior to demolition

**Estimate the amount of asbestos:** Include RACM (Regulated Asbestos Containing Material) to be removed, encapsulated, etc. Also include the amount and type (floor tile, roofing, etc.) of non-friable Category I and/or Category II ACM that **will not** be removed prior to demolition. (**NOTE:** In a demolition, cementitious ACM **cannot** remain in a structure, as it is likely to become regulated in the demolition/handling process. It **must** be removed prior to demolition.)

RACM to be Removed

RACM to be Encapsulated

Non-friable ACM **not** removed prior to demo.

Category I

Category II

Units of Measure

				<input type="checkbox"/> Ln. Ft.	<input type="checkbox"/> Ln. M.
				<input type="checkbox"/> Sq. Ft.	<input type="checkbox"/> Sq. M.
				<input type="checkbox"/> Cu. Ft.*	<input type="checkbox"/> Cu. M.*

\*Volume (cubic ft./meters) should be used only if unable to measure by linear/square measure (example: asbestos has fallen off of surface).

(continued on reverse side)

**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH (continued)**

**11. PROJECT DESCRIPTION:** Complete **A) for Renovation** (asbestos removal/encapsulation) and/or **B) for Demolition**:

**A) RENOVATION:** Mark all surfaces/types of RACM to be removed:

- Piping     Fittings     Boiler(s)     Tanks(s)  
 Beam(s)     Duct(s)     Tunnel(s)     Ceiling Tile(s)  
 Mag Block     Other (describe) \_\_\_\_\_

**Encapsulation (for LARA):** Mark surfaces/types to be encapsulated:

- Piping     Fittings     Boiler(s)     Tank(s)  
 Beam(s)     Duct(s)     Tunnel(s)     Ceiling Tile(s)  
 Other (describe) \_\_\_\_\_

**Method of removal:** Describe how the asbestos will be removed from the surface (example: glove bag, scrape with hand tools, cut in sections and carefully lower, etc.): \_\_\_\_\_  
 \_\_\_\_\_

**B) DEMOLITION:** Describe the method of demolition of facility, bridge, etc., and indicate if complete or partial. If partial, describe which part of facility bridge, etc., will be demolished: \_\_\_\_\_  
 \_\_\_\_\_

**12. ENGINEERING CONTROLS:** Describe work practices and engineering controls used to prevent visible emissions before, during, and after removal, and until proper disposal: \_\_\_\_\_  
 \_\_\_\_\_

**13. UNEXPECTED ASBESTOS:** Describe the steps you intend to follow in the event that unexpected RACM is found or previously non-friable asbestos becomes friable (crumbled, pulverized, reduced to powder, etc.) and therefore regulated: \_\_\_\_\_  
 \_\_\_\_\_

**14. PROCEDURE(S) USED TO DETECT THE PRESENCE OF ASBESTOS:** **A)** Indicate how you determined whether or not asbestos is in the facility. If analytical sampling was used, describe method of analysis. (The determination of the presence or absence of asbestos must be made prior to submitting a renovation/demolition notification.): \_\_\_\_\_  
 \_\_\_\_\_

**B)** Name, address, and phone number of company performing asbestos survey: \_\_\_\_\_

**C)** Name, accreditation number of inspector, and date of inspection: \_\_\_\_\_

**15. EMERGENCY RENOVATIONS:** Date/time of emergency: \_\_\_\_\_ Describe the sudden, unexpected event: \_\_\_\_\_  
 \_\_\_\_\_

Explain how the event caused unsafe conditions, and/or would cause equipment damage and/or an unreasonable financial burden: \_\_\_\_\_  
 \_\_\_\_\_

**16.** I certify that an individual trained in the provisions of 40 CFR Part 61, Subpart M, will be on-site during the renovation and during demolition involving RACM above the threshold and/or during an ordered demolition. Evidence that this person has completed the required training will be available for inspection at the renovation or demolition site.

\_\_\_\_\_  
*Signature of Owner or Abatement Contractor      Date*

\_\_\_\_\_  
*Signature of Owner or Demolition Contractor      Date*

**17. Signature Requirements for Projects with Negative Pressure Enclosures: (required by LARA)**  
**Per Section 221(1)(2) of P.A. 135 of 1986, as amended, clearance air monitoring is required for any asbestos abatement project involving 10 linear feet/15 square feet or more of friable material which is performed within a negative pressure enclosure. I (the building owner or lessee) have been advised by the contractor of my responsibility under Act 135 to have clearance air monitoring performed on this project.**

\_\_\_\_\_  
*Signature of Building Owner or Lessee      Date*

\_\_\_\_\_  
*Signature of Asbestos Abatement Contractor Representative      Date*

**NOTE:** It is not mandatory that a signed copy be sent to LARA unless requested. For affected projects, this section of the notification form must be completed, signed, and made part of your records before the project begins.

**18. I certify that the above information is correct:**

\_\_\_\_\_  
*Printed Name of Owner/Operator      Date*

\_\_\_\_\_  
*Signature of Owner/Operator      Date*

**MAILING ADDRESSES/PHONE NUMBERS:** (See Item 1 to determine which agency requirements/regulations are applicable to your project.)

For **Public Act 135 of 1986, as amended, Section 220 (1-4) or (8)**, mail to address below. For more info visit:  
<http://www.michigan.gov/asbestos>

MIOSHA Asbestos Program  
 LARA, CSHD  
 P.O. Box 30671  
 Lansing, MI 48909-8171

517.636.4551 (office), 517.322.1713 (fax)

For **NESHAP Demolitions/Renovations, 40 CFR, Part 61, Subpart M**, please use the e-submittal process. For more information visit <http://www.michigan.gov/air>, under Air Links click on Asbestos NESHAP Program.

NESHAP Asbestos Program  
 DEQ, AQD  
 P.O. Box 30260  
 Lansing, MI 48909-7760

517.284.6777 (Office)



December 28, 2017

Ms. Roxanne Case  
 Grant Manager  
 Ingham County Land Bank  
 3024 Turner Street  
 Lansing, Ingham County, Michigan 48906

Re: Pre-Demolition Regulated Materials Survey  
 406 West Saginaw St, Lansing, Ingham County, Michigan

Dear Ms. Case:

The Mannik & Smith Group, Inc. (MSG) is pleased to present Ingham County with the results of the limited pre-demolition regulated materials survey (RMS) performed at 406 West Saginaw St, Lansing, Ingham County, Michigan (hereinafter referred to as the "Site") by Kory McKay (Accreditation Number A47903).

**SUMMARY**

Building Information	
Property Address	406 W Saginaw St, Lansing, MI
Parcel #	33-01-01-09-364-121
No. Stories	2
Square Footage (approx.)	1,400 SF
Siding	Vinyl and Asphalt
Basement	Yes
Garage	No



Asbestos Containing Material				
Location	Material Group	Friable/Non Friable	Asbestos	Quantity
**No asbestos containing materials were found on site**				

Universal Waste Inventory		
Location	Material Description	Quantity
RM-2	Thermostat	1
RM-2	Laptop	1
RM-1, RM-2, RM-3, RM-4, RM-5, RM-6, RM-7, RM-8, RM-9, Basement	CFL light bulb	12



TECHNICAL SKILL.  
 CREATIVE SPIRIT.

Universal Waste Inventory Cont.		
Location	Material Description	Quantity
RM-2, RM-6, Basement	Smoke detector	3
Basement	Computer	4
Basement	Printer	4
Basement	Television	3
Basement	Large speaker	4

Hazardous Materials		
Location	Material Description	Quantity
RM-4	1 Gallon paint can	2

## PURPOSE AND SCOPE OF WORK

The purpose of the RMS was to identify, quantify and document the location of regulated materials that may be encountered during demolition of the on-site structure. To accomplish this purpose, MSG performed the following scope of work:

- 1) Pre-demolition asbestos-containing material (ACM) survey.
- 2) Universal wastes, hazardous materials, and other regulated wastes survey.

## METHODOLOGIES

The RMS was conducted on December 6, 2017. Methodologies employed during the completion of each task of the RMS are detailed below.

### ACM Survey Procedures

The ACM survey was performed in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763. The National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations govern demolition and renovation activities in which asbestos is present. The NESHAP rule distinguishes between Regulated Asbestos-Containing Materials (RACM) that would readily release asbestos fibers when damaged or disturbed and those materials that are unlikely to result in significant fiber release during demolition activities. The purpose of this survey is to determine if ACM within the Site building are RACM and thus, subject to the NESHAP, and to comply with the Michigan Occupational Safety and Health Administration (MIOSHA) and guidelines set forth in the Occupational Safety and Health Administration (OSHA) Regulations Standards 29 CFR 1910.1101.

RACM, as defined by NESHAP, is classified into four parts, (1) friable asbestos material, (2) Category I non-friable ACM (packing, gaskets, floor tile and roofing products) that has become friable, (3) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (4) Category II non-friable ACM (all other ACM products) 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.

The suspect ACM identified during this survey was grouped into homogeneous materials (i.e. similar materials which are uniform in color and texture) and:

- Described and quantified it in linear feet (LF) or square feet (SF);
- Identified and classified as friable or non-friable;
- Assessed as being in good, fair or poor condition;
- Assigned an EPA classification type (surfacing material, thermal system insulation or miscellaneous);



- Classified as RACM or non-RACM; and
- Sampled, or identified as presumed ACM (PACM).

MSG performed services associated with the ACM survey in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. The ACM survey included a systematic visual inspection of readily accessible areas of the Site building. Destructive sampling methods were used and suspect ACM samples were collected by State of Michigan Accredited Asbestos Inspector, Kory McKay (Accreditation Number A47903). Based on the quantity of each classification of material, MSG collected samples of each suspect ACM in accordance with EPA guidelines.

### **Universal Wastes and Hazardous Material Survey Procedures**

MSG identified and inventoried universal wastes and hazardous materials by a visual reconnaissance of the Site. Materials were identified, described, and quantified to the extent possible; however, no equipment or containers were opened and/or sampled as part of this survey.

A hazardous material, as defined in OSHA 29 CFR 1910.1200, is any item or chemical which is a "health hazard" or "physical hazard", including the following:

- Chemicals that are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, hepatotoxins, nephrotoxins, neurotoxins, agents that act on the hematopoietic system, and agents that damage the lungs, skin, eyes, or mucous membranes;
- Chemicals that are combustible liquids, compressed gases, explosives, flammable liquids, flammable solids, organic peroxides, oxidizers, pyrophorics, unstable (reactive) or water-reactive;
- Chemicals that, in the course of normal handling, use or storage, may produce or release dusts, gases, fumes, vapors, mists or smoke which have any of the above characteristics; and
- Any item or chemical which, when being transported or moved, is a risk to public safety or an environmental hazard, and is regulated as such by one or more of the following:
  - DOT - Department of Transportation; Hazardous Materials Regulations (49 CFR 100-180);
  - IMO - International Maritime Organization; International Maritime Dangerous Goods (IMDG) Code;
  - IATA - International Air Transport Association; Dangerous Goods Regulations;
  - ICAO - International Civil Aviation Organization; Technical Instructions; and
  - AF - Air Force "INTERSERVICE" Manual, Preparing Hazmat for Military Air Shipments (AFMAN 24-204).

Hazardous materials may also include:

- Any item or chemical listed in the United States Environmental Protection Agency (USEPA) *List of Hazardous Substances and Reportable Quantities*, dated September 1992.
- Noticeable as inventory under the reporting requirements of the Hazardous Chemical Reporting (40 CFR Part 302).
- An environmental release under the reporting requirements of the Toxic Chemical Release Reporting: Community Right To Know (40 CFR Part 372) or under Part 201, Environmental Remediation of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 201) and Part 213, Leaking Underground Storage Tanks (Part 213).

These would include chemicals with special characteristics which, in the opinion of the manufacturer, can cause harm to people, plants, or animals when released by spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other receptacles).

Universal wastes are waste that comes primarily from consumer products containing mercury, lead, cadmium or other substances that are hazardous to human health and the environment. These items

cannot be discarded in household trash nor disposed of in landfills but have less stringent handling and disposal requirements than hazardous waste streams. In Michigan, universal wastes are regulated by the MDEQ Office of Waste Management and Radiological Protection under Part 111 of Act 451 and the federal Resource Conservation and Recovery Act (RCRA) of 1976 under 40 CFR Part 273. Universal waste is also regulated by the US Department of Transportation (US DOT) under 49 CFR Parts 171 through 180. Most of the universal waste requirements overseen by the DEQ are addressed by R 299.9228 of Part 111 of 1994 P.A. 451, as amended and 40 CFR Part 273. These regulations are designed to encourage proper collection, recycling, treatment, or disposal of these wastes.

Examples of universal waste are mercury-containing equipment (e.g. thermostats, barometers, manometers, temperature and pressure gauges, and mercury switches), nickel-cadmium and spent lead-acid batteries, lamps (e.g. incandescent, fluorescent, high intensity discharge, neon, mercury vapor, and high pressure sodium and metal halide), pesticides, polychlorinated biphenyl (PCB) containing transformers and light ballasts, stored chemical and/or petroleum products, etc. In Michigan, Part 111 also includes pharmaceutical and consumer electronics as additional types of universal wastes.

### **Other Regulated Materials**

This RMS also included identifying and inventorying other regulated materials which may pose physical or chemical concerns during demolition of the Site building(s) including chlorofluorocarbon (CFC) containing devices, tanks, vessels, equipment, and building materials that may contain or become contaminated with hazardous materials.

Specifically, CFC containing devices are regulated Under Title VI of the Clean Air Act (CAA). The Stratospheric Protection Division of the EPA manages programs protecting the stratospheric ozone layer. Title 40, Part 82 of the Code of Federal Regulations contains the EPA regulations protecting the ozone layer. The RMS survey of the premises identified and quantified any CFC containers and CFC containing equipment, which could include the following:

- Drinking fountains, air conditioners, refrigerators
- Air conditioners in control panels and other process equipment
- Water and air chillers
- Roof top and stand-alone air conditioners
- Cafeteria equipment: freezers, walk-in coolers/freezers
- CFC canisters and cylinders

In Michigan, underground storage tanks are regulated under the authority of Part 211, Underground Storage Tank Regulations, of Act 451 of 1994, as amended, and the Michigan Underground Storage Tank Rules (MUSTR). Therefore, this survey included whether any evidence of underground storage tanks and related piping and dispensers were present at the Site.

MSG also surveyed for the presence of equipment, other storage tanks, and materials that may contain or be contaminated by regulated chemicals. These include, but may not be comprehensive of:

- Above ground storage tanks
- Oil-containing equipment (hydraulic equipment, blowers, fans, motors, elevators, compressors, etc.)
- Fire brick
- Contaminated building materials (concrete, block walls, wood, plaster, etc.) with staining, odor or other signs of a hazardous chemical release

## **SURVEY RESULTS**

The following subsections include a discussion of the RMS results. Photographs of the residence are located in the *Attachment A, Photo Log*. The results of this report are valid as of the report date, subject to the limitations presented in *Attachment B, Limitations*.

## **ACM Survey Results**

MSG identified fourteen (14) homogenous materials that were suspect as asbestos containing during the ACM survey. Thirty-four (34) bulk samples were collected from these suspect homogeneous materials and were submitted to APEX Research, Inc. (APEX) for laboratory analysis of Bulk Materials by Polarized Light Microscopy using USEPA Method 600/R-93/116. APEX is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) to analyze bulk samples for asbestos content. Of the aforementioned suspect homogenous materials identified during this ACM survey, laboratory analysis found no samples to contain greater than 1% asbestos. The EPA defines ACM as materials containing greater than 1% asbestos.

A point-count quantification procedure (PCQM) allows for lower detection limits than calibrated visual estimation (CVES), which is the quantification method widely used in asbestos analysis via Polarized Light Microscopy (PLM). If the asbestos content is found to contain less than 10% asbestos as determined by a method other than point counting by PLM, it can only be treated as non-ACM if verified to contain less than 1% by the PCQM. If not point-counted, the sample must be assumed to be greater than 1% and thus considered and treated as ACM. No samples were point counted.

Suspect ACM sample locations are depicted on the attached figure. See *Table 1, Asbestos Sampling Results* for a listing of homogeneous materials identified by MSG during this survey. A copy of the analytical reports including chains of custody is attached in *Attachment C, Analytical Reports and Chains of Custody*.

## **Universal Wastes, Hazardous Materials, and Other Regulated Materials Survey Results**

Universal wastes, hazardous materials, and/or other regulated materials wastes were identified within the Site building. Quantities identified are provided in *Table 2, Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory*.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Asbestos Containing Materials**

Of the fourteen (14) homogenous materials collected as part of the ACM survey, no samples contained asbestos greater than 1%. All materials containing ACM must be disposed of in a licensed landfill.

Prior to demolition, a notification of intent to demolish shall be made to the Michigan Department of Environmental Quality Air Quality Division (MDEQ-AQD) and Licensing and Regulatory Affairs (LARA), Asbestos Program. Notification, according to the procedure described by the NESHAP, Title 40 of the Code of Federal Regulations, Part 61, Subpart M, Notification, for renovation and demolition projects should be followed. A copy of this notification form is provided in *Attachment D, Notification of Intent to Renovate/Demolish*. This form shall be completed by the contractor who completes the demolition.

If additional suspect ACMs are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, shall be surveyed, tested, and abated if warranted. If suspect ACMs are determined to be RACM that would be disturbed during demolition activities, the RACM must be properly removed by a licensed asbestos abatement contractor.

Category I and Category II Non-Friable ACM may often be left in place during demolition activities if the ACM is not subjected to sanding, grinding, cutting, or abrading or has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material during the course of demolition.

### **Universal Wastes, Hazardous Materials, and Other Regulated Materials**

The universal waste, hazardous materials, and other regulated materials (see Table 2) must be properly characterized (as necessary) and properly removed from the Site building for recycling and/or disposed of in accordance with Parts 111, 115, or 147 of Michigan Public Act 451 of 1994, as amended. If additional

universal wastes, hazardous materials, and other regulated materials are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, these materials shall be characterized (as necessary) and properly removed in accordance with the above-mentioned regulations.

If you have any questions or concerns regarding the above information please contact us at 734-397-3100.

Sincerely,



Kory McKay  
Environmental Scientist  
Accreditation Number A47903



Charlie Bush  
Senior Project Manager  
Accreditation Number A34293

Attachments

FIGURE





TECHNICAL SKILL.  
CREATIVE SPIRIT.

721 N. Capitol Avenue, Suite 2, Lansing, Michigan 48906 Tel: 517.316.9232 Fax: 517.316.9233 www.MannikSmithGroup.com

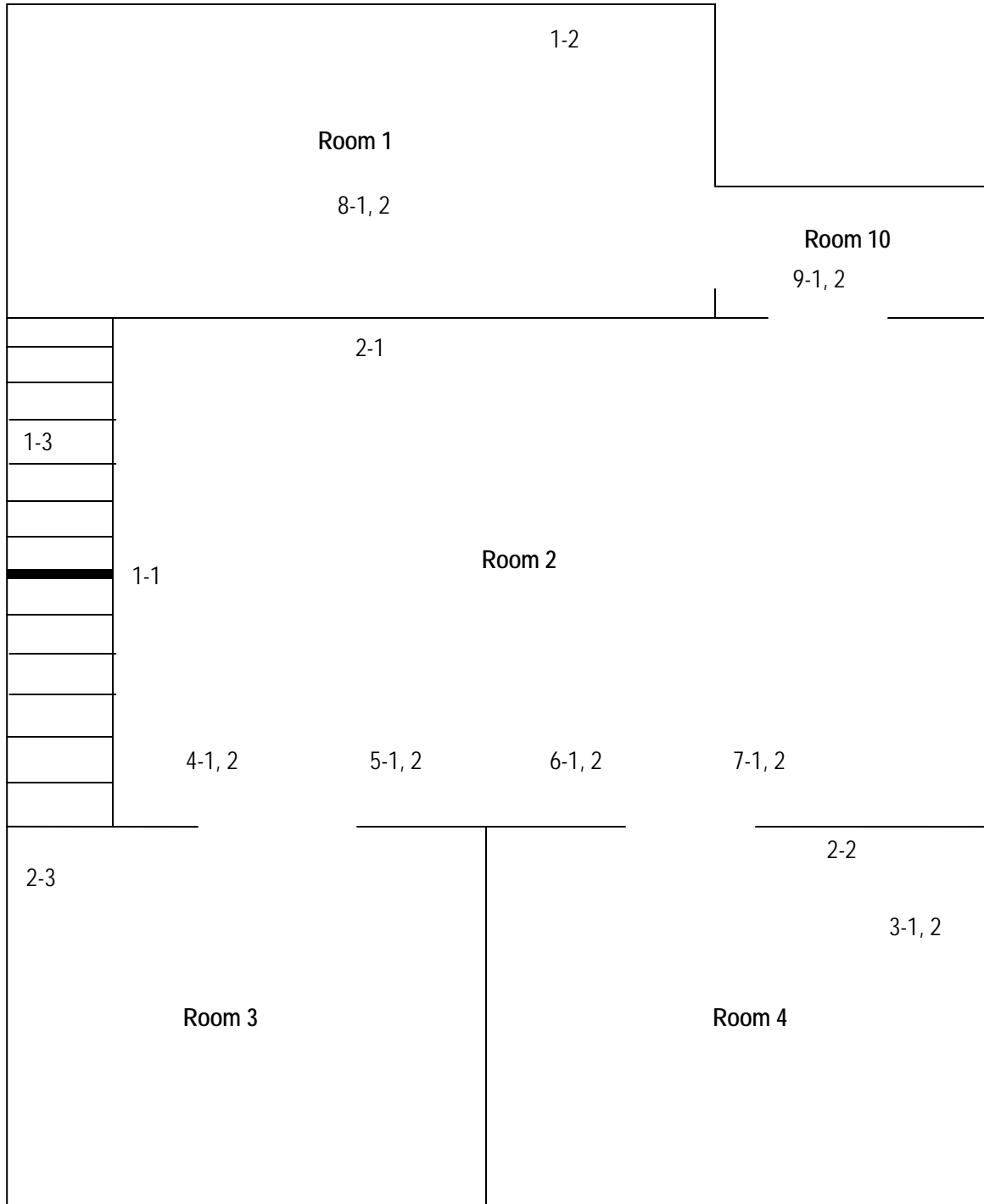
Address: 406 W Saginaw

Date: December 11, 2017

Drawing not to scale

1<sup>st</sup> Floor

13-1, 2  
14-1, 2



#-# = Asbestos Sample



TECHNICAL SKILL.  
CREATIVE SPIRIT.

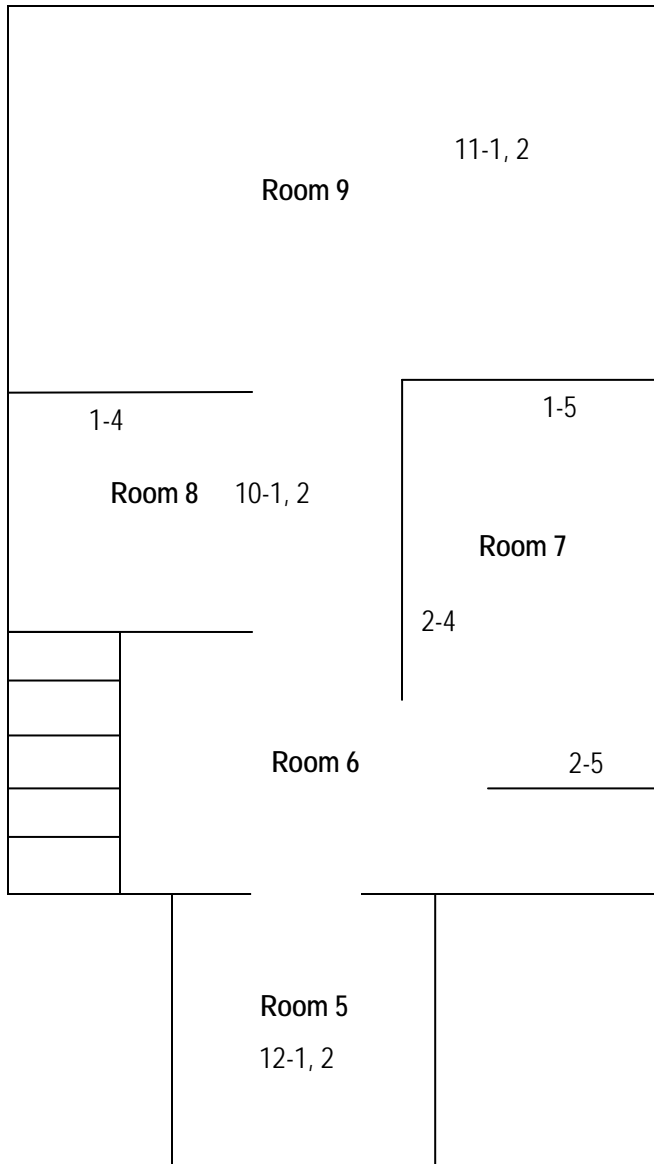
721 N. Capitol Avenue, Suite 2, Lansing, Michigan 48906 Tel: 517.316.9232 Fax: 517.316.9233 www.MannikSmithGroup.com

Address: 406 W Saginaw

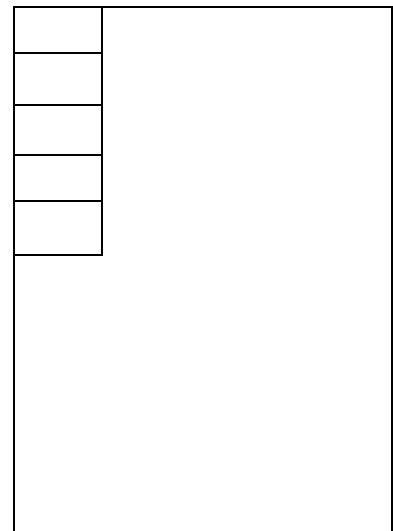
Date: December 11, 2017

Drawing not to scale

2<sup>nd</sup> Floor



Basement



#-# = Asbestos Sample

TABLES





**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		406 W Saginaw St								
Survey Date		December 6, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-2	1	AS 1-1	HA-1	Plaster	Non-Friable	Good	Miscellaneous	No	No	2200 SF
RM-1	1	AS 1-2	HA-1	Plaster	Non-Friable	Good	Miscellaneous	No	No	2200 SF
RM-2	1	AS 1-3	HA-1	Plaster	Non-Friable	Good	Miscellaneous	No	No	2200 SF
RM-8	2	AS 1-4	HA-1	Plaster	Non-Friable	Good	Miscellaneous	No	No	2200 SF
RM-7	2	AS 1-5	HA-1	Plaster	Non-Friable	Good	Miscellaneous	No	No	2200 SF
RM-2	1	AS 2-1	HA-2	Drywall	Non-Friable	Good	Miscellaneous	No	No	2200 SF
RM-4	1	AS 2-2	HA-2	Drywall	Non-Friable	Good	Miscellaneous	No	No	2200 SF
RM-3	1	AS 2-3	HA-2	Drywall	Non-Friable	Good	Miscellaneous	No	No	2200 SF
RM-7	2	AS 2-4	HA-2	Drywall	Non-Friable	Good	Miscellaneous	No	No	2200 SF
RM-6	2	AS 2-5	HA-2	Drywall	Non-Friable	Good	Miscellaneous	No	No	2200 SF
RM-4	1	AS 3-1	HA-3	Window glaze	Non-Friable	Good	Miscellaneous	No	No	100 SF
RM-4	1	AS 3-2	HA-3	Window glaze	Non-Friable	Good	Miscellaneous	No	No	100 SF
RM-2	1	AS 4-1	HA-4	Black tile	Non-Friable	Good	Miscellaneous	No	No	517 SF
RM-2	1	AS 4-2	HA-4	Black tile	Non-Friable	Good	Miscellaneous	No	No	517 SF
RM-2	2	AS 5-1	HA-5	Tan 12x12 tile	Non-Friable	Good	Miscellaneous	No	No	216 SF
RM-2	1	AS 5-2	HA-5	Tan 12x12 tile	Non-Friable	Good	Miscellaneous	No	No	216 SF
RM-2	1	AS 6-1	HA-6	Red Linoleum	Non-Friable	Good	Miscellaneous	No	No	216 SF

**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		406 W Saginaw St								
Survey Date		December 6, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-2	1	AS 6-2	HA-6	Red Linoleum	Non-Friable	Good	Miscellaneous	No	No	216 SF
RM-2	1	AS 7-1	HA-7	Stone flooring	Non-Friable	Good	Miscellaneous	No	No	216 SF
RM-2	1	AS 7-2	HA-7	Stone flooring	Non-Friable	Good	Miscellaneous	No	No	216 SF
RM-1	1	AS 8-1	HA-8	Brown 16x16 tile	Non-Friable	Good	Miscellaneous	No	No	100 SF
RM-1	1	AS 8-2	HA-8	Brown 16x16 tile	Non-Friable	Good	Miscellaneous	No	No	100 SF
RM-10	1	AS 9-1	HA-9	Green 12x12 tile	Non-Friable	Good	Miscellaneous	No	No	35 SF
RM-10	1	AS 9-2	HA-9	Green 12x12 tile	Non-Friable	Good	Miscellaneous	No	No	35 SF
RM-8	2	AS 10-1	HA-10	Multi color tile	Non-Friable	Good	Miscellaneous	No	No	30 SF
RM-8	2	AS 10-2	HA-10	Multi color tile	Non-Friable	Good	Miscellaneous	No	No	30 SF
RM-9	2	AS 11-1	HA-11	Dark faux wood tile	Non-Friable	Good	Miscellaneous	No	No	169 SF
RM-9	2	AS 11-2	HA-11	Dark faux wood tile	Non-Friable	Good	Miscellaneous	No	No	169 SF
RM-5	2	AS 12-1	HA-12	Light faux wood tile	Non-Friable	Good	Miscellaneous	No	No	96 SF
RM-5	2	AS 12-2	HA-12	Light faux wood tile	Non-Friable	Good	Miscellaneous	No	No	96 SF
Roof	E	AS 13-1	HA-13	Shingles	Non-Friable	Good	Miscellaneous	No	No	550 SF
Roof	1	AS 13-2	HA-13	Shingles	Non-Friable	Good	Miscellaneous	No	No	550 SF
Exterior	E	AS 14-1	HA-14	Asphalt siding	Non-Friable	Good	Miscellaneous	No	No	2300 SF
Exterior	E	AS 14-2	HA-14	Asphalt siding	Non-Friable	Good	Miscellaneous	No	No	2300 SF

Table 2  
**Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory**  
 406 W Saginaw St  
 Lansing, Ingham County, Michigan

<b>Universal Waste Inventory</b>		
Location	Type of Waste	Approximate Quantity
RM-2	Thermostat	1
RM-2	Laptop	1
RM-1,2,3,4,5,6,7,8,9, Basement	CFL Bulb	12
RM-2, RM-6, Basement	Smoke Detector	3
Basement	Computer	4
Basement	Printer	4
Basement	TV	3
Basement	Large Speaker	4
<b>Hazardous Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
RM-4	1 Gallon Paint Can	2
<b>Other Regulated Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
-	-	-

**ATTACHMENT A**

**PHOTO LOG**



Property Photos



406 West Saginaw St, Front of House



Back of House

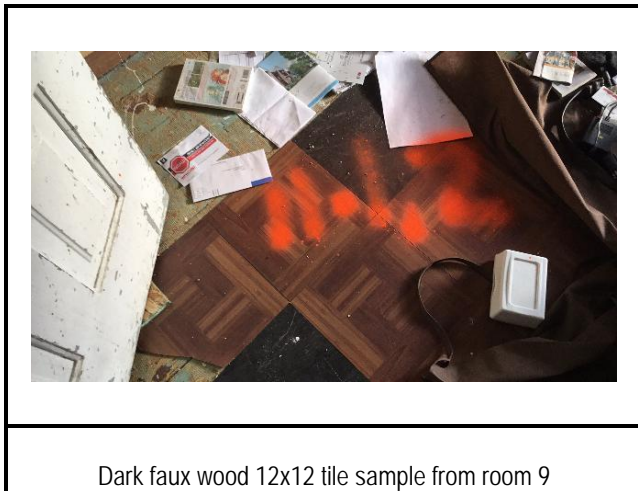
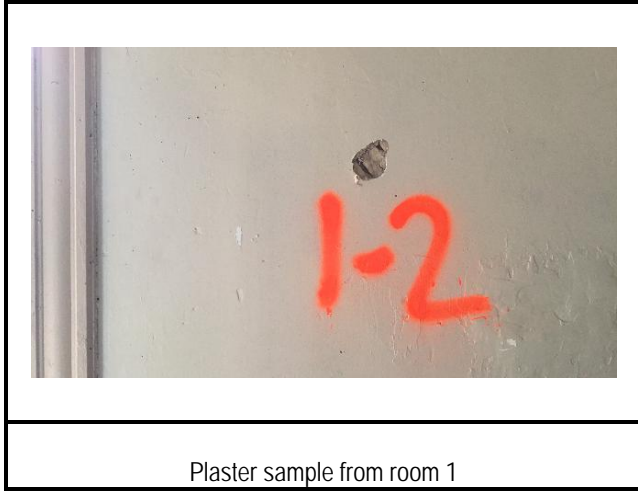


Side of House



Side of House

Sample Photos





# ATTACHMENT B

## LIMITATIONS





## REGULATED MATERIALS SURVEY LIMITATIONS

The Mannik & Smith Group, Inc. (MSG) performed its services associated with this Regulated Materials Survey (RMS) in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763, Occupational Safety and Health Administration (OHSA) 29 CFR 1926.62, and in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. This RMS and related documentation are site-specific, which means they pertain to the conditions of the site surveyed.

Unless otherwise noted, MSG's RMS is limited to accessible areas. Areas determined to be not structurally sound, safely reached, limited by excessive accumulated obstructions, require specialized equipment to access, in operable windows, etc., are not included in this survey. There may be areas where regulated materials, such as suspected asbestos-containing materials (SACM) and lead containing paint cannot be viewed and/or tested. MSG shall not be responsible for identifying all SACM, lead containing paint, or other hazardous materials located in inaccessible locations, including but not limited to, above a plaster ceiling, behind a wall, embedded in concrete, buried, confined spaces, unsafe areas, or otherwise not readily identifiable.

Destructive sampling will only be conducted when permission has been granted by the owner. Destructive survey locations are limited to areas where hidden SACM, lead containing paint, or other hazardous materials is reasonably thought to be present and sampling can be conducted in a safe manner. If regulated materials are found during the course of demolition and/or renovation activities that are not listed in this report, the material should be assumed as asbestos-containing, lead containing, or hazardous until it can be sampled and analyzed at an accredited laboratory and safe work practices should always be used if those areas are to be disturbed.

MSG has prepared a logical assessment program to reduce the client's risk of discovering unknown regulated materials and/or hazardous substances. The presence of subsurface regulated materials and/or hazardous substances is based solely on surface observations and/or information provided by others. Descriptions of subsurface conditions provided in this report are not warranted to be complete or accurate. This risk may be reduced by more extensive exploration on the site, but even with additional exploration, it is not possible to completely eliminate the risk of discovering regulated materials and/or hazardous conditions. It cannot and should not be assumed that samples collected and conditions observed at the time of the RMS are representative of an area that has not been sampled and/or tested.

In preparing this report, MSG may have relied on information obtained from or provided by others. MSG makes no representation or warranty regarding the accuracy or completeness of this information gathered through outside sources or subcontracted services. No warranty, guarantee, or certification of any kind, expressed or implied, at common law or created by statute, is extended, made, or intended by rendering these environmental consulting services or by furnishing this written report. Environmental conditions and regulations are subject to constant change and reinterpretation. One should not assume that any on-site conditions and/or regulatory statutes or rules will remain constant after MSG has completed the scope of work for this project. Furthermore, because the facts stated in this report are subject to professional interpretation, differing conclusions could be reached by other environmental professionals.

The report is intended to offer support to a building owner, construction manager, general contractor, abatement contractor, architect, and/or other parties authorized by the owner in generally locating asbestos-containing materials (ACM), lead containing paint, universal and hazardous wastes, and/or other regulated materials. This report does not have the required components to serve as an Asbestos Project Design document, Asbestos and/or Lead Containing Paint Abatement Work Plan, and/or a Health and Safety Plan. Therefore, this report should not be utilized as a project specification document. The results, findings, conclusions, and recommendations expressed in



this report are based only on conditions that were noted during this survey. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated. Quantities have been conservatively estimated and sampling locations have been described representatively; however, current site conditions should be field-verified by contractors bidding on and/or prior to abatement work.

**ATTACHMENT C**

**ANALYTICAL REPORTS AND CHAINS OF CUSTODY**



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)



Project: 406 W. Saginaw St.  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73610  
Date Collected: 12/06/17  
Date Received: 12/08/17  
Date Analyzed: 12/12/17  
Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73610 - 01 Cust. #: AS1-1 Material: Plaster Finish Coat Location: Room 2 Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73610 - 01a Cust. #: AS1-1 Material: Plaster Base Coat Location: Room 2 Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 5% Other - 95%
Lab ID #: 73610 - 02 Cust. #: AS1-2 Material: Plaster Base Coat Location: Room 1 Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 5% Other - 95%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0

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Date Analyzed: 12/12/17  
Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73610 - 03 Cust. #: AS1-3 Material: Plaster Finish Coat Location: Room 2 Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73610 - 03a Cust. #: AS1-3 Material: Plaster Base Coat Location: Room 2 Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 73610 - 04 Cust. #: AS1-4 Material: Plaster Finish Coat Location: Room 8 Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73610 - 04a Cust. #: AS1-4 Material: Plaster Base Coat Location: Room 8 Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 5% Other - 95%
Lab ID #: 73610 - 05 Cust. #: AS1-5 Material: Plaster Finish Coat Location: Room 7 Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73610 - 05a Cust. #: AS1-5 Material: Plaster Base Coat Location: Room 7 Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73610 - 06 Cust. #: AS2-1 Material: Drywall Location: Room 2 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 73610 - 07 Cust. #: AS2-2 Material: Drywall Location: Room 4 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 5% Other - 80%
Lab ID #: 73610 - 08 Cust. #: AS2-3 Material: Drywall Location: Room 3 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73610 - 09 Cust. #: AS2-4 Material: Drywall Location: Room 7 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 73610 - 10 Cust. #: AS2-5 Material: Drywall Location: Room 6 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Other - 85%
Lab ID #: 73610 - 11 Cust. #: AS3-1 Material: Window Glaze Location: Room 4 Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 5% Other - 95%

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Date Analyzed: 12/12/17  
Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73610 - 12 Cust. #: AS3-2 Material: Window Glaze Location: Room 4 Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 5% Other - 95%
Lab ID #: 73610 - 13 Cust. #: AS4-1 Material: Black Tile Location: Room 2 Appearance: black, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73610 - 13a Cust. #: AS4-1 Material: Mastic Location: Room 2 Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73610 - 14 Cust. #: AS4-2 Material: Black Tile Location: Room 2 Appearance: black,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73610 - 14a Cust. #: AS4-2 Material: Mastic Location: Room 2 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73610 - 15 Cust. #: AS5-1 Material: Tan 12x12 Tile Location: Room 2 Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73610 - 15a Cust. #: AS5-1 Material: Mastic Location: Room 2 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73610 - 16 Cust. #: AS5-2 Material: Tan 12x12 Tile Location: Room 2 Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73610 - 16a Cust. #: AS5-2 Material: Mastic Location: Room 2 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 12/12/17  
Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73610 - 17 Cust. #: AS6-1 Material: Red Linoleum Location: Room 2 Appearance: red, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73610 - 18 Cust. #: AS6-2 Material: Red Linoleum Location: Room 2 Appearance: red, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73610 - 19 Cust. #: AS7-1 Material: Stone Flooring Location: Room 2 Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73610 - 20 Cust. #: AS7-2 Material: Stone Flooring Location: Room 2 Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73610 - 21 Cust. #: AS8-1 Material: Brown 16x16 Tile Location: Room 1 Appearance: brown, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73610 - 21a Cust. #: AS8-1 Material: Mastic Location: Room 1 Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73610 - 22 Cust. #: AS8-2 Material: Brown 16x16 Tile Location: Room 1 Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73610 - 22a Cust. #: AS8-2 Material: Mastic Location: Room 1 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73610 - 23 Cust. #: AS9-1 Material: Green 12x12 Floor Tile Location: Room 10 Appearance: grey,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73610 - 23a Cust. #: AS9-1 Material: Mastic Location: Room 10 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73610 - 24 Cust. #: AS9-2 Material: Green 12x12 Floor Tile Location: Room 10 Appearance: grey,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73610 - 24a Cust. #: AS9-2 Material: Mastic Location: Room 10 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73610 - 25 Cust. #: AS10-1 Material: Flooring Location: Room 8 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73610 - 26 Cust. #: AS10-2 Material: Flooring Location: Room 8 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73610 - 27 Cust. #: AS11-1 Material: Floor Tile Location: Room 11, Room 9 Appearance: brown, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73610 - 27a Cust. #: AS11-1 Material: Mastic Location: Room 11, Room 9 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73610 - 28 Cust. #: AS11-2 Material: Floor Tile Location: Room 11, Room 9 Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73610 - 28a Cust. #: AS11-2 Material: Mastic Location: Room 11, Room 9 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)



Project: 406 W. Saginaw St.  
Project # I1440002

**Report To:**  
Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73610  
Date Collected: 12/06/17  
Date Received: 12/08/17  
Date Analyzed: 12/12/17  
Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73610 - 29 Cust. #: AS12-1 Material: Floor Tile Location: Room 5 Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73610 - 29a Cust. #: AS12-1 Material: Mastic Location: Room 5 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73610 - 30 Cust. #: AS12-2 Material: Floor Tile Location: Room 5 Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)



Project: 406 W. Saginaw St.  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73610  
Date Collected: 12/06/17  
Date Received: 12/08/17  
Date Analyzed: 12/12/17  
Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73610 - 30a Cust. #: AS12-2 Material: Mastic Location: Room 5 Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73610 - 31 Cust. #: AS13-1 Material: Shingle Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 73610 - 32 Cust. #: AS13-2 Material: Shingle Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)



Project: 406 W. Saginaw St.  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73610  
Date Collected: 12/06/17  
Date Received: 12/08/17  
Date Analyzed: 12/12/17  
Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73610 - 33 Cust. #: AS14-1 Material: Siding Location: Exterior Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73610 - 34 Cust. #: AS14-2 Material: Siding Location: Exterior Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

## APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: 2193 Association Drive, Suite 200  
 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/6/2017 5:00  
 Project: 406 W SAGINAW ST  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only

Log-In: \_\_\_\_\_

Report: \_\_\_\_\_

Fax: \_\_\_\_\_

Verbal: \_\_\_\_\_

Email: \_\_\_\_\_

Turn Around Time: (circle one) Terms and conditions on the other side.

Rush 24 Hour  
 48 Hour 72 Hour  
 Other: TTP yes / no  
 (Test Till Positive)

Samples received after 3pm  
 logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	AS 1-1	RM-2 - Plaster	Bag	HA-1	
2	AS 1-2	RM-1 - Plaster	Bag	HA-1	
3	AS 1-3	RM-2 - Plaster	Bag	HA-1	
4	AS 1-4	RM-8 - Plaster	Bag	HA-1	
5	AS 1-5	RM-7 - Plaster	Bag	HA-1	
6	AS 2-1	RM-2 - Drywall	Bag	HA-2	
7	AS 2-2	RM-4 - Drywall	Bag	HA-2	
8	AS 2-3	RM-3 - Drywall	Bag	HA-2	
9	AS 2-4	RM-7 - Drywall	Bag	HA-2	
10	AS 2-5	RM-6 - Drywall	Bag	HA-2	
11	AS 3-1	RM-4 - Window glaze	Bag	HA-3	
12	AS 3-2	RM-4 - Window glaze	Bag	HA-3	

Relinquished By: [Signature]Received By: [Signature]Relinquished By: \_\_\_\_\_ Received By: [Signature] 000Date: 12/7/2017Time/Date: 12/7/17Date: \_\_\_\_\_ Time/Date: DEC 08 2017

Revision R4 Date: May/2017

73610

**APEX Research, Inc.**

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: 2193 Association Drive, Suite 200  
 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/6/2017 5:00  
 Project: 406 W SAGINAW ST  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) \*\*\*Terms and conditions on the other side.

Rush \_\_\_\_\_ 24 Hour \_\_\_\_\_  
 48 Hour \_\_\_\_\_ 72 Hour \_\_\_\_\_  
 Other: \_\_\_\_\_ TTP yes / no \_\_\_\_\_  
 (Test Till Positive)

Samples received after 3pm  
 logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Asbestos Bulk X Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
13	AS 4-1	RM-2 - Black tile	Bag	HA-4	
14	AS 4-2	RM-2 - Black tile	Bag	HA-4	
15	AS 5-1	RM-2 - Tan 12x12 tile	Bag	HA-5	
16	AS 5-2	RM-2 - Tan 12x12 tile	Bag	HA-5	
17	AS 6-1	RM-2 - Red Linoleum	Bag	HA-6	
18	AS 6-2	RM-2 - Red Linoleum	Bag	HA-6	
19	AS 7-1	RM-2 - Stone flooring	Bag	HA-7	
20	AS 7-2	RM-2 - Stone flooring	Bag	HA-7	
21	AS 8-1	RM-1 - Brown 16x16 tile	Bag	HA-8	
22	AS 8-2	RM-1 - Brown 16x16 tile	Bag	HA-8	
23	AS 9-1	RM-10 - Green 12x12 tile	Bag	HA-9	
24	AS 9-2	RM-10 - Green 12x12 tile	Bag	HA-9	

Relinquished By: [Signature]  
 Date: 12/7/2017

Received By: [Signature]  
 Time/Date: 12/7/17

Relinquished By: \_\_\_\_\_ Received By: [Signature]  
 Date: \_\_\_\_\_ Time/Date: DEC 08 2017

RECEIVED

73610

### APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: 2193 Association Drive, Suite 200  
 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/6/2017 5:00  
 Project: 406 W SAGINAW ST  
 Project #: 11440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) Terms and conditions on the other side.

Rush \_\_\_\_\_ 24 Hour  
 48 Hour \_\_\_\_\_ 72 Hour  
 Other: \_\_\_\_\_ TTP yes / no  
 (Test Till Positive)

Samples received after 3pm logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk X Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
25	AS 10-1	RM-8 - RM-8	Bag	HA-10	
26	AS 10-2	RM-8 - RM-8	Bag	HA-10	
27	AS 11-1	RM-9 - RM-11, RM-9	Bag	HA-11	
28	AS 11-2	RM-9 - RM-11, RM-9	Bag	HA-11	
29	AS 12-1	RM-5 - RM-5	Bag	HA-12	
30	AS 12-2	RM-5 - RM-5	Bag	HA-12	
31	AS 13-1	Roof - Roof	Bag	HA-13	
32	AS 13-2	Roof - Roof	Bag	HA-13	
33	AS 14-1	Exterior - Exterior	Bag	HA-14	
34	AS 14-2	Exterior - Exterior	Bag	HA-14	

RECEIVED

Relinquished By: [Signature]  
 Date: 12/7/2017  
 Revision R4 Date: May/2017

Received By: [Signature]  
 Time/Date: 12/7/17

Relinquished By: \_\_\_\_\_ Received By: [Signature]  
 Date: \_\_\_\_\_ Time/Date: DEC 08 2017

**ATTACHMENT D**

**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH**



# NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
(MDEQ) AIR QUALITY DIVISION  
NESHAP, 40 CFR Part 61, Subpart M



MICHIGAN DEPARTMENT OF LICENSING AND  
REGULATORY AFFAIRS (LARA), ASBESTOS PROGRAM,  
P.A. 135 OF 1986, AS AMENDED, Section 220 (1-4) or (8)

### DEQ/LARA USE ONLY

Postmark Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Rec'd Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Emergency Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Valid No. \_\_\_\_\_

OK  Send Def Ltr. Date of Def Ltr. \_\_\_\_/\_\_\_\_/\_\_\_\_

FOLLOW UP \_\_\_\_/\_\_\_\_/\_\_\_\_ Spoke w/ \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Notification No. \_\_\_\_\_ Trans No. \_\_\_\_\_

### Calculate LARA Asbestos Project Fee: (1% Project Fee)

Total Project Cost: \_\_\_\_\_ x 0.01 = \_\_\_\_\_

Type of Contractor: \_\_\_\_\_ License No.: \_\_\_\_\_

Licensing Authority: \_\_\_\_\_

### 1. NOTIFICATION:

Date of Notification: \_\_\_\_\_

Date of Revision(s): \_\_\_\_\_

Notification Type:  Original  Revised  Canceled  Annual

#### Mark appropriate boxes: (both DEQ and LARA may apply):

#### DEQ (NESHAP) [260 ln. ft./160 sq. ft. or more is threshold]

Planned Renovation – 10 **working** days notice

Emergency Renovation

Scheduled Demolition – 10 **working** days notice

Intentional Burn – 10 **working** days notice

Ordered Demolition

#### LARA (MIOSHA) [Will not accept annual notifications]

Demo, Reno, Encap. (>10 ln. ft./15 sq. ft.) 10 **calendar** days notice

Emergency Renovation/Encapsulation

### 2. PROJECT SCHEDULE:

**START DATE**                      **END DATE**

\* Renovation                      \_\_\_\_\_                      \_\_\_\_\_

+Asb. Removal                      \_\_\_\_\_                      \_\_\_\_\_

+Demolition:                      \_\_\_\_\_                      \_\_\_\_\_

Encapsulation:                      \_\_\_\_\_                      \_\_\_\_\_

**Work Schedule:** Please indicate the anticipated days of the week and work hours for the purpose of scheduling a compliance inspection.

**Days of the Week**                      **Work Hours**

Asb. Removal:                      \_\_\_\_\_                      \_\_\_\_\_

Demolition:                      \_\_\_\_\_                      \_\_\_\_\_

Encapsulation:                      \_\_\_\_\_                      \_\_\_\_\_

\* Includes setup, build enclosure, asbestos removal, demobilizing, etc.

+Include **only** those dates you are conducting asbestos removal/demo.

Check here if this is a multi-phased project, attach a schedule showing the start/end date of each phase.

### 3. ABATEMENT CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 4. DEMOLITION CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 5. FACILITY OWNER: ("Facility" includes Bridges)

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 6. FACILITY DESCRIPTION:

Facility Name: \_\_\_\_\_

Location Address/Description: \_\_\_\_\_

\_\_\_\_\_ If Apt. # of units: \_\_\_\_\_

City/Twp. \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

County: \_\_\_\_\_ Nearest Crossroad: \_\_\_\_\_

Size: (sq. ft.) \_\_\_\_\_ No. of Floors: \_\_\_\_\_ Floor No.: \_\_\_\_\_

Age: \_\_\_\_\_ Present Use: \_\_\_\_\_ Prior Use: \_\_\_\_\_

Specific Location(s) in Facility: \_\_\_\_\_

### 7. DISPOSAL SITE:

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

Location Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

### 8. WASTE TRANSPORTER 1:

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

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

### WASTE TRANSPORTER 2:

### 9. ORDERED DEMOLITIONS: (See NESHAP regulations for definition of "Ordered Demolition.") A copy of the official Order must accompany this notification.

Gov't Agency Ordering Demo: \_\_\_\_\_

Name/Title of Person Signing Order: \_\_\_\_\_

Date of Order: \_\_\_\_\_ Date Ordered to Begin: \_\_\_\_\_

### 10. IS ASBESTOS PRESENT? Yes No

To be removed prior to demolition

**Estimate the amount of asbestos:** Include RACM (Regulated Asbestos Containing Material) to be removed, encapsulated, etc. Also include the amount and type (floor tile, roofing, etc.) of non-friable Category I and/or Category II ACM that **will not** be removed prior to demolition. (**NOTE:** In a demolition, cementitious ACM **cannot** remain in a structure, as it is likely to become regulated in the demolition/handling process. It **must** be removed prior to demolition.)

RACM to be Removed

RACM to be Encapsulated

Non-friable ACM **not** removed prior to demo.

Category I

Category II

Units of Measure

				<input type="checkbox"/> Ln. Ft.	<input type="checkbox"/> Ln. M.
				<input type="checkbox"/> Sq. Ft.	<input type="checkbox"/> Sq. M.
				<input type="checkbox"/> Cu. Ft.*	<input type="checkbox"/> Cu. M.*

\*Volume (cubic ft./meters) should be used only if unable to measure by linear/square measure (example: asbestos has fallen off of surface).

(continued on reverse side)



**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH (continued)**

**11. PROJECT DESCRIPTION:** Complete **A) for Renovation** (asbestos removal/encapsulation) and/or **B) for Demolition**:

**A) RENOVATION:** Mark all surfaces/types of RACM to be removed:

- Piping     Fittings     Boiler(s)     Tanks(s)  
 Beam(s)     Duct(s)     Tunnel(s)     Ceiling Tile(s)  
 Mag Block     Other (describe) \_\_\_\_\_

**Encapsulation (for LARA):** Mark surfaces/types to be encapsulated:

- Piping     Fittings     Boiler(s)     Tank(s)  
 Beam(s)     Duct(s)     Tunnel(s)     Ceiling Tile(s)  
 Other (describe) \_\_\_\_\_

**Method of removal:** Describe how the asbestos will be removed from the surface (example: glove bag, scrape with hand tools, cut in sections and carefully lower, etc.): \_\_\_\_\_  
 \_\_\_\_\_

**B) DEMOLITION:** Describe the method of demolition of facility, bridge, etc., and indicate if complete or partial. If partial, describe which part of facility bridge, etc., will be demolished: \_\_\_\_\_  
 \_\_\_\_\_

**12. ENGINEERING CONTROLS:** Describe work practices and engineering controls used to prevent visible emissions before, during, and after removal, and until proper disposal: \_\_\_\_\_  
 \_\_\_\_\_

**13. UNEXPECTED ASBESTOS:** Describe the steps you intend to follow in the event that unexpected RACM is found or previously non-friable asbestos becomes friable (crumbled, pulverized, reduced to powder, etc.) and therefore regulated: \_\_\_\_\_  
 \_\_\_\_\_

**14. PROCEDURE(S) USED TO DETECT THE PRESENCE OF ASBESTOS:** **A)** Indicate how you determined whether or not asbestos is in the facility. If analytical sampling was used, describe method of analysis. (The determination of the presence or absence of asbestos must be made prior to submitting a renovation/demolition notification.): \_\_\_\_\_  
 \_\_\_\_\_

**B)** Name, address, and phone number of company performing asbestos survey: \_\_\_\_\_

**C)** Name, accreditation number of inspector, and date of inspection: \_\_\_\_\_

**15. EMERGENCY RENOVATIONS:** Date/time of emergency: \_\_\_\_\_ Describe the sudden, unexpected event: \_\_\_\_\_  
 \_\_\_\_\_

Explain how the event caused unsafe conditions, and/or would cause equipment damage and/or an unreasonable financial burden: \_\_\_\_\_  
 \_\_\_\_\_

**16.** I certify that an individual trained in the provisions of 40 CFR Part 61, Subpart M, will be on-site during the renovation and during demolition involving RACM above the threshold and/or during an ordered demolition. Evidence that this person has completed the required training will be available for inspection at the renovation or demolition site.

\_\_\_\_\_  
*Signature of Owner or Abatement Contractor      Date*

\_\_\_\_\_  
*Signature of Owner or Demolition Contractor      Date*

**17. Signature Requirements for Projects with Negative Pressure Enclosures: (required by LARA)**  
**Per Section 221(1)(2) of P.A. 135 of 1986, as amended, clearance air monitoring is required for any asbestos abatement project involving 10 linear feet/15 square feet or more of friable material which is performed within a negative pressure enclosure. I (the building owner or lessee) have been advised by the contractor of my responsibility under Act 135 to have clearance air monitoring performed on this project.**

\_\_\_\_\_  
*Signature of Building Owner or Lessee      Date*

\_\_\_\_\_  
*Signature of Asbestos Abatement Contractor Representative      Date*

**NOTE:** It is not mandatory that a signed copy be sent to LARA unless requested. For affected projects, this section of the notification form must be completed, signed, and made part of your records before the project begins.

**18. I certify that the above information is correct:**

\_\_\_\_\_  
*Printed Name of Owner/Operator      Date*

\_\_\_\_\_  
*Signature of Owner/Operator      Date*

**MAILING ADDRESSES/PHONE NUMBERS:** (See Item 1 to determine which agency requirements/regulations are applicable to your project.)

For **Public Act 135 of 1986, as amended, Section 220 (1-4) or (8)**, mail to address below. For more info visit:  
<http://www.michigan.gov/asbestos>

MIOSHA Asbestos Program  
 LARA, CSHD  
 P.O. Box 30671  
 Lansing, MI 48909-8171

517.636.4551 (office), 517.322.1713 (fax)

For **NESHAP Demolitions/Renovations, 40 CFR, Part 61, Subpart M**, please use the e-submittal process. For more information visit <http://www.michigan.gov/air>, under Air Links click on Asbestos NESHAP Program.

NESHAP Asbestos Program  
 DEQ, AQD  
 P.O. Box 30260  
 Lansing, MI 48909-7760

517.284.6777 (Office)



January 2, 2018

Ms. Roxanne Case  
 Grant Manager  
 Ingham County Land Bank  
 3024 Turner Street  
 Lansing, Ingham County, Michigan 48906

Re: Pre-Demolition Regulated Materials Survey  
 1001 N Pine St, Lansing, Ingham County, MI

Dear Ms. Case:

The Mannik & Smith Group, Inc. (MSG) is pleased to present Ingham County with the results of the limited pre-demolition regulated materials survey (RMS) performed at 1001 N Pine St, Lansing, Ingham County, Michigan (hereinafter referred to as the "Site") by Kory McKay (Accreditation Number A47903).

**SUMMARY**

Building Information	
Property Address	1001 N Pine St, Lansing, MI
Parcel #	33-01-01-09-306-121
No. Stories	3
Square Footage (approx.)	1,700 SF
Siding	Transite
Basement	Yes
Garage	Yes attached



Asbestos Containing Material				
Location	Material Group	Friable/Non Friable	Asbestos	Quantity
RM-1, RM-2, RM-3, RM-5, RM-6, RM-7, RM-8, RM-9 (walls and ceilings)	Plaster	Non Friable	1.75% Chrysotile	4,250 SF
RM-1, RM-2, RM-3	Vent wrap	Friable	45% Chrysotile	240 SF
Exterior	Siding	Non Friable	35% Chrysotile	3,000 SF
RM-3	Sink under coating	Non Friable	1.75% Chrysotile	3 SF

Hazardous Materials		
Location	Material Description	Quantity
RM-5	1 Gallon bleach	1
RM-3	1 Gallon pesticide	1
RM-7	1 Gallon paint can	4
Roof	5 Gallon container unknown contents	1

TECHNICAL SKILL.  
 CREATIVE SPIRIT.

Universal Waste Inventory		
Location	Material Description	Quantity
RM-2, RM-8	Television	3
RM-1	Thermostat	1
RM-2, Basement	Smoke detector	2
RM-3	CFL bulb	1

## PURPOSE AND SCOPE OF WORK

The purpose of the RMS was to identify, quantify and document the location of regulated materials that may be encountered during demolition of the on-site structure. To accomplish this purpose, MSG performed the following scope of work:

- 1) Pre-demolition asbestos-containing material (ACM) survey.
- 2) Universal wastes, hazardous materials, and other regulated wastes survey.

## METHODOLOGIES

The RMS was conducted on December 19, 2017. Methodologies employed during the completion of each task of the RMS are detailed below.

### ACM Survey Procedures

The ACM survey was performed in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763. The National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations govern demolition and renovation activities in which asbestos is present. The NESHAP rule distinguishes between Regulated Asbestos-Containing Materials (RACM) that would readily release asbestos fibers when damaged or disturbed and those materials that are unlikely to result in significant fiber release during demolition activities. The purpose of this survey is to determine if ACM within the Site building are RACM and thus, subject to the NESHAP, and to comply with the Michigan Occupational Safety and Health Administration (MIOSHA) and guidelines set forth in the Occupational Safety and Health Administration (OSHA) Regulations Standards 29 CFR 1910.1101.

RACM, as defined by NESHAP, is classified into four parts, (1) friable asbestos material, (2) Category I non-friable ACM (packing, gaskets, floor tile and roofing products) that has become friable, (3) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (4) Category II non-friable ACM (all other ACM products) 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.

The suspect ACM identified during this survey was grouped into homogeneous materials (i.e. similar materials which are uniform in color and texture) and:

- Described and quantified it in linear feet (LF) or square feet (SF);
- Identified and classified as friable or non-friable;
- Assessed as being in good, fair or poor condition;
- Assigned an EPA classification type (surfacing material, thermal system insulation or miscellaneous);
- Classified as RACM or non-RACM; and
- Sampled, or identified as presumed ACM (PACM).

MSG performed services associated with the ACM survey in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. The ACM survey included a systematic visual inspection of readily accessible areas of the Site building. Destructive sampling methods were used and suspect ACM samples

were collected by State of Michigan Accredited Asbestos Inspector, Kory McKay (Accreditation Number A47903). Based on the quantity of each classification of material, MSG collected samples of each suspect ACM in accordance with EPA guidelines.

### **Universal Wastes and Hazardous Material Survey Procedures**

MSG identified and inventoried universal wastes and hazardous materials by a visual reconnaissance of the Site. Materials were identified, described, and quantified to the extent possible; however, no equipment or containers were opened and/or sampled as part of this survey.

A hazardous material, as defined in OSHA 29 CFR 1910.1200, is any item or chemical which is a "health hazard" or "physical hazard", including the following:

- Chemicals that are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, hepatotoxins, nephrotoxins, neurotoxins, agents that act on the hematopoietic system, and agents that damage the lungs, skin, eyes, or mucous membranes;
- Chemicals that are combustible liquids, compressed gases, explosives, flammable liquids, flammable solids, organic peroxides, oxidizers, pyrophorics, unstable (reactive) or water-reactive;
- Chemicals that, in the course of normal handling, use or storage, may produce or release dusts, gases, fumes, vapors, mists or smoke which have any of the above characteristics; and
- Any item or chemical which, when being transported or moved, is a risk to public safety or an environmental hazard, and is regulated as such by one or more of the following:
  - DOT - Department of Transportation; Hazardous Materials Regulations (49 CFR 100-180);
  - IMO - International Maritime Organization; International Maritime Dangerous Goods (IMDG) Code;
  - IATA - International Air Transport Association; Dangerous Goods Regulations;
  - ICAO - International Civil Aviation Organization; Technical Instructions; and
  - AF - Air Force "INTERSERVICE" Manual, Preparing Hazmat for Military Air Shipments (AFMAN 24-204).

Hazardous materials may also include:

- Any item or chemical listed in the United States Environmental Protection Agency (USEPA) *List of Hazardous Substances and Reportable Quantities*, dated September 1992.
- Noticeable as inventory under the reporting requirements of the Hazardous Chemical Reporting (40 CFR Part 302).
- An environmental release under the reporting requirements of the Toxic Chemical Release Reporting: Community Right To Know (40 CFR Part 372) or under Part 201, Environmental Remediation of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 201) and Part 213, Leaking Underground Storage Tanks (Part 213).

These would include chemicals with special characteristics which, in the opinion of the manufacturer, can cause harm to people, plants, or animals when released by spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other receptacles).

Universal wastes are waste that comes primarily from consumer products containing mercury, lead, cadmium or other substances that are hazardous to human health and the environment. These items cannot be discarded in household trash nor disposed of in landfills but have less stringent handling and disposal requirements than hazardous waste streams. In Michigan, universal wastes are regulated by the MDEQ Office of Waste Management and Radiological Protection under Part 111 of Act 451 and the federal Resource Conservation and Recovery Act (RCRA) of 1976 under 40 CFR Part 273. Universal waste is also regulated by the US Department of Transportation (US DOT) under 49 CFR Parts 171 through 180. Most of the universal waste requirements overseen by the DEQ are addressed by R 299.9228 of Part 111 of 1994

P.A. 451, as amended and 40 CFR Part 273. These regulations are designed to encourage proper collection, recycling, treatment, or disposal of these wastes.

Examples of universal waste are mercury-containing equipment (e.g. thermostats, barometers, manometers, temperature and pressure gauges, and mercury switches), nickel-cadmium and spent lead-acid batteries, lamps (e.g. incandescent, fluorescent, high intensity discharge, neon, mercury vapor, and high pressure sodium and metal halide), pesticides, polychlorinated biphenyl (PCB) containing transformers and light ballasts, stored chemical and/or petroleum products, etc. In Michigan, Part 111 also includes pharmaceutical and consumer electronics as additional types of universal wastes.

### **Other Regulated Materials**

This RMS also included identifying and inventorying other regulated materials which may pose physical or chemical concerns during demolition of the Site building(s) including chlorofluorocarbon (CFC) containing devices, tanks, vessels, equipment, and building materials that may contain or become contaminated with hazardous materials.

Specifically, CFC containing devices are regulated Under Title VI of the Clean Air Act (CAA). The Stratospheric Protection Division of the EPA manages programs protecting the stratospheric ozone layer. Title 40, Part 82 of the Code of Federal Regulations contains the EPA regulations protecting the ozone layer. The RMS survey of the premises identified and quantified any CFC containers and CFC containing equipment, which could include the following:

- Drinking fountains, air conditioners, refrigerators
- Air conditioners in control panels and other process equipment
- Water and air chillers
- Roof top and stand-alone air conditioners
- Cafeteria equipment: freezers, walk-in coolers/freezers
- CFC canisters and cylinders

In Michigan, underground storage tanks are regulated under the authority of Part 211, Underground Storage Tank Regulations, of Act 451 of 1994, as amended, and the Michigan Underground Storage Tank Rules (MUSTR). Therefore, this survey included whether any evidence of underground storage tanks and related piping and dispensers were present at the Site.

MSG also surveyed for the presence of equipment, other storage tanks, and materials that may contain or be contaminated by regulated chemicals. These include, but may not be comprehensive of:

- Above ground storage tanks
- Oil-containing equipment (hydraulic equipment, blowers, fans, motors, elevators, compressors, etc.)
- Fire brick
- Contaminated building materials (concrete, block walls, wood, plaster, etc.) with staining, odor or other signs of a hazardous chemical release

## **SURVEY RESULTS**

The following subsections include a discussion of the RMS results. Photographs of the residence are located in the *Attachment A, Photo Log*. The results of this report are valid as of the report date, subject to the limitations presented in *Attachment B, Limitations*.

### **ACM Survey Results**

MSG identified nineteen (19) homogenous materials that were suspect as asbestos containing during the ACM survey. Forty-six (46) bulk samples were collected from these suspect homogeneous materials and were submitted to Apex Research, Inc. for laboratory analysis of Bulk Materials by Polarized Light Microscopy using USEPA Method 600/R-93/116. Apex is accredited by the National Voluntary Laboratory

Accreditation Program (NVLAP) to analyzed bulk samples for asbestos content. Of the aforementioned suspect homogenous materials identified during this ACM survey, laboratory analysis found four (4) homogenous materials (samples 2-5, 15-3, 16-1 and 19-1) contained greater than 1% asbestos. The EPA defines ACM as materials containing greater than 1% asbestos.

A point-count quantification procedure (PCQM) allows for lower detection limits than calibrated visual estimation (CVES), which is the quantification method widely used in asbestos analysis via Polarized Light Microscopy (PLM). If the asbestos content is found to contain less than 10% asbestos as determined by a method other than point counting by PLM, it can only be treated as non-ACM if verified to contain less than 1% by the PCQM. If not point-counted, the sample must be assumed to be greater than 1% and thus considered and treated as ACM. It is MSG's experience that point counting samples with an estimated PLM asbestos content of more than 3% does not yield significantly different analytical results. Point counts were conducted on samples 2-5 and 19-1.

Suspect ACM sample locations are depicted on the attached figure. See *Table 1, Asbestos Sampling Results* for a listing of homogeneous materials identified by MSG during this survey. A copy of the analytical reports including chains of custody is attached in *Attachment C, Analytical Reports and Chains of Custody*.

### **Universal Wastes, Hazardous Materials, and Other Regulated Materials Survey Results**

Universal wastes, hazardous materials, and/or other regulated materials wastes were identified within the Site building. Quantities identified are provided in *Table 2, Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory*.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Asbestos Containing Materials**

Of the nineteen (19) homogenous materials collected as part of the ACM survey, four (4) homogenous materials (plaster, vent wrap, siding and sink under coating) contained asbestos greater than 1% (samples 2-5, 15-3, 16-1 and 19-1) with these four (4) homogenous materials being classified as RACM. All materials containing ACM must be disposed of in a licensed landfill.

Prior to demolition, a notification of intent to demolish shall be made to the Michigan Department of Environmental Quality Air Quality Division (MDEQ-AQD) and Licensing and Regulatory Affairs (LARA), Asbestos Program. Notification, according to the procedure described by the NESHAP, Title 40 of the Code of Federal Regulations, Part 61, Subpart M, Notification, for renovation and demolition projects should be followed. A copy of this notification form is provided in *Attachment D, Notification of Intent to Renovate/Demolish*. This form shall be completed by the contractor who completes the demolition.

If additional suspect ACMs are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, shall be surveyed, tested, and abated if warranted. If suspect ACMs are determined to be RACM that would be disturbed during demolition activities, the RACM must be properly removed by a licensed asbestos abatement contractor.

Category I and Category II Non-Friable ACM may often be left in place during demolition activities if the ACM is not subjected to sanding, grinding, cutting, or abrading or has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material during the course of demolition.

### **Universal Wastes, Hazardous Materials, and Other Regulated Materials**

The universal waste, hazardous materials, and other regulated materials (see Table 2) must be properly characterized (as necessary) and properly removed from the Site building for recycling and/or disposed of in accordance with Parts 111, 115, or 147 of Michigan Public Act 451 of 1994, as amended. If additional universal wastes, hazardous materials, and other regulated materials are discovered during demolition

activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, these materials shall be characterized (as necessary) and properly removed in accordance with the above-mentioned regulations.

If you have any questions or concerns regarding the above information please contact us at 517-316-9232.

Sincerely,



Kory McKay  
Environmental Scientist  
Accreditation Number A47903



Charlie Bush  
Senior Project Manager  
Accreditation Number A34293

Attachments

FIGURE



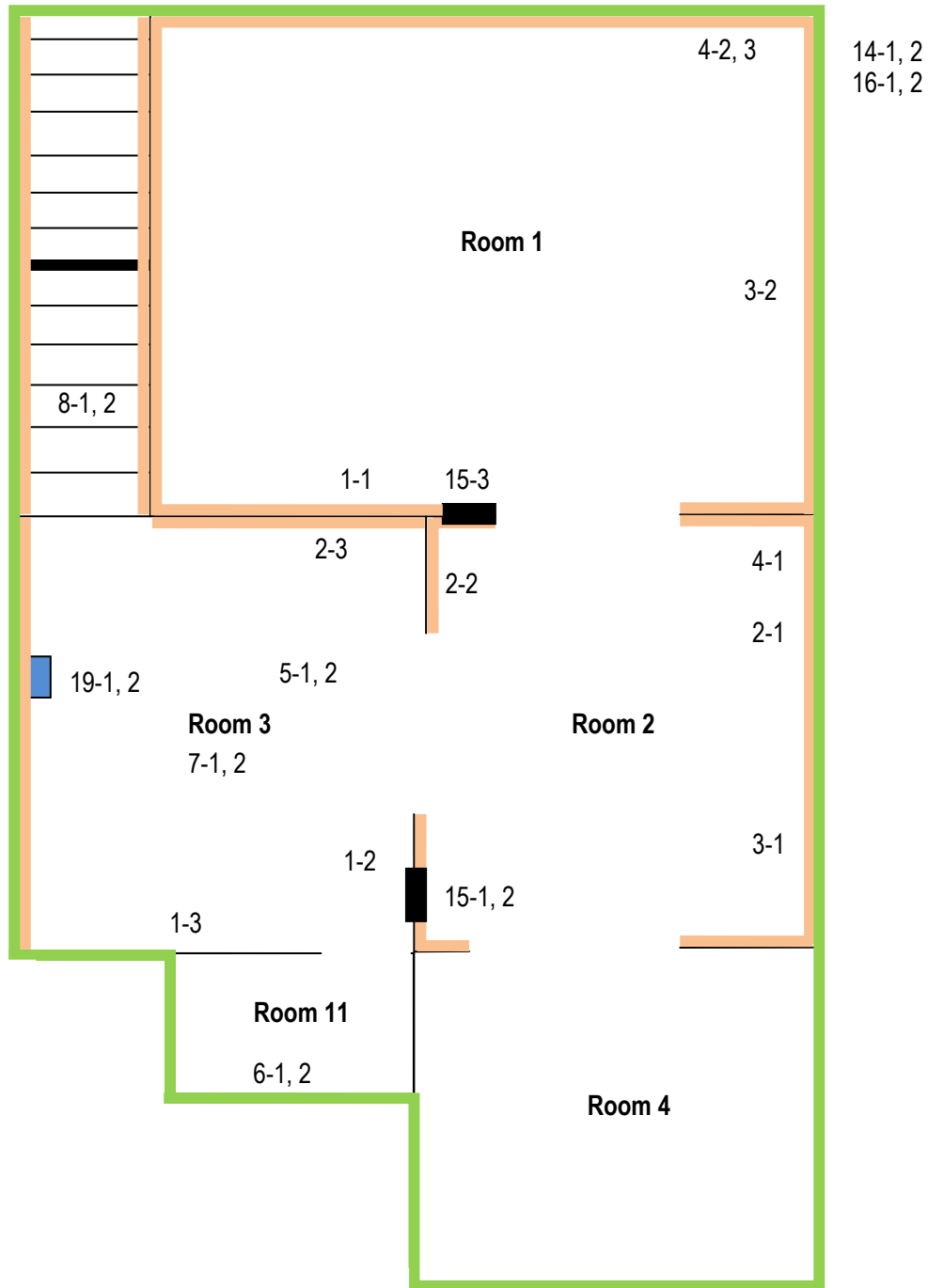



Address: 1001 N Pine St


Date: December 21, 2017

Drawing not to scale


1<sup>st</sup> Floor



 = Plaster Walls and Ceilings (4,250 SF)

 = Siding (3,000 SF)

 = Sink under coating (3 SF)

 = Vent with wrap (240 SF)

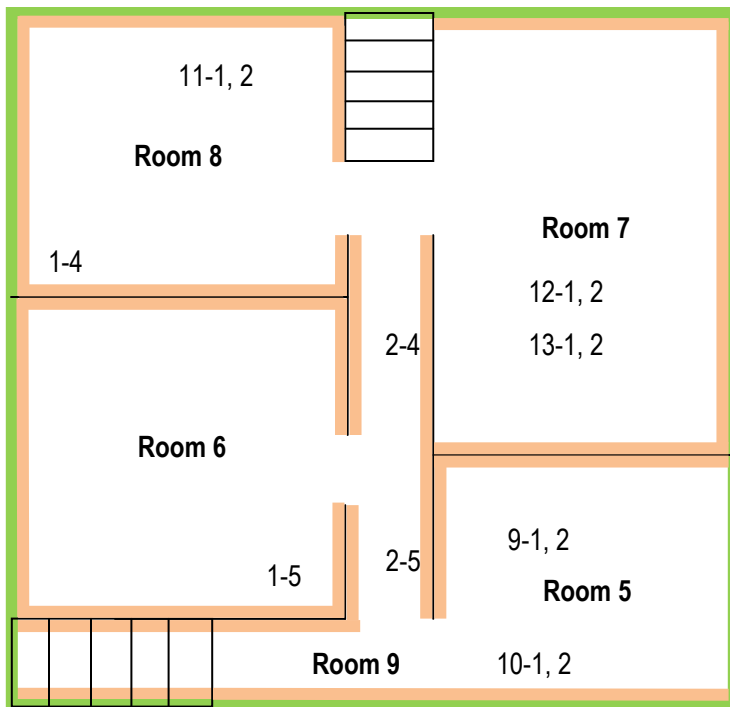
#-# = Asbestos Sample

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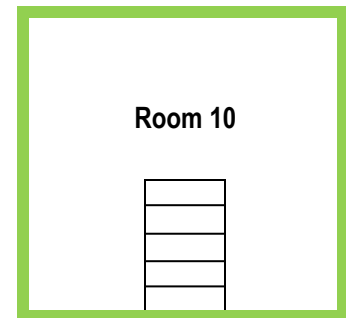
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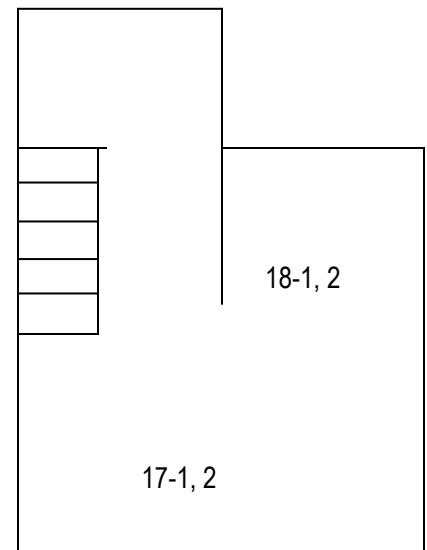
2<sup>nd</sup> Floor





3<sup>rd</sup> Floor



Basement



 = Plaster Wall and Ceiling (4,250 SF)

 = Siding (3,000 SF)

#-# = Asbestos Sample

TABLES



**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		1001 N Pine St								
Survey Date		December 19, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-1	1	AS 1-1	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	1750 SF
RM-3	1	AS 1-2	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	1750 SF
RM-3	1	AS 1-3	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	1750 SF
RM-8	2	AS 1-4	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	1750 SF
RM-6	2	AS 1-5	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	1750 SF
RM-2	1	AS 2-1	HA-2	Plaster	Non-Friable	Good	Miscellaneous	Yes	NA	4250 SF
RM-2	1	AS 2-2	HA-2	Plaster	Non-Friable	Good	Miscellaneous	Yes	NA	4250 SF
RM-3	1	AS 2-3	HA-2	Plaster	Non-Friable	Good	Miscellaneous	Yes	NA	4250 SF
RM-9	2	AS 2-4	HA-2	Plaster	Non-Friable	Good	Miscellaneous	Yes	NA	4250 SF
RM-9	2	AS 2-5	HA-2	Plaster	Non-Friable	Good	Miscellaneous	Yes	1.75% Chrysotile	4250 SF
RM-2	1	AS 3-1	HA-3	Window glaze	Non-Friable	Good	Miscellaneous	No	No	210 SF
RM-1	1	AS 3-2	HA-3	Window glaze	Non-Friable	Good	Miscellaneous	No	No	210 SF
RM-2	1	AS 4-1	HA-4	Textured ceiling	Friable	Good	Miscellaneous	No	No	366 SF
RM-1	1	AS 4-2	HA-4	Textured ceiling	Friable	Good	Miscellaneous	No	No	366 SF
RM-1	1	AS 4-3	HA-4	Textured ceiling	Friable	Good	Miscellaneous	No	No	366 SF

**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		1001 N Pine St								
Survey Date		December 19, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-3	1	AS 5-1	HA-5	Tan flooring	Non-Friable	Good	Miscellaneous	No	No	150 SF
RM-3	1	AS 5-2	HA-5	Tan flooring	Non-Friable	Good	Miscellaneous	No	No	150 SF
RM-11	1	AS 6-1	HA-6	Faux wood tile	Non-Friable	Good	Miscellaneous	No	No	40 SF
RM-11	1	AS 6-2	HA-6	Faux wood tile	Non-Friable	Good	Miscellaneous	No	No	40 SF
RM-3	1	AS 7-1	HA-7	Faux stone Linoleum	Non-Friable	Good	Miscellaneous	No	No	150 SF
RM-3	1	AS 7-2	HA-7	Faux stone Linoleum	Non-Friable	Good	Miscellaneous	No	No	150 SF
Basement	B	AS 8-1	HA-8	Linoleum sandwich	Non-Friable	Good	Miscellaneous	No	No	50 SF
Basement	B	AS 8-2	HA-8	Linoleum sandwich	Non-Friable	Good	Miscellaneous	No	No	50 SF
RM-5	2	AS 9-1	HA-9	White linoleum	Non-Friable	Good	Miscellaneous	No	No	120 SF
RM-5	2	AS 9-2	HA-9	White linoleum	Non-Friable	Good	Miscellaneous	No	No	120 SF
RM-5	2	AS 10-1	HA-10	Blue tile	Non-Friable	Good	Miscellaneous	No	No	120 SF
RM-5	2	AS 10-2	HA-10	Blue tile	Non-Friable	Good	Miscellaneous	No	No	120 SF
RM-8	2	AS 11-1	HA-11	Blue Linoleum	Non-Friable	Good	Miscellaneous	No	No	120 SF
RM-8	2	AS 11-2	HA-11	Blue Linoleum	Non-Friable	Good	Miscellaneous	No	No	120 SF
RM-7	2	AS 12-1	HA-12	Gray tile	Non-Friable	Good	Miscellaneous	No	No	200 SF

**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		1001 N Pine St								
Survey Date		December 19, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-7	2	AS 12-2	HA-12	Gray tile	Non-Friable	Good	Miscellaneous	No	No	200 SF
RM-7	2	AS 13-1	HA-13	Cream Linoleum	Non-Friable	Good	Miscellaneous	No	No	200 SF
RM-7	2	AS 13-2	HA-13	Cream Linoleum	Non-Friable	Good	Miscellaneous	No	No	200 SF
Roof	E	AS 14-1	HA-14	Shingles	Non-Friable	Good	Miscellaneous	No	No	700 SF
Roof	E	AS 14-2	HA-14	Shingles	Non-Friable	Good	Miscellaneous	No	No	700 SF
RM-2	1	AS 15-1	HA-15	Vent wrap	Friable	Good	Miscellaneous	Yes	NA	240 SF
RM-2	1	AS 15-2	HA-15	Vent wrap	Friable	Good	Miscellaneous	Yes	NA	240 SF
RM-1	1	AS 15-3	HA-15	Vent wrap	Friable	Good	Miscellaneous	Yes	45% Chrysotile	240 SF
Exterior	E	AS 16-1	HA-16	Siding	Non-Friable	Good	Miscellaneous	Yes	35% Chrysotile	3000 SF
Exterior	E	AS 16-2	HA-16	Siding	Non-Friable	Good	Miscellaneous	Yes	NA	3000 SF
Basement	B	AS 17-1	HA-17	Basement cement floor	Non-Friable	Good	Miscellaneous	No	No	400 SF
Basement	B	AS 17-2	HA-17	Basement cement floor	Non-Friable	Good	Miscellaneous	No	No	400 SF
Basement	B	AS 18-1	HA-18	Stack Cement	Non-Friable	Good	Miscellaneous	No	No	4 SF
Basement	B	AS 18-2	HA-18	Stack Cement	Non-Friable	Good	Miscellaneous	No	No	4 SF
RM-3	1	AS 19-1	HA-19	Sink under coating	Non-Friable	Good	Miscellaneous	Yes	1.75% Chrysotile	3 SF
RM-3	1	AS 19-2	HA-19	Sink under coating	Non-Friable	Good	Miscellaneous	Yes	NA	3 SF

Table 2  
 Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory  
 1001 N Pine St  
 Lansing, Ingham County, Michigan

<b>Universal Waste Inventory</b>		
Location	Type of Waste	Approximate Quantity
RM-2, RM-8	Television	3
RM-1	Thermostat	1
RM-2, Basement	Smoke detector	2
RM-3	CFL bulb	1
<b>Hazardous Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
RM-5	1 Gallon bleach	1
RM-3	1 Gallon pesticide	1
RM-7	1 Gallon paint can	4
Roof	5 Gallon container unknown contents	1
<b>Other Regulated Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
-	-	-

**ATTACHMENT A**

**PHOTO LOG**





Property Photos



1001 N Pine St, Front of House



Back of House

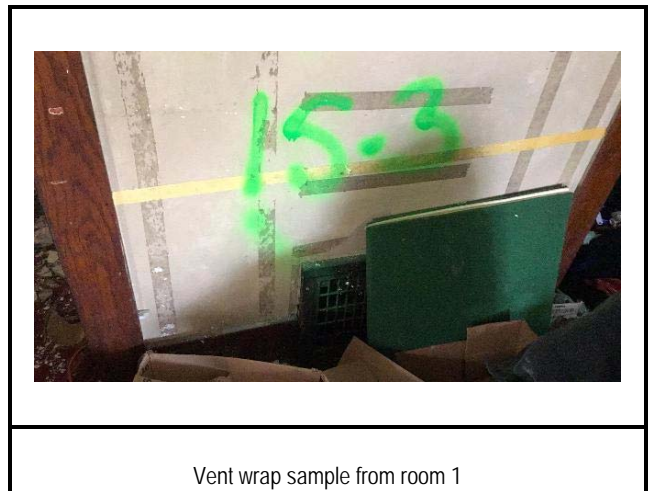
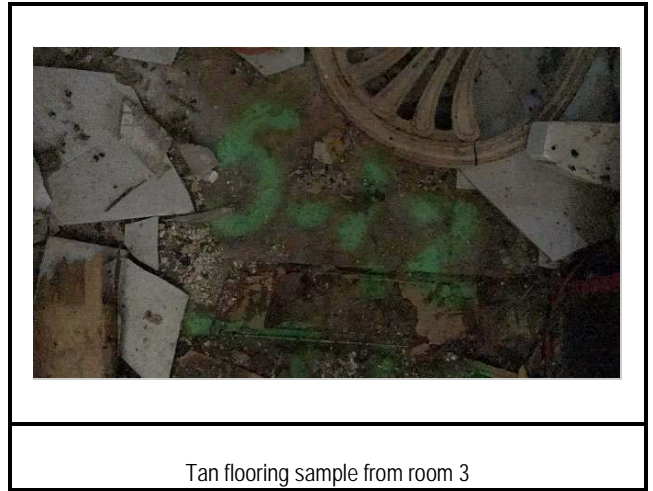
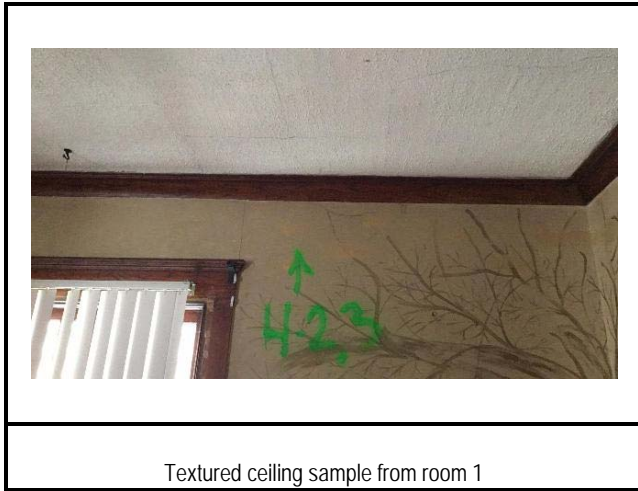
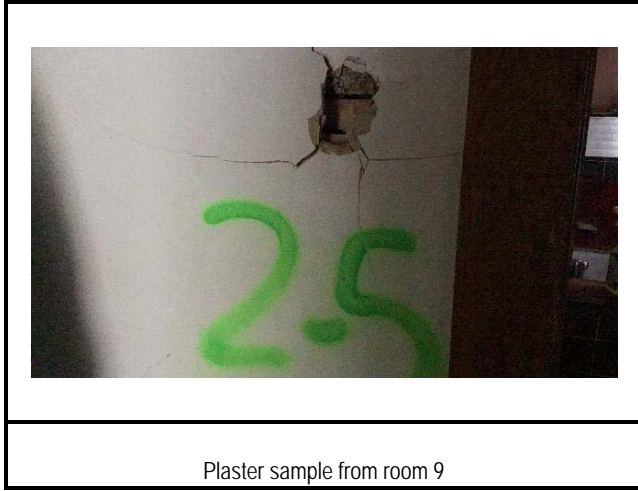


Side of House



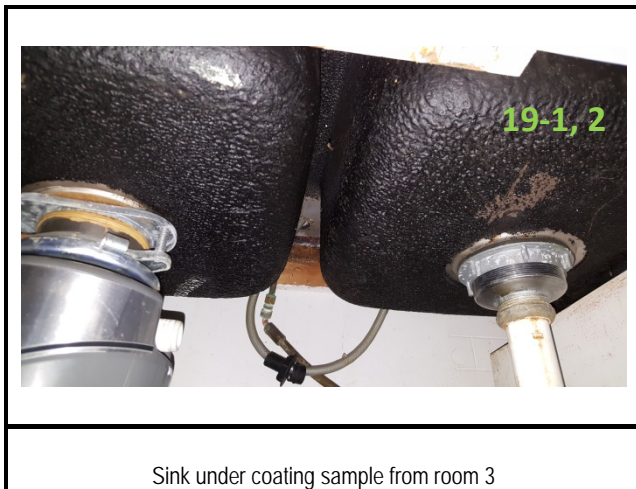
Side of House

Sample Photos





Sample Photos



# ATTACHMENT B

## LIMITATIONS





## REGULATED MATERIALS SURVEY LIMITATIONS

The Mannik & Smith Group, Inc. (MSG) performed its services associated with this Regulated Materials Survey (RMS) in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763, Occupational Safety and Health Administration (OHSA) 29 CFR 1926.62, and in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. This RMS and related documentation are site-specific, which means they pertain to the conditions of the site surveyed.

Unless otherwise noted, MSG's RMS is limited to accessible areas. Areas determined to be not structurally sound, safely reached, limited by excessive accumulated obstructions, require specialized equipment to access, in operable windows, etc., are not included in this survey. There may be areas where regulated materials, such as suspected asbestos-containing materials (SACM) and lead containing paint cannot be viewed and/or tested. MSG shall not be responsible for identifying all SACM, lead containing paint, or other hazardous materials located in inaccessible locations, including but not limited to, above a plaster ceiling, behind a wall, embedded in concrete, buried, confined spaces, unsafe areas, or otherwise not readily identifiable.

Destructive sampling will only be conducted when permission has been granted by the owner. Destructive survey locations are limited to areas where hidden SACM, lead containing paint, or other hazardous materials is reasonably thought to be present and sampling can be conducted in a safe manner. If regulated materials are found during the course of demolition and/or renovation activities that are not listed in this report, the material should be assumed as asbestos-containing, lead containing, or hazardous until it can be sampled and analyzed at an accredited laboratory and safe work practices should always be used if those areas are to be disturbed.

MSG has prepared a logical assessment program to reduce the client's risk of discovering unknown regulated materials and/or hazardous substances. The presence of subsurface regulated materials and/or hazardous substances is based solely on surface observations and/or information provided by others. Descriptions of subsurface conditions provided in this report are not warranted to be complete or accurate. This risk may be reduced by more extensive exploration on the site, but even with additional exploration, it is not possible to completely eliminate the risk of discovering regulated materials and/or hazardous conditions. It cannot and should not be assumed that samples collected and conditions observed at the time of the RMS are representative of an area that has not been sampled and/or tested.

In preparing this report, MSG may have relied on information obtained from or provided by others. MSG makes no representation or warranty regarding the accuracy or completeness of this information gathered through outside sources or subcontracted services. No warranty, guarantee, or certification of any kind, expressed or implied, at common law or created by statute, is extended, made, or intended by rendering these environmental consulting services or by furnishing this written report. Environmental conditions and regulations are subject to constant change and reinterpretation. One should not assume that any on-site conditions and/or regulatory statutes or rules will remain constant after MSG has completed the scope of work for this project. Furthermore, because the facts stated in this report are subject to professional interpretation, differing conclusions could be reached by other environmental professionals.

The report is intended to offer support to a building owner, construction manager, general contractor, abatement contractor, architect, and/or other parties authorized by the owner in generally locating asbestos-containing materials (ACM), lead containing paint, universal and hazardous wastes, and/or other regulated materials. This report does not have the required components to serve as an Asbestos Project Design document, Asbestos and/or Lead Containing Paint Abatement Work Plan, and/or a Health and Safety Plan. Therefore, this report should not be utilized as a project specification document. The results, findings, conclusions, and recommendations expressed in

this report are based only on conditions that were noted during this survey. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated. Quantities have been conservatively estimated and sampling locations have been described representatively; however, current site conditions should be field-verified by contractors bidding on and/or prior to abatement work.

**ATTACHMENT C**

**ANALYTICAL REPORTS AND CHAINS OF CUSTODY**





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1001 N. Pine St.  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73861  
Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 01 Cust. #: AS 9-1 Material: White Linoleum Location: Room 5 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 20% Other - 65%
Lab ID #: 73861 - 02 Cust. #: AS 9-2 Material: White Linoleum Location: Room 5 Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 20% Other - 65%
Lab ID #: 73861 - 02a Cust. #: AS 9-2 Material: Mastic Location: Room 5 Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1001 N. Pine St.  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73861  
Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 03 Cust. #: AS 10-1 Material: Blue Tile Location: Room 5 Appearance: brown, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 73861 - 03a Cust. #: AS 10-1 Material: Mastic Location: Room 5 Appearance: brown, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73861 - 04 Cust. #: AS 10-2 Material: Blue Tile Location: Room 5 Appearance: brown, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 04a Cust. #: AS 10-2 Material: Mastic Location: Room 5 Appearance: brown, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73861 - 05 Cust. #: AS 2-5 Material: Plaster - Base Coat Location: Room 9 Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 1.75%  <b>POINT COUNT RESULT</b>	Cellulose - 2% Other - 96.25%
Lab ID #: 73861 - 06 Cust. #: AS 1-5 Material: Drywall Location: Room 6 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Other - 85%

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Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 07 Cust. #: AS 1-4 Material: Drywall Location: Room 8 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Other - 85%
Lab ID #: 73861 - 08 Cust. #: AS 11-1 Material: Blue Linoleum Location: Room 8 Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 25% Other - 75%
Lab ID #: 73861 - 09 Cust. #: AS 11-2 Material: Blue Linoleum Location: Room 8 Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%

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Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 10 Cust. #: AS 2-4 Material: Plaster Location: Room 9 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73861 - 11 Cust. #: AS 12-1 Material: Gray Tile/Backing Location: Room 7 Appearance: black, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Other - 85%
Lab ID #: 73861 - 11a Cust. #: AS 12-1 Material: Mastic Location: Room 7 Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 12 Cust. #: AS 12-2 Material: Gray Tile/Backing Location: Room 7 Appearance: black, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73861 - 12a Cust. #: AS 12-2 Material: Mastic Location: Room 7 Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73861 - 13 Cust. #: AS 13-1 Material: Cream Linoleum Location: Room 7 Appearance: grey, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 13a Cust. #: AS 13-1 Material: Mastic Location: Room 7 Appearance: beige, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73861 - 14 Cust. #: AS 13-2 Material: Cream Linoleum Location: Room 7 Appearance: grey, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73861 - 14a Cust. #: AS 13-2 Material: Mastic Location: Room 7 Appearance: beige, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 15 Cust. #: AS 1-1 Material: Drywall Location: Room 7 Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Other - 85%
Lab ID #: 73861 - 15a Cust. #: AS 1-1 Material: Joint Compound Location: Room 7 Appearance: beige, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73861 - 16 Cust. #: AS 15-3 Material: Vent Wrap Location: Room 1 Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 45%	Other - 55%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 17 Cust. #: AS 3-2 Material: Window Glaze Location: Room 1 Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 73861 - 18 Cust. #: AS 4-2 Material: Textured Ceiling Location: Room 1 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 73861 - 19 Cust. #: AS 4-3 Material: Textured Ceiling Location: Room 1 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%

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Date Collected: 12/19/17  
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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 20 Cust. #: AS 2-2 Material: Plaster Location: Room 2 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73861 - 21 Cust. #: AS 15-1 Material: Vent Wrap Location: Room 2 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73861 - 22 Cust. #: AS 15-2 Material: Vent Wrap Location: Room 2 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	

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Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 23 Cust. #: AS 4-1 Material: Textured Ceiling Location: Room 2 Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 73861 - 24 Cust. #: AS 2-1 Material: Plaster Location: Room 2 Appearance: Layer: of	Asbestos Present:  <b>NOT ANALYZED</b>	
Lab ID #: 73861 - 25 Cust. #: AS 3-1 Material: Window Glaze Location: Room 2 Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%

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Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 26 Cust. #: AS 5-1 Material: Tan Flooring Location: Room 3 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Other - 85%
Lab ID #: 73861 - 26a Cust. #: AS 5-1 Material: Mastic Location: Room 3 Appearance: brown, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 73861 - 27 Cust. #: AS 5-2 Material: Tan Flooring Location: Room 3 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Other - 85%

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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 27a Cust. #: AS 5-2 Material: Mastic Location: Room 3 Appearance: brown, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 73861 - 28 Cust. #: AS 7-1 Material: Faux Stone Linoleum Location: Room 3 Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73861 - 29 Cust. #: AS 7-2 Material: Faux Stone Linoleum Location: Room 3 Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 30 Cust. #: AS 1-2 Material: Drywall Location: Room 3 Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Other - 85%
Lab ID #: 73861 - 30a Cust. #: AS 1-2 Material: Joint Compound Location: Room 3 Appearance: beige, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73861 - 31 Cust. #: AS 1-3 Material: Drywall Location: Room 3 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Other - 85%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 32 Cust. #: AS 2-3 Material: Plaster Location: Room 3 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73861 - 33 Cust. #: AS 8-1 Material: Linoleum Location: Basement Appearance: black, fibrous, nonhomogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73861 - 33a Cust. #: AS 8-1 Material: Linoleum Location: Basement Appearance: black, fibrous, nonhomogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 33b Cust. #: AS 8-1 Material: Mastic Location: Basement Appearance: red,nonfibrous,homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73861 - 34 Cust. #: AS 8-2 Material: Linoleum Location: Basement Appearance: black,fibrous,homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73861 - 34a Cust. #: AS 8-2 Material: Mastic Location: Basement Appearance: yellow,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1001 N. Pine St.  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73861  
Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 34b Cust. #: AS 8-2 Material: Linoleum Location: Basement Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73861 - 34c Cust. #: AS 8-2 Material: Mastic Location: Basement Appearance: red, nonfibrous, homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73861 - 35 Cust. #: AS 6-1 Material: Faux Wood Tile Location: Room 11 Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1001 N. Pine St.  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73861  
Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 35a Cust. #: AS 6-1 Material: Mastic Location: Room 11 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73861 - 36 Cust. #: AS 6-2 Material: Faux Wood Tile Location: Room 11 Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73861 - 36a Cust. #: AS 6-2 Material: Mastic Location: Room 11 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1001 N. Pine St.  
Project # I1440002

**Report To:**  
Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73861  
Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 37 Cust. #: AS 14-1 Material: Shingles Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Other - 90%
Lab ID #: 73861 - 38 Cust. #: AS 14-2 Material: Shingles Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Other - 85%
Lab ID #: 73861 - 38a Cust. #: AS 14-2 Material: Tar Location: Roof Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1001 N. Pine St.  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73861  
Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 39 Cust. #: AS 16-1 Material: Siding Location: Exterior Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 35%	Other - 65%
Lab ID #: 73861 - 40 Cust. #: AS 16-2 Material: Siding Location: Exterior Appearance: Layer: of	Asbestos Present:  <b>NOT ANALYZED</b>	
Lab ID #: 73861 - 41 Cust. #: AS 17-1 Material: Basement Cement Floor Location: Basement Appearance: grey, nonfibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1001 N. Pine St.  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73861  
Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 42 Cust. #: AS 17-2 Material: Basement Cement Floor Location: Basement Appearance: grey, nonfibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73861 - 43 Cust. #: AS 18-1 Material: Stack Cement Location: Basement Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 73861 - 44 Cust. #: AS 18-2 Material: Stack Cement Location: Basement Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1001 N. Pine St.  
Project # I1440002

**Report To:**  
Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73861  
Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73861 - 45 Cust. #: AS 19-1 Material: Sink Undercoating Location: Room 3 Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 1.75%  POINT COUNT RESULT	Cellulose - 2% Other - 96.25%
Lab ID #: 73861 - 46 Cust. #: AS 19-2 Material: Sink Undercoating Location: Room 3 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

Apex # **73861**

**APEX Research, Inc.**

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: **2193 Association Drive, Suite 200**  
 City, St., Zip: **Okemos, MI, 48864**  
 Phone: **(517) 316-9232** Fax: **(517) 316-9233**

Date of Survey: **12/19/2017 5:00**  
 Project: **1001 N PINE ST**  
 Project #: **I1440002**  
 Contact Person: **Charlie Bush**  
 Email: **cbush@manniksmithgroup.com**

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) *Terms and conditions on the other side.*

Rush  24 Hour  
 48 Hour  **72 Hour**  
 Other: \_\_\_\_\_ TTP  yes /  no  
 (Test Till Positive)

Samples received after 3pm  
 logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	AS 9-1	RM-5 - White linoleum	Bag	HA-9	
2	AS 9-2	RM-5 - White linoleum	Bag	HA-9	
3	AS 10-1	RM-5 - Blue tile	Bag	HA-10	
4	AS 10-2	RM-5 - Blue tile	Bag	HA-10	
5	AS 2-5	RM-9 - Plaster	Bag	HA-2	
6	AS 1-5	RM-6 - Drywall	Bag	HA-1	
7	AS 1-4	RM-8 - Drywall	Bag	HA-1	
8	AS 11-1	RM-8 - Blue Linoleum	Bag	HA-11	
9	AS 11-2	RM-8 - Blue Linoleum	Bag	HA-11	
10	AS 2-4	RM-9 - Plaster	Bag	HA-2	
11	AS 12-1	RM-7 - Gray tile	Bag	HA-12	
12	AS 12-2	RM-7 - Gray tile	Bag	HA-12	

Relinquished By: [Signature]  
 Date: 12/21/17

Received By: [Signature]  
 Time/Date: 12/21/17

Relinquished By: \_\_\_\_\_ Received By: \_\_\_\_\_  
 Date: \_\_\_\_\_ Time/Date: \_\_\_\_\_

**APEX RESEARCH**

73861

### APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**

Address: **2193 Association Drive, Suite 200**

City, St., Zip: **Okemos, MI, 48864**

Phone: **(517) 316-9232** Fax: **(517) 316-9233**

Date of Survey: **12/19/2017 5:00**

Project: **1001 N PINE ST**

Project #: **I1440002**

Contact Person: **Charlie Bush**

Email: **cbush@manniksmithgroup.com**

Lab Use Only

Log-In: \_\_\_\_\_

Report: \_\_\_\_\_

Fax: \_\_\_\_\_

Verbal: \_\_\_\_\_

Email: \_\_\_\_\_

Turn Around Time: (circle one) \*\*\*Terms and conditions on the other side.

Rush \_\_\_\_\_ 24 Hour \_\_\_\_\_

48 Hour \_\_\_\_\_ **72 Hour**

Other: \_\_\_\_\_ TTP **yes** / no  
(Test Till Positive)

Samples received after 3pm  
logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_

TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
13	AS 13-1	RM-7 - Cream Linoleum	Bag	HA-13	
14	AS 13-2	RM-7 - Cream Linoleum	Bag	HA-13	
15	AS 1-1	RM-1 - Drywall	Bag	HA-1	
16	AS 15-3	RM-1 - Vent wrap	Bag	HA-15	
17	AS 3-2	RM-1 - Window glaze	Bag	HA-3	
18	AS 4-2	RM-1 - Textured ceiling	Bag	HA-4	
19	AS 4-3	RM-1 - Textured ceiling	Bag	HA-4	
20	AS 2-2	RM-2 - Plaster	Bag	HA-2	
21	AS 15-1	RM-2 - Vent wrap	Bag	HA-15	
22	AS 15-2	RM-2 - Vent wrap	Bag	HA-15	
23	AS 4-1	RM-2 - Textured ceiling	Bag	HA-4	
24	AS 2-1	RM-2 - Plaster	Bag	HA-2	

Relinquished By: \_\_\_\_\_

Received By: J. Hill

Relinquished By: \_\_\_\_\_ Received By: \_\_\_\_\_

Date: 12/21/17

Time/Date: 12/21/17 DEC 21 2017

Date: \_\_\_\_\_ Time/Date: \_\_\_\_\_

Revision R4 Date: May/2017

APEX RESEARCH

73861

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Customer Name: **MANNIK & SMITH GROUP**  
 Address: 2193 Association Drive, Suite 200  
 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/19/2017 5:00  
 Project: 1001 N PINE ST  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) *Terms and conditions on the other side.*

Rush \_\_\_\_\_ 24 Hour \_\_\_\_\_  
 48 Hour \_\_\_\_\_ 72 Hour  
 Other: \_\_\_\_\_ TTP yes / no  
 (Test Till Positive)  
 Samples received after 3pm  
 logged in next morning

Circle analyses required, indicate type and quantity

Asbestos:    Bulk X Wipe    Point Count    PCM     
 Lead / Cad / Chrome: Air    Paint    Wipe (ASTM)    Bulk     
 Mold: Bulk    Air    BioSIS    Tape     
 TEM: Bulk    NIOSH    EPA Level II    Other   

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
25	AS 3-1	RM-2 - Window glaze	Bag	HA-3	
26	AS 5-1	RM-3 - Tan flooring	Bag	HA-5	
27	AS 5-2	RM-3 - Tan flooring	Bag	HA-5	
28	AS 7-1	RM-3 - Faux stone Linoleum	Bag	HA-7	
29	AS 7-2	RM-3 - Faux stone Linoleum	Bag	HA-7	
30	AS 1-2	RM-3 - Drywall	Bag	HA-1	
31	AS 1-3	RM-3 - Drywall	Bag	HA-1	
32	AS 2-3	RM-3 - Plaster	Bag	HA-2	
33	AS 8-1	Basement - Linoleum sandwich	Bag	HA-8	
34	AS 8-2	Basement - Linoleum sandwich	Bag	HA-8	
35	AS 6-1	RM-11 - Faux wood tile	Bag	HA-6	
36	AS 6-2	RM-11 - Faux wood tile	Bag	HA-6	

Relinquished By: [Signature]  
 Date: 12/21/17

Received By: [Signature]  
 Time/Date: 12/21/17

Relinquished By: \_\_\_\_\_ Received By: \_\_\_\_\_  
 Date: \_\_\_\_\_ Time/Date: \_\_\_\_\_

RECEIVED  
 DEC 21 2017  
 APEX RESEARCH



73861

**APEX Research, Inc.**

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Date of Survey: 12/19/2017 5:00  
 Project: 1001 N PINE ST  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) Terms and conditions on the other side.

Rush 24 Hour  
 48 Hour **72 Hour**  
 Other: TTP **yes** / no  
 (Test Till Positive)

Samples received after 3pm  
 logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
37	AS 14-1	Roof - Shingles	Bag	HA-14	
38	AS 14-2	Roof - Shingles	Bag	HA-14	
39	AS 16-1	Exterior - Siding	Bag	HA-16	
40	AS 16-2	Exterior - Siding	Bag	HA-16	
41	AS 17-1	Basement - Basement cement floor	Bag	HA-17	
42	AS 17-2	Basement - Basement cement floor	Bag	HA-17	
43	AS 18-1	Basement - Stack Cement	Bag	HA-18	
44	AS 18-2	Basement - Stack Cement	Bag	HA-18	
45	AS 19-1	RM-3 - Sink under coating	Bag	HA-19	
46	AS 19-2	RM-3 - Sink under coating	Bag	HA-19	

RECEIVED

Relinquished By: *[Signature]*  
 Date: 12/21/17

Received By: *[Signature]*  
 Time/Date: 12/21/17 DEC 21 2017

Relinquished By: \_\_\_\_\_ Received By: \_\_\_\_\_  
 Date: \_\_\_\_\_ Time/Date: \_\_\_\_\_

**ATTACHMENT D**

**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH**



# NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
(MDEQ) AIR QUALITY DIVISION  
NESHAP, 40 CFR Part 61, Subpart M



MICHIGAN DEPARTMENT OF LICENSING AND  
REGULATORY AFFAIRS (LARA), ASBESTOS PROGRAM,  
P.A. 135 OF 1986, AS AMENDED, Section 220 (1-4) or (8)

### DEQ/LARA USE ONLY

Postmark Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Rec'd Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Emergency Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Valid No. \_\_\_\_\_

OK  Send Def Ltr. Date of Def Ltr. \_\_\_\_/\_\_\_\_/\_\_\_\_

FOLLOW UP \_\_\_\_/\_\_\_\_/\_\_\_\_ Spoke w/ \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Notification No. \_\_\_\_\_ Trans No. \_\_\_\_\_

#### Calculate LARA Asbestos Project Fee: (1% Project Fee)

Total Project Cost: \_\_\_\_\_ x 0.01 = \_\_\_\_\_

Type of Contractor: \_\_\_\_\_ License No.: \_\_\_\_\_

Licensing Authority: \_\_\_\_\_

#### 1. NOTIFICATION:

Date of Notification: \_\_\_\_\_

Date of Revision(s): \_\_\_\_\_

Notification Type:  Original  Revised  Canceled  Annual

#### Mark appropriate boxes: (both DEQ and LARA may apply):

##### DEQ (NESHAP) [260 ln. ft./160 sq. ft. or more is threshold]

Planned Renovation – 10 **working** days notice

Emergency Renovation

Scheduled Demolition – 10 **working** days notice

Intentional Burn – 10 **working** days notice

Ordered Demolition

##### LARA (MIOSHA) [Will not accept annual notifications]

Demo, Reno, Encap. (>10 ln. ft./15 sq. ft.) 10 **calendar** days notice

Emergency Renovation/Encapsulation

#### 2. PROJECT SCHEDULE:

**START DATE**                      **END DATE**

\* Renovation                      \_\_\_\_\_                      \_\_\_\_\_

+Asb. Removal                      \_\_\_\_\_                      \_\_\_\_\_

+Demolition:                      \_\_\_\_\_                      \_\_\_\_\_

Encapsulation:                      \_\_\_\_\_                      \_\_\_\_\_

**Work Schedule:** Please indicate the anticipated days of the week and work hours for the purpose of scheduling a compliance inspection.

**Days of the Week**                      **Work Hours**

Asb. Removal:                      \_\_\_\_\_                      \_\_\_\_\_

Demolition:                      \_\_\_\_\_                      \_\_\_\_\_

Encapsulation:                      \_\_\_\_\_                      \_\_\_\_\_

\* Includes setup, build enclosure, asbestos removal, demobilizing, etc.

+Include **only** those dates you are conducting asbestos removal/demo.

Check here if this is a multi-phased project, attach a schedule showing the start/end date of each phase.

#### 3. ABATEMENT CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

#### 4. DEMOLITION CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

#### 5. FACILITY OWNER: ("Facility" includes Bridges)

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

#### 6. FACILITY DESCRIPTION:

Facility Name: \_\_\_\_\_

Location Address/Description: \_\_\_\_\_

\_\_\_\_\_ If Apt. # of units: \_\_\_\_\_

City/Twp. \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

County: \_\_\_\_\_ Nearest Crossroad: \_\_\_\_\_

Size: (sq. ft.) \_\_\_\_\_ No. of Floors: \_\_\_\_\_ Floor No.: \_\_\_\_\_

Age: \_\_\_\_\_ Present Use: \_\_\_\_\_ Prior Use: \_\_\_\_\_

Specific Location(s) in Facility: \_\_\_\_\_

#### 7. DISPOSAL SITE:

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

Location Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

#### 8. WASTE TRANSPORTER 1:

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

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

#### WASTE TRANSPORTER 2:

#### 9. ORDERED DEMOLITIONS: (See NESHAP regulations for definition of "Ordered Demolition.") A copy of the official Order must accompany this notification.

Gov't Agency Ordering Demo: \_\_\_\_\_

Name/Title of Person Signing Order: \_\_\_\_\_

Date of Order: \_\_\_\_\_ Date Ordered to Begin: \_\_\_\_\_

#### 10. IS ASBESTOS PRESENT? Yes No

To be removed prior to demolition

**Estimate the amount of asbestos:** Include RACM (Regulated Asbestos Containing Material) to be removed, encapsulated, etc. Also include the amount and type (floor tile, roofing, etc.) of non-friable Category I and/or Category II ACM that **will not** be removed prior to demolition. (**NOTE:** In a demolition, cementitious ACM **cannot** remain in a structure, as it is likely to become regulated in the demolition/handling process. It **must** be removed prior to demolition.)

RACM to be Removed

RACM to be Encapsulated

Non-friable ACM **not** removed prior to demo.

Category I

Category II

Units of Measure

				<input type="checkbox"/> Ln. Ft.	<input type="checkbox"/> Ln. M.
				<input type="checkbox"/> Sq. Ft.	<input type="checkbox"/> Sq. M.
				<input type="checkbox"/> Cu. Ft.*	<input type="checkbox"/> Cu. M.*

\*Volume (cubic ft./meters) should be used only if unable to measure by linear/square measure (example: asbestos has fallen off of surface).

(continued on reverse side)

**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH (continued)**

**11. PROJECT DESCRIPTION:** Complete **A) for Renovation** (asbestos removal/encapsulation) and/or **B) for Demolition**:

**A) RENOVATION:** Mark all surfaces/types of RACM to be removed:

- Piping     Fittings     Boiler(s)     Tanks(s)  
 Beam(s)     Duct(s)     Tunnel(s)     Ceiling Tile(s)  
 Mag Block     Other (describe) \_\_\_\_\_

**Encapsulation (for LARA):** Mark surfaces/types to be encapsulated:

- Piping     Fittings     Boiler(s)     Tank(s)  
 Beam(s)     Duct(s)     Tunnel(s)     Ceiling Tile(s)  
 Other (describe) \_\_\_\_\_

**Method of removal:** Describe how the asbestos will be removed from the surface (example: glove bag, scrape with hand tools, cut in sections and carefully lower, etc.): \_\_\_\_\_  
 \_\_\_\_\_

**B) DEMOLITION:** Describe the method of demolition of facility, bridge, etc., and indicate if complete or partial. If partial, describe which part of facility bridge, etc., will be demolished: \_\_\_\_\_  
 \_\_\_\_\_

**12. ENGINEERING CONTROLS:** Describe work practices and engineering controls used to prevent visible emissions before, during, and after removal, and until proper disposal: \_\_\_\_\_  
 \_\_\_\_\_

**13. UNEXPECTED ASBESTOS:** Describe the steps you intend to follow in the event that unexpected RACM is found or previously non-friable asbestos becomes friable (crumbled, pulverized, reduced to powder, etc.) and therefore regulated: \_\_\_\_\_  
 \_\_\_\_\_

**14. PROCEDURE(S) USED TO DETECT THE PRESENCE OF ASBESTOS:** **A)** Indicate how you determined whether or not asbestos is in the facility. If analytical sampling was used, describe method of analysis. (The determination of the presence or absence of asbestos must be made prior to submitting a renovation/demolition notification.): \_\_\_\_\_  
 \_\_\_\_\_

**B)** Name, address, and phone number of company performing asbestos survey: \_\_\_\_\_

**C)** Name, accreditation number of inspector, and date of inspection: \_\_\_\_\_

**15. EMERGENCY RENOVATIONS:** Date/time of emergency: \_\_\_\_\_ Describe the sudden, unexpected event: \_\_\_\_\_  
 \_\_\_\_\_

Explain how the event caused unsafe conditions, and/or would cause equipment damage and/or an unreasonable financial burden: \_\_\_\_\_  
 \_\_\_\_\_

**16.** I certify that an individual trained in the provisions of 40 CFR Part 61, Subpart M, will be on-site during the renovation and during demolition involving RACM above the threshold and/or during an ordered demolition. Evidence that this person has completed the required training will be available for inspection at the renovation or demolition site.

\_\_\_\_\_  
*Signature of Owner or Abatement Contractor      Date*

\_\_\_\_\_  
*Signature of Owner or Demolition Contractor      Date*

**17. Signature Requirements for Projects with Negative Pressure Enclosures: (required by LARA)**  
**Per Section 221(1)(2) of P.A. 135 of 1986, as amended, clearance air monitoring is required for any asbestos abatement project involving 10 linear feet/15 square feet or more of friable material which is performed within a negative pressure enclosure. I (the building owner or lessee) have been advised by the contractor of my responsibility under Act 135 to have clearance air monitoring performed on this project.**

\_\_\_\_\_  
*Signature of Building Owner or Lessee      Date*

\_\_\_\_\_  
*Signature of Asbestos Abatement Contractor Representative      Date*

**NOTE:** It is not mandatory that a signed copy be sent to LARA unless requested. For affected projects, this section of the notification form must be completed, signed, and made part of your records before the project begins.

**18. I certify that the above information is correct:**

\_\_\_\_\_  
*Printed Name of Owner/Operator      Date*

\_\_\_\_\_  
*Signature of Owner/Operator      Date*

**MAILING ADDRESSES/PHONE NUMBERS:** (See Item 1 to determine which agency requirements/regulations are applicable to your project.)

For **Public Act 135 of 1986, as amended, Section 220 (1-4) or (8)**, mail to address below. For more info visit:  
<http://www.michigan.gov/asbestos>

MIOSHA Asbestos Program  
 LARA, CSHD  
 P.O. Box 30671  
 Lansing, MI 48909-8171

517.636.4551 (office), 517.322.1713 (fax)

For **NESHAP Demolitions/Renovations, 40 CFR, Part 61, Subpart M**, please use the e-submittal process. For more information visit <http://www.michigan.gov/air>, under Air Links click on Asbestos NESHAP Program.

NESHAP Asbestos Program  
 DEQ, AQD  
 P.O. Box 30260  
 Lansing, MI 48909-7760

517.284.6777 (Office)



December 28, 2017

Ms. Roxanne Case  
 Grant Manager  
 Ingham County Land Bank  
 3024 Turner Street  
 Lansing, Ingham County, Michigan 48906

Re: Pre-Demolition Regulated Materials Survey  
 635 Brook St, Lansing, Ingham County, MI

Dear Ms. Case:

The Mannik & Smith Group, Inc. (MSG) is pleased to present Ingham County with the results of the limited pre-demolition regulated materials survey (RMS) performed at 635 Brook St, Lansing, Ingham County, Michigan (hereinafter referred to as the "Site") by Kory McKay (Accreditation Number A47903).

**SUMMARY**

Building Information	
Property Address	635 Brook St, Lansing, MI
Parcel #	33-01-01-09-352-001
No. Stories	2
Square Footage (approx.)	1,150 SF
Siding	Wood
Basement	Yes
Garage	No



Asbestos Containing Material				
Location	Material Group	Friable/Non Friable	Asbestos	Quantity
RM-8	Gold tile	Non friable	5% Chrysotile	85
RM-7, RM-8	Vent wrap	Friable	40% Chrysotile	200 SF
RM-2, RM-9	Multicolored linoleum	Non friable	20% Chrysotile	100 SF
Exterior	Siding	Non friable	15% Chrysotile	900 SF

Hazardous Materials		
Location	Material Description	Quantity
Basement	Fuel tank 150 gallon empty	1
Basement	Spray paint can	5
Basement	1 Gallon paint stripper	1

TECHNICAL SKILL.  
 CREATIVE SPIRIT.

Universal Waste Inventory		
Location	Material Description	Quantity
RM-7	Television	1
RM-4	Thermostat	1
RM-3	CFL bulb	1

## PURPOSE AND SCOPE OF WORK

The purpose of the RMS was to identify, quantify and document the location of regulated materials that may be encountered during demolition of the on-site structure. To accomplish this purpose, MSG performed the following scope of work:

- 1) Pre-demolition asbestos-containing material (ACM) survey.
- 2) Universal wastes, hazardous materials, and other regulated wastes survey.

## METHODOLOGIES

The RMS was conducted on December 13, 2017. Methodologies employed during the completion of each task of the RMS are detailed below.

### ACM Survey Procedures

The ACM survey was performed in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763. The National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations govern demolition and renovation activities in which asbestos is present. The NESHAP rule distinguishes between Regulated Asbestos-Containing Materials (RACM) that would readily release asbestos fibers when damaged or disturbed and those materials that are unlikely to result in significant fiber release during demolition activities. The purpose of this survey is to determine if ACM within the Site building are RACM and thus, subject to the NESHAP, and to comply with the Michigan Occupational Safety and Health Administration (MIOSHA) and guidelines set forth in the Occupational Safety and Health Administration (OSHA) Regulations Standards 29 CFR 1910.1101.

RACM, as defined by NESHAP, is classified into four parts, (1) friable asbestos material, (2) Category I non-friable ACM (packing, gaskets, floor tile and roofing products) that has become friable, (3) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (4) Category II non-friable ACM (all other ACM products) 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.

The suspect ACM identified during this survey was grouped into homogeneous materials (i.e. similar materials which are uniform in color and texture) and:

- Described and quantified it in linear feet (LF) or square feet (SF);
- Identified and classified as friable or non-friable;
- Assessed as being in good, fair or poor condition;
- Assigned an EPA classification type (surfacing material, thermal system insulation or miscellaneous);
- Classified as RACM or non-RACM; and
- Sampled, or identified as presumed ACM (PACM).

MSG performed services associated with the ACM survey in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. The ACM survey included a systematic visual inspection of readily accessible areas of the Site building. Destructive sampling methods were used and suspect ACM samples were collected by State of Michigan Accredited Asbestos Inspector, Kory McKay (Accreditation Number

A47903). Based on the quantity of each classification of material, MSG collected samples of each suspect ACM in accordance with EPA guidelines.

### **Universal Wastes and Hazardous Material Survey Procedures**

MSG identified and inventoried universal wastes and hazardous materials by a visual reconnaissance of the Site. Materials were identified, described, and quantified to the extent possible; however, no equipment or containers were opened and/or sampled as part of this survey.

A hazardous material, as defined in OSHA 29 CFR 1910.1200, is any item or chemical which is a "health hazard" or "physical hazard", including the following:

- Chemicals that are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, hepatotoxins, nephrotoxins, neurotoxins, agents that act on the hematopoietic system, and agents that damage the lungs, skin, eyes, or mucous membranes;
- Chemicals that are combustible liquids, compressed gases, explosives, flammable liquids, flammable solids, organic peroxides, oxidizers, pyrophorics, unstable (reactive) or water-reactive;
- Chemicals that, in the course of normal handling, use or storage, may produce or release dusts, gases, fumes, vapors, mists or smoke which have any of the above characteristics; and
- Any item or chemical which, when being transported or moved, is a risk to public safety or an environmental hazard, and is regulated as such by one or more of the following:
  - DOT - Department of Transportation; Hazardous Materials Regulations (49 CFR 100-180);
  - IMO - International Maritime Organization; International Maritime Dangerous Goods (IMDG) Code;
  - IATA - International Air Transport Association; Dangerous Goods Regulations;
  - ICAO - International Civil Aviation Organization; Technical Instructions; and
  - AF - Air Force "INTERSERVICE" Manual, Preparing Hazmat for Military Air Shipments (AFMAN 24-204).

Hazardous materials may also include:

- Any item or chemical listed in the United States Environmental Protection Agency (USEPA) *List of Hazardous Substances and Reportable Quantities*, dated September 1992.
- Noticeable as inventory under the reporting requirements of the Hazardous Chemical Reporting (40 CFR Part 302).
- An environmental release under the reporting requirements of the Toxic Chemical Release Reporting: Community Right To Know (40 CFR Part 372) or under Part 201, Environmental Remediation of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 201) and Part 213, Leaking Underground Storage Tanks (Part 213).

These would include chemicals with special characteristics which, in the opinion of the manufacturer, can cause harm to people, plants, or animals when released by spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other receptacles).

Universal wastes are waste that comes primarily from consumer products containing mercury, lead, cadmium or other substances that are hazardous to human health and the environment. These items cannot be discarded in household trash nor disposed of in landfills but have less stringent handling and disposal requirements than hazardous waste streams. In Michigan, universal wastes are regulated by the MDEQ Office of Waste Management and Radiological Protection under Part 111 of Act 451 and the federal Resource Conservation and Recovery Act (RCRA) of 1976 under 40 CFR Part 273. Universal waste is also regulated by the US Department of Transportation (US DOT) under 49 CFR Parts 171 through 180. Most of the universal waste requirements overseen by the DEQ are addressed by R 299.9228 of Part 111 of 1994 P.A. 451, as amended and 40 CFR Part 273. These regulations are designed to encourage proper collection, recycling, treatment, or disposal of these wastes.

Examples of universal waste are mercury-containing equipment (e.g. thermostats, barometers, manometers, temperature and pressure gauges, and mercury switches), nickel-cadmium and spent lead-acid batteries, lamps (e.g. incandescent, fluorescent, high intensity discharge, neon, mercury vapor, and high pressure sodium and metal halide), pesticides, polychlorinated biphenyl (PCB) containing transformers and light ballasts, stored chemical and/or petroleum products, etc. In Michigan, Part 111 also includes pharmaceutical and consumer electronics as additional types of universal wastes.

### **Other Regulated Materials**

This RMS also included identifying and inventorying other regulated materials which may pose physical or chemical concerns during demolition of the Site building(s) including chlorofluorocarbon (CFC) containing devices, tanks, vessels, equipment, and building materials that may contain or become contaminated with hazardous materials.

Specifically, CFC containing devices are regulated Under Title VI of the Clean Air Act (CAA). The Stratospheric Protection Division of the EPA manages programs protecting the stratospheric ozone layer. Title 40, Part 82 of the Code of Federal Regulations contains the EPA regulations protecting the ozone layer. The RMS survey of the premises identified and quantified any CFC containers and CFC containing equipment, which could include the following:

- Drinking fountains, air conditioners, refrigerators
- Air conditioners in control panels and other process equipment
- Water and air chillers
- Roof top and stand-alone air conditioners
- Cafeteria equipment: freezers, walk-in coolers/freezers
- CFC canisters and cylinders

In Michigan, underground storage tanks are regulated under the authority of Part 211, Underground Storage Tank Regulations, of Act 451 of 1994, as amended, and the Michigan Underground Storage Tank Rules (MUSTR). Therefore, this survey included whether any evidence of underground storage tanks and related piping and dispensers were present at the Site.

MSG also surveyed for the presence of equipment, other storage tanks, and materials that may contain or be contaminated by regulated chemicals. These include, but may not be comprehensive of:

- Above ground storage tanks
- Oil-containing equipment (hydraulic equipment, blowers, fans, motors, elevators, compressors, etc.)
- Fire brick
- Contaminated building materials (concrete, block walls, wood, plaster, etc.) with staining, odor or other signs of a hazardous chemical release

## **SURVEY RESULTS**

The following subsections include a discussion of the RMS results. Photographs of the residence are located in the *Attachment A, Photo Log*. The results of this report are valid as of the report date, subject to the limitations presented in *Attachment B, Limitations*.

### **ACM Survey Results**

MSG identified fourteen (14) homogenous materials that were suspect as asbestos containing during the ACM survey. Thirty-three (33) bulk samples were collected from these suspect homogeneous materials and were submitted to Apex Research, Inc. for laboratory analysis of Bulk Materials by Polarized Light Microscopy using USEPA Method 600/R-93/116. Apex is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) to analyzed bulk samples for asbestos content. Of the aforementioned suspect homogenous materials identified during this ACM survey, laboratory analysis found four (4)



homogenous materials (samples 9-1, 10-1, 11-1, and 14-1) contained greater than 1% asbestos. The EPA defines ACM as materials containing greater than 1% asbestos.

A point-count quantification procedure (PCQM) allows for lower detection limits than calibrated visual estimation (CVES), which is the quantification method widely used in asbestos analysis via Polarized Light Microscopy (PLM). If the asbestos content is found to contain less than 10% asbestos as determined by a method other than point counting by PLM, it can only be treated as non-ACM if verified to contain less than 1% by the PCQM. If not point-counted, the sample must be assumed to be greater than 1% and thus considered and treated as ACM. It is MSG's experience that point counting samples with an estimated PLM asbestos content of more than 3% does not yield significantly different analytical results. No samples were point counted.

Suspect ACM sample locations are depicted on the attached figure. See *Table 1, Asbestos Sampling Results* for a listing of homogeneous materials identified by MSG during this survey. A copy of the analytical reports including chains of custody is attached in *Attachment C, Analytical Reports and Chains of Custody*.

#### **Universal Wastes, Hazardous Materials, and Other Regulated Materials Survey Results**

Universal wastes, hazardous materials, and/or other regulated materials wastes were identified within the Site building. Quantities identified are provided in *Table 2, Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory*.

### **CONCLUSIONS AND RECOMMENDATIONS**

#### **Asbestos Containing Materials**

Of the fourteen (14) homogenous materials collected as part of the ACM survey, four (4) homogenous materials contained asbestos greater than 1% (samples 9-1, 10-1, 11-1, and 14-1) with these four (4) homogenous materials being classified as RACM. All materials containing ACM must be disposed of in a licensed landfill.

Prior to demolition, a notification of intent to demolish shall be made to the Michigan Department of Environmental Quality Air Quality Division (MDEQ-AQD) and Licensing and Regulatory Affairs (LARA), Asbestos Program. Notification, according to the procedure described by the NESHAP, Title 40 of the Code of Federal Regulations, Part 61, Subpart M, Notification, for renovation and demolition projects should be followed. A copy of this notification form is provided in *Attachment D, Notification of Intent to Renovate/Demolish*. This form shall be completed by the contractor who completes the demolition.

If additional suspect ACMs are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, shall be surveyed, tested, and abated if warranted. If suspect ACMs are determined to be RACM that would be disturbed during demolition activities, the RACM must be properly removed by a licensed asbestos abatement contractor.

Category I and Category II Non-Friable ACM may often be left in place during demolition activities if the ACM is not subjected to sanding, grinding, cutting, or abrading or has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material during the course of demolition.

#### **Universal Wastes, Hazardous Materials, and Other Regulated Materials**

The universal waste, hazardous materials, and other regulated materials (see Table 2) must be properly characterized (as necessary) and properly removed from the Site building for recycling and/or disposed of in accordance with Parts 111, 115, or 147 of Michigan Public Act 451 of 1994, as amended. If additional universal wastes, hazardous materials, and other regulated materials are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe,

inaccessible, concealed and/or in buried areas, these materials shall be characterized (as necessary) and properly removed in accordance with the above-mentioned regulations.

If you have any questions or concerns regarding the above information please contact us at 517-316-9232.

Sincerely,



Kory McKay  
Environmental Scientist  
Accreditation Number A47903



Charlie Bush  
Senior Project Manager  
Accreditation Number A34293

Attachments

FIGURE

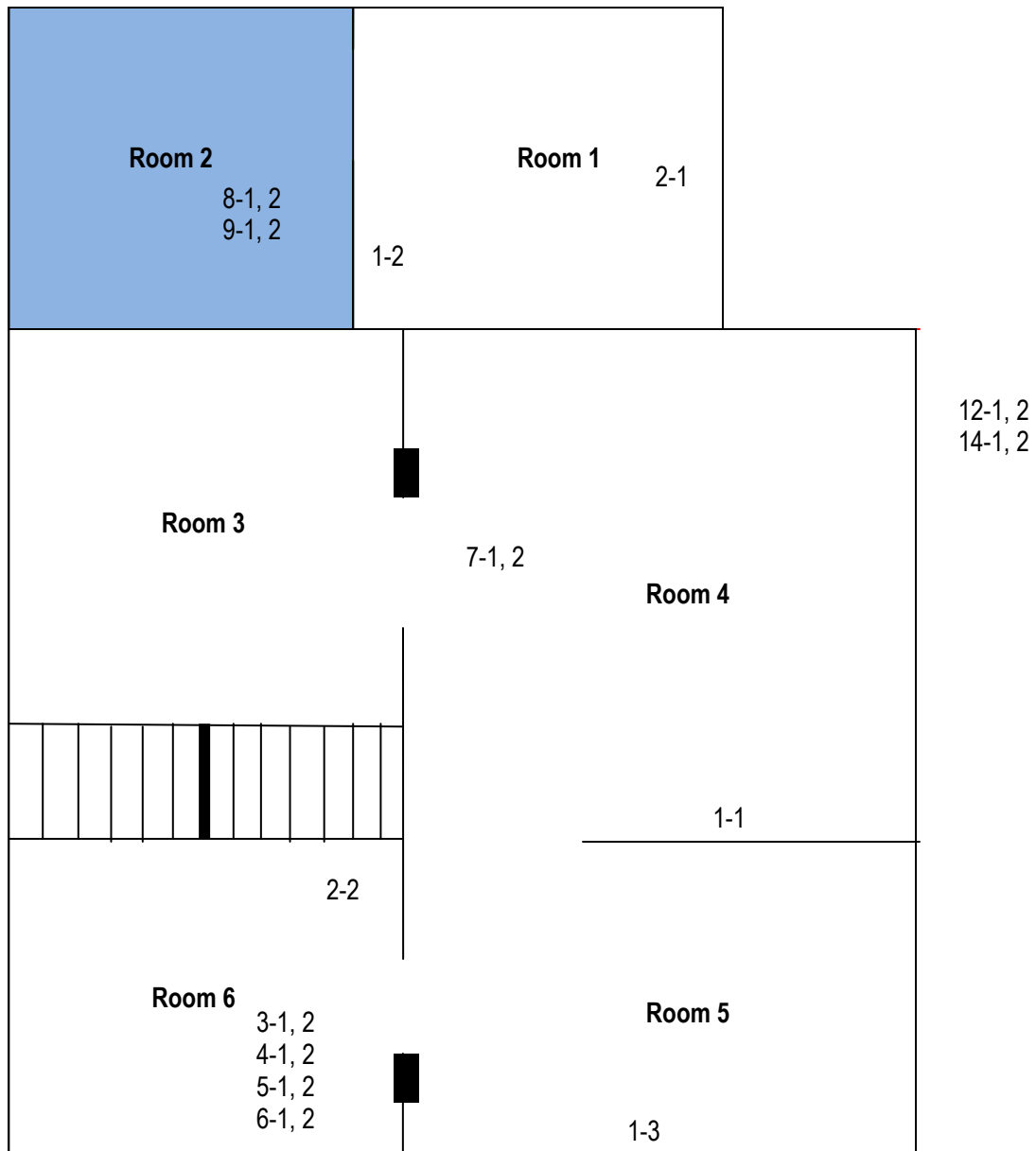


Address: 635 Brook St


Date: December 15, 2017

Drawing not to scale

1<sup>st</sup> Floor



 Multicolored Linoleum (100 SF)

 Vent with wrap (200 SF)

#-# = Asbestos Sample



TECHNICAL SKILL.  
CREATIVE SPIRIT.

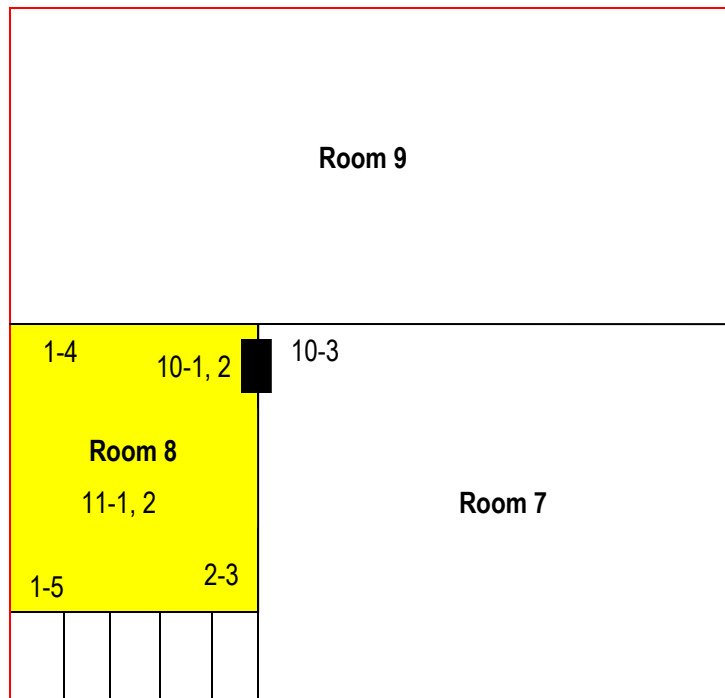
721 N. Capitol Avenue, Suite 2, Lansing, Michigan 48906 Tel: 517.316.9232 Fax: 517.316.9233 www.MannikSmithGroup.com

Address: 635 Brook St

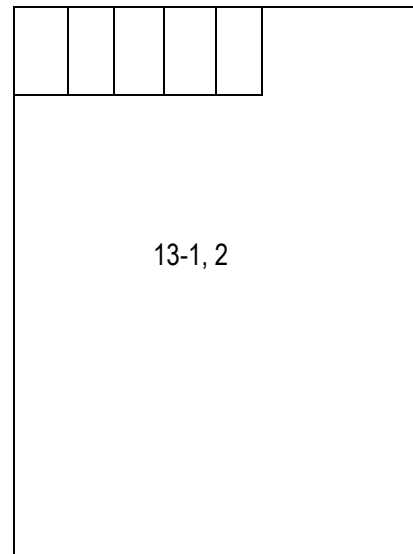
Date: December 15, 2017

Drawing not to scale

### 2<sup>nd</sup> Floor



### Basement



Gold Tile (85 SF)



Vent with wrap (200 SF)



Siding (900 SF)

#-# = Asbestos Sample

TABLES



**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		635 Brook St.								
Survey Date		December 13, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-4	1	AS 1-1	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	1500 SF
RM-1	1	AS 1-2	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	1500 SF
RM-5	1	AS 1-3	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	1500 SF
RM-8	2	AS 1-4	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	1500 SF
RM-8	2	AS 1-5	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	1500 SF
RM-1	1	AS 2-1	HA-2	Plaster	Non-Friable	Good	Miscellaneous	No	No	1500 SF
RM-6	1	AS 2-2	HA-2	Plaster	Non-Friable	Good	Miscellaneous	No	No	1500 SF
RM-8	2	AS 2-3	HA-2	Plaster	Non-Friable	Good	Miscellaneous	No	No	1500 SF
RM-6	1	AS 3-1	HA-3	Cream Linoleum	Non-Friable	Good	Miscellaneous	No	No	100 SF
RM-6	1	AS 3-2	HA-3	Cream Linoleum	Non-Friable	Good	Miscellaneous	No	No	100 SF
RM-6	1	AS 4-1	HA-4	White linoleum sandwich	Non-Friable	Good	Miscellaneous	No	No	200 SF
RM-6	1	AS 4-2	HA-4	White linoleum sandwich	Non-Friable	Good	Miscellaneous	No	No	200 SF
RM-6	1	AS 5-1	HA-5	Brown flooring	Non-Friable	Good	Miscellaneous	No	No	100 SF
RM-6	1	AS 5-2	HA-5	Brown flooring	Non-Friable	Good	Miscellaneous	No	No	100 SF
RM-6	1	AS 6-1	HA-6	White tile	Non-Friable	Good	Miscellaneous	No	No	100 SF
RM-6	1	AS 6-2	HA-6	White tile	Non-Friable	Good	Miscellaneous	No	No	100 SF

**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		635 Brook St.								
Survey Date		December 13, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-4	1	AS 7-1	HA-7	Yellow Linoleum	Non-Friable	Good	Miscellaneous	No	No	150 SF
RM-4	1	AS 7-2	HA-7	Yellow Linoleum	Non-Friable	Good	Miscellaneous	No	No	150 SF
RM-2	1	AS 8-1	HA-8	Cream tile	Non-Friable	Good	Miscellaneous	No	No	100 SF
RM-2	1	AS 8-2	HA-8	Cream tile	Non-Friable	Good	Miscellaneous	No	No	100 SF
RM-2	1	AS 9-1	HA-9	Multi colored Linoleum	Non-Friable	Good	Miscellaneous	Yes	20% Chrysotile	100 SF
RM-2	1	AS 9-2	HA-9	Multi colored Linoleum	Non-Friable	Good	Miscellaneous	Yes	NA	100 SF
RM-8	2	AS 10-1	HA-10	Vent wrap	Friable	Good	Miscellaneous	Yes	40% Chrysotile	200 SF
RM-8	2	AS 10-2	HA-10	Vent wrap	Friable	Good	Miscellaneous	Yes	NA	200 SF
RM-7	2	AS 10-3	HA-10	Vent wrap	Friable	Good	Miscellaneous	Yes	NA	200 SF
RM-8	2	AS 11-1	HA-11	Gold tile	Non-Friable	Good	Miscellaneous	Yes	5% Chrysotile	85 SF
RM-8	2	AS 11-2	HA-11	Gold tile	Non-Friable	Good	Miscellaneous	Yes	NA	85 SF
Roof	E	AS 12-1	HA-12	Shingles	Non-Friable	Good	Miscellaneous	No	No	500 SF
Roof	E	AS 12-2	HA-12	Shingles	Non-Friable	Good	Miscellaneous	No	No	500 SF
Basement	B	AS 13-1	HA-13	Basement cement floor	Non-Friable	Good	Miscellaneous	No	No	400 SF
Basement	B	AS 13-2	HA-13	Basement cement floor	Non-Friable	Good	Miscellaneous	No	No	400 SF
Exterior	E	AS 14-1	HA-14	Siding	Non-Friable	Good	Miscellaneous	Yes	15% Chrysotile	900 SF
Exterior	E	AS 14-2	HA-14	Siding	Non-Friable	Good	Miscellaneous	Yes	NA	900 SF



Table 2  
 Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory  
 635 Brook St.  
 Lansing, Ingham County, Michigan

<b>Universal Waste Inventory</b>		
Location	Type of Waste	Approximate Quantity
RM-7	Television	1
RM-4	Thermostat	1
RM-3	CFL bulb	1
<b>Hazardous Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
Basement	Fuel tank 150 gallon empty	1
Basement	Spray paint can	5
Basement	1 Gallon paint stripper	1
<b>Other Regulated Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
-	-	-

**ATTACHMENT A**

**PHOTO LOG**



Property Photos



635 Brook St, Front of House



Back of House



Side of House



Side of House

Sample Photos



Drywall sample from room 8



Yellow linoleum sample from room 4



Multicolored linoleum sample from room 2



Vent wrap sample from room 8



Gold tile sample from room 8



Siding sample from exterior second story

# ATTACHMENT B

## LIMITATIONS







## REGULATED MATERIALS SURVEY LIMITATIONS

The Mannik & Smith Group, Inc. (MSG) performed its services associated with this Regulated Materials Survey (RMS) in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763, Occupational Safety and Health Administration (OHSA) 29 CFR 1926.62, and in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. This RMS and related documentation are site-specific, which means they pertain to the conditions of the site surveyed.

Unless otherwise noted, MSG's RMS is limited to accessible areas. Areas determined to be not structurally sound, safely reached, limited by excessive accumulated obstructions, require specialized equipment to access, in operable windows, etc., are not included in this survey. There may be areas where regulated materials, such as suspected asbestos-containing materials (SACM) and lead containing paint cannot be viewed and/or tested. MSG shall not be responsible for identifying all SACM, lead containing paint, or other hazardous materials located in inaccessible locations, including but not limited to, above a plaster ceiling, behind a wall, embedded in concrete, buried, confined spaces, unsafe areas, or otherwise not readily identifiable.

Destructive sampling will only be conducted when permission has been granted by the owner. Destructive survey locations are limited to areas where hidden SACM, lead containing paint, or other hazardous materials is reasonably thought to be present and sampling can be conducted in a safe manner. If regulated materials are found during the course of demolition and/or renovation activities that are not listed in this report, the material should be assumed as asbestos-containing, lead containing, or hazardous until it can be sampled and analyzed at an accredited laboratory and safe work practices should always be used if those areas are to be disturbed.

MSG has prepared a logical assessment program to reduce the client's risk of discovering unknown regulated materials and/or hazardous substances. The presence of subsurface regulated materials and/or hazardous substances is based solely on surface observations and/or information provided by others. Descriptions of subsurface conditions provided in this report are not warranted to be complete or accurate. This risk may be reduced by more extensive exploration on the site, but even with additional exploration, it is not possible to completely eliminate the risk of discovering regulated materials and/or hazardous conditions. It cannot and should not be assumed that samples collected and conditions observed at the time of the RMS are representative of an area that has not been sampled and/or tested.

In preparing this report, MSG may have relied on information obtained from or provided by others. MSG makes no representation or warranty regarding the accuracy or completeness of this information gathered through outside sources or subcontracted services. No warranty, guarantee, or certification of any kind, expressed or implied, at common law or created by statute, is extended, made, or intended by rendering these environmental consulting services or by furnishing this written report. Environmental conditions and regulations are subject to constant change and reinterpretation. One should not assume that any on-site conditions and/or regulatory statutes or rules will remain constant after MSG has completed the scope of work for this project. Furthermore, because the facts stated in this report are subject to professional interpretation, differing conclusions could be reached by other environmental professionals.

The report is intended to offer support to a building owner, construction manager, general contractor, abatement contractor, architect, and/or other parties authorized by the owner in generally locating asbestos-containing materials (ACM), lead containing paint, universal and hazardous wastes, and/or other regulated materials. This report does not have the required components to serve as an Asbestos Project Design document, Asbestos and/or Lead Containing Paint Abatement Work Plan, and/or a Health and Safety Plan. Therefore, this report should not be utilized as a project specification document. The results, findings, conclusions, and recommendations expressed in

this report are based only on conditions that were noted during this survey. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated. Quantities have been conservatively estimated and sampling locations have been described representatively; however, current site conditions should be field-verified by contractors bidding on and/or prior to abatement work.

**ATTACHMENT C**

**ANALYTICAL REPORTS AND CHAINS OF CUSTODY**







# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 635 Brook St  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73780  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73780 - 01 Cust. #: AS2-3 Material: Plaster Finish Coat Location: Room 8 Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73780 - 01a Cust. #: AS2-3 Material: Plaster Base Coat Location: Room 8 Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 73780 - 02 Cust. #: AS1-5 Material: Drywall Location: Room 8 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73780 - 02a Cust. #: AS1-5 Material: Joint Compound Location: Room 8 Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73780 - 03 Cust. #: AS1-4 Material: Drywall Location: Room 8 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 73780 - 04 Cust. #: AS11-1 Material: Glue Location: Room 8 Appearance: yellow, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73780 - 04a Cust. #: AS11-1 Material: Gold Tile Location: Room 8 Appearance: beige, fibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%
Lab ID #: 73780 - 04b Cust. #: AS11-1 Material: Mastic Location: Room 8 Appearance: brown, nonfibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73780 - 05 Cust. #: AS11-2 Material: Glue Location: Room 8 Appearance: yellow, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73780 - 05a Cust. #: AS11-2 Material: Gold Tile Location: Room 8 Appearance: Layer: 2 of 3	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73780 - 05b Cust. #: AS11-2 Material: Mastic Location: Room 8 Appearance: brown, nonfibrous, homogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73780 - 06 Cust. #: AS10-1 Material: Vent Wrap Location: Room 8 Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 40%	Other - 60%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73780 - 07 Cust. #: AS10-2 Material: Vent Wrap Location: Room 8 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73780 - 08 Cust. #: AS10-3 Material: Vent Wrap Location: Room 7 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73780 - 09 Cust. #: AS12-1 Material: Shingles Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Date Reported: 12/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73780 - 10 Cust. #: AS12-2 Material: Shingles Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 73780 - 11 Cust. #: AS1-3 Material: Drywall Location: Room 5 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 73780 - 12 Cust. #: AS2-2 Material: Plaster Base Coat Location: Room 6 Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Perlite - 10% Other - 88%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73780 - 13 Cust. #: AS3-1 Material: Cream Linoleum/Glue Location: Room 6 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 5% Other - 95%
Lab ID #: 73780 - 14 Cust. #: AS3-2 Material: Cream Linoleum/Glue Location: Room 6 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 5% Other - 95%
Lab ID #: 73780 - 15 Cust. #: AS4-1 Material: White Linoleum Sandwich/Glue Location: Room 6 Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 2% Other - 88%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73780 - 15a Cust. #: AS4-1 Material: Linoleum Felt/Glue Location: Room 6 Appearance: beige, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 5% Other - 75%
Lab ID #: 73780 - 16 Cust. #: AS4-2 Material: White Linoleum Sandwich/Glue Location: Room 6 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 83%
Lab ID #: 73780 - 16a Cust. #: AS4-2 Material: Linoleum Felt/Glue Location: Room 6 Appearance: beige, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 83%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73780 - 17 Cust. #: AS5-1 Material: Brown Flooring Location: Room 6 Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 73780 - 18 Cust. #: AS5-2 Material: Brown Flooring Location: Room 6 Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 73780 - 19 Cust. #: AS6-1 Material: White Tile Location: Room 6 Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73780 - 20 Cust. #: AS6-2 Material: White Tile Location: Room 6 Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73780 - 21 Cust. #: AS1-1 Material: Drywall Location: Room 4 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 73780 - 22 Cust. #: AS7-1 Material: Yellow Linoleum Location: Room 4 Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73780 - 23 Cust. #: AS7-2 Material: Yellow Linoleum Location: Room 4 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 73780 - 24 Cust. #: AS2-1 Material: Plaster Base Coat Location: Room 1 Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 10% Other - 90%
Lab ID #: 73780 - 25 Cust. #: AS1-2 Material: Drywall Location: Room 1 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73780 - 26 Cust. #: AS8-1 Material: Cream Tile/Linoleum/Glue Location: Room 2 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 83%
Lab ID #: 73780 - 27 Cust. #: AS8-2 Material: Cream Tile/Linoleum/Glue Location: Room 2 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 83%
Lab ID #: 73780 - 28 Cust. #: AS9-1 Material: Multicolored Linoleum Location: Room 2 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 20%	Other - 80%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73780 - 29 Cust. #: AS9-2 Material: Multicolored Linoleum Location: Room 2 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73780 - 30 Cust. #: AS14-1 Material: Siding Location: Exterior Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 15%	Other - 85%
Lab ID #: 73780 - 31 Cust. #: AS14-2 Material: Siding Location: Exterior Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73780 - 32 Cust. #: AS13-1 Material: Basement Cement Floor Location: Basement Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 73780 - 33 Cust. #: AS13-2 Material: Basement Cement Floor Location: Basement Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

## APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: 2193 Association Drive, Suite 200  
 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/13/2017 5:00  
 Project: 635 BROOK ST  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only

Log-In: \_\_\_\_\_

Report: \_\_\_\_\_

Fax: \_\_\_\_\_

Verbal: \_\_\_\_\_

Email: \_\_\_\_\_

Turn Around Time: (circle one) Terms and conditions on the other side.

Rush 24 Hour  
 48 Hour **72 Hour**  
 Other: \_\_\_\_\_ TTP **yes** / no  
 (Test Till Positive)

Samples received after 3pm  
 logged in next morning

Circle analyses required, indicate type and quantity

Asbstos:  Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	AS 2-3	RM-8 - Plaster	Bag	HA-2	
2	AS 1-5	RM-8 - Drywall	Bag	HA-1	
3	AS 1-4	RM-8 - Drywall	Bag	HA-1	
4	AS 11-1	RM-8 - Gold tile	Bag	HA-11	
5	AS 11-2	RM-8 - Gold tile	Bag	HA-11	
6	AS 10-1	RM-8 - Vent wrap	Bag	HA-10	
7	AS 10-2	RM-8 - Vent wrap	Bag	HA-10	
8	AS 10-3	RM-7 - Vent wrap	Bag	HA-10	
9	AS 12-1	Roof - Shingles	Bag	HA-12	
10	AS 12-2	Roof - Shingles	Bag	HA-12	
11	AS 1-3	RM-5 - Drywall	Bag	HA-1	
12	AS 2-2	RM-6 - Plaster	Bag	HA-2	

Relinquished By: [Signature]Received By: [Signature]

Relinquished By: \_\_\_\_\_

Received By: [Signature]Date: 12/15/17Time/Date: 12/15/17

Date: \_\_\_\_\_

Time/Date: DEC 15 2017

Revision R4 Date: May/2017

73780

### APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: MANNIK & SMITH GROUP  
 Address: 2193 Association Drive, Suite 200  
 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/13/2017 5:00  
 Project: 635 BROOK ST  
 Project #: 11440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) Terms and conditions on the other side.

Rush \_\_\_\_\_ 24 Hour \_\_\_\_\_  
 48 Hour \_\_\_\_\_ 72 Hour \_\_\_\_\_  
 Other: \_\_\_\_\_ TTP yes / no  
 (Test Till Positive)

Samples received after 3pm logged in next morning

Circle analyses required, indicate type and quantity

Asbstos: \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
13	AS 3-1	RM-6 - Cream Linoleum	Bag	HA-3	
14	AS 3-2	RM-6 - Cream Linoleum	Bag	HA-3	
15	AS 4-1	RM-6 - White linoleum sandwich	Bag	HA-4	
16	AS 4-2	RM-6 - White linoleum sandwich	Bag	HA-4	
17	AS 5-1	RM-6 - Brown flooring	Bag	HA-5	
18	AS 5-2	RM-6 - Brown flooring	Bag	HA-5	
19	AS 6-1	RM-6 - White tile	Bag	HA-6	
20	AS 6-2	RM-6 - White tile	Bag	HA-6	
21	AS 1-1	RM-4 - Drywall	Bag	HA-1	
22	AS 7-1	RM-4 - Yellow Linoleum	Bag	HA-7	
23	AS 7-2	RM-4 - Yellow Linoleum	Bag	HA-7	
24	AS 2-1	RM-1 - Plaster	Bag	HA-2	

Relinquished By: [Signature]

Date: 12/15/17

Revision R4 Date: May/2017

Received By: 12/15/17

Time/Date: [Signature]

Relinquished By: \_\_\_\_\_ Received By: [Signature]

Date: \_\_\_\_\_ Time/Date: DEC 15 2017

APEX RESEARCH



73780

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
Address: 2193 Association Drive, Suite 200  
City, St., Zip: Okemos, MI, 48864  
Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/13/2017 5:00  
Project: 635 BROOK ST  
Project #: I1440002  
Contact Person: Charlie Bush  
Email: cbush@manniksmithgroup.com

Lab Use Only  
Log-In: \_\_\_\_\_  
Report: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Verbal: \_\_\_\_\_  
Email: \_\_\_\_\_

Turn Around Time: (circle one) Terms and conditions on the other side.

Rush 24 Hour  
48 Hour 72 Hour  
Other: TTP yes / no  
(Test Till Positive)  
Samples received after 3pm  
logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk X Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
25	AS 1-2	RM-1 - Drywall	Bag	HA-1	
26	AS 8-1	RM-2 - Cream tile	Bag	HA-8	
27	AS 8-2	RM-2 - Cream tile	Bag	HA-8	
28	AS 9-1	RM-2 - Multi colored Linoleum	Bag	HA-9	
29	AS 9-2	RM-2 - Multi colored Linoleum	Bag	HA-9	
30	AS 14-1	Exterior - Siding	Bag	HA-14	
31	AS 14-2	Exterior - Siding	Bag	HA-14	
32	AS 13-1	Basement - Basement cement floor	Bag	HA-13	
33	AS 13-2	Basement - Basement cement floor	Bag	HA-13	

Relinquished By: [Signature]  
Date: 12/15/17  
Received By: [Signature]  
Time/Date: 12/15/17

Relinquished By: \_\_\_\_\_ Received By: [Signature]  
Date: \_\_\_\_\_ Time/Date: \_\_\_\_\_  
DEC 15 2017

Revision R4 Date: May/2017

**ATTACHMENT D**

**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH**



# NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
(MDEQ) AIR QUALITY DIVISION  
NESHAP, 40 CFR Part 61, Subpart M



MICHIGAN DEPARTMENT OF LICENSING AND  
REGULATORY AFFAIRS (LARA), ASBESTOS PROGRAM,  
P.A. 135 OF 1986, AS AMENDED, Section 220 (1-4) or (8)

### DEQ/LARA USE ONLY

Postmark Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Rec'd Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Emergency Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Valid No. \_\_\_\_\_

OK  Send Def Ltr. Date of Def Ltr. \_\_\_\_/\_\_\_\_/\_\_\_\_

FOLLOW UP \_\_\_\_/\_\_\_\_/\_\_\_\_ Spoke w/ \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Notification No. \_\_\_\_\_ Trans No. \_\_\_\_\_

### Calculate LARA Asbestos Project Fee: (1% Project Fee)

Total Project Cost: \_\_\_\_\_ x 0.01 = \_\_\_\_\_

Type of Contractor: \_\_\_\_\_ License No.: \_\_\_\_\_

Licensing Authority: \_\_\_\_\_

### 1. NOTIFICATION:

Date of Notification: \_\_\_\_\_

Date of Revision(s): \_\_\_\_\_

Notification Type:  Original  Revised  Canceled  Annual

#### Mark appropriate boxes: (both DEQ and LARA may apply):

#### DEQ (NESHAP) [260 ln. ft./160 sq. ft. or more is threshold]

Planned Renovation – 10 **working** days notice

Emergency Renovation

Scheduled Demolition – 10 **working** days notice

Intentional Burn – 10 **working** days notice

Ordered Demolition

#### LARA (MIOSHA) [Will not accept annual notifications]

Demo, Reno, Encap. (>10 ln. ft./15 sq. ft.) 10 **calendar** days notice

Emergency Renovation/Encapsulation

### 2. PROJECT SCHEDULE:

**START DATE** **END DATE**

\* Renovation \_\_\_\_\_

+Asb. Removal \_\_\_\_\_

+Demolition: \_\_\_\_\_

Encapsulation: \_\_\_\_\_

**Work Schedule:** Please indicate the anticipated days of the week and work hours for the purpose of scheduling a compliance inspection.

**Days of the Week** **Work Hours**

Asb. Removal: \_\_\_\_\_

Demolition: \_\_\_\_\_

Encapsulation: \_\_\_\_\_

\* Includes setup, build enclosure, asbestos removal, demobilizing, etc.

+Include **only** those dates you are conducting asbestos removal/demo.

Check here if this is a multi-phased project, attach a schedule showing the start/end date of each phase.

### 3. ABATEMENT CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 4. DEMOLITION CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 5. FACILITY OWNER: ("Facility" includes Bridges)

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 6. FACILITY DESCRIPTION:

Facility Name: \_\_\_\_\_

Location Address/Description: \_\_\_\_\_

\_\_\_\_\_ If Apt. # of units: \_\_\_\_\_

City/Twp. \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

County: \_\_\_\_\_ Nearest Crossroad: \_\_\_\_\_

Size: (sq. ft.) \_\_\_\_\_ No. of Floors: \_\_\_\_\_ Floor No.: \_\_\_\_\_

Age: \_\_\_\_\_ Present Use: \_\_\_\_\_ Prior Use: \_\_\_\_\_

Specific Location(s) in Facility: \_\_\_\_\_

### 7. DISPOSAL SITE:

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

Location Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

### 8. WASTE TRANSPORTER 1:

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

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

### WASTE TRANSPORTER 2:

### 9. ORDERED DEMOLITIONS: (See NESHAP regulations for definition of "Ordered Demolition.") A copy of the official Order must accompany this notification.

Gov't Agency Ordering Demo: \_\_\_\_\_

Name/Title of Person Signing Order: \_\_\_\_\_

Date of Order: \_\_\_\_\_ Date Ordered to Begin: \_\_\_\_\_

### 10. IS ASBESTOS PRESENT? Yes No To be removed prior to demolition

**Estimate the amount of asbestos:** Include RACM (Regulated Asbestos Containing Material) to be removed, encapsulated, etc. Also include the amount and type (floor tile, roofing, etc.) of non-friable Category I and/or Category II ACM that **will not** be removed prior to demolition. (**NOTE:** In a demolition, cementitious ACM **cannot** remain in a structure, as it is likely to become regulated in the demolition/handling process. It **must** be removed prior to demolition.)

RACM to be Removed

RACM to be Encapsulated

Non-friable ACM **not** removed prior to demo.

Category I

Category II

Units of Measure

				<input type="checkbox"/> Ln. Ft.	<input type="checkbox"/> Ln. M.
				<input type="checkbox"/> Sq. Ft.	<input type="checkbox"/> Sq. M.
				<input type="checkbox"/> Cu. Ft.*	<input type="checkbox"/> Cu. M.*

\*Volume (cubic ft./meters) should be used only if unable to measure by linear/square measure (example: asbestos has fallen off of surface).

(continued on reverse side)

NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH (continued)

11. PROJECT DESCRIPTION: Complete A) for Renovation (asbestos removal/encapsulation) and/or B) for Demolition:

A) RENOVATION: Mark all surfaces/types of RACM to be removed:

- checkboxes for Piping, Fittings, Boiler(s), Tanks(s), Beam(s), Duct(s), Tunnel(s), Ceiling Tile(s), Mag Block, Other (describe)

Encapsulation (for LARA): Mark surfaces/types to be encapsulated:

- checkboxes for Piping, Fittings, Boiler(s), Tank(s), Beam(s), Duct(s), Tunnel(s), Ceiling Tile(s), Other (describe)

Method of removal: Describe how the asbestos will be removed from the surface (example: glove bag, scrape with hand tools, cut in sections and carefully lower, etc.):

B) DEMOLITION: Describe the method of demolition of facility, bridge, etc., and indicate if complete or partial. If partial, describe which part of facility bridge, etc., will be demolished:

12. ENGINEERING CONTROLS: Describe work practices and engineering controls used to prevent visible emissions before, during, and after removal, and until proper disposal:

13. UNEXPECTED ASBESTOS: Describe the steps you intend to follow in the event that unexpected RACM is found or previously non-friable asbestos becomes friable (crumbled, pulverized, reduced to powder, etc.) and therefore regulated:

14. PROCEDURE(S) USED TO DETECT THE PRESENCE OF ASBESTOS: A) Indicate how you determined whether or not asbestos is in the facility. If analytical sampling was used, describe method of analysis. (The determination of the presence or absence of asbestos must be made prior to submitting a renovation/demolition notification.):

B) Name, address, and phone number of company performing asbestos survey:

C) Name, accreditation number of inspector, and date of inspection:

15. EMERGENCY RENOVATIONS: Date/time of emergency: Describe the sudden, unexpected event:

Explain how the event caused unsafe conditions, and/or would cause equipment damage and/or an unreasonable financial burden:

16. I certify that an individual trained in the provisions of 40 CFR Part 61, Subpart M, will be on-site during the renovation and during demolition involving RACM above the threshold and/or during an ordered demolition. Evidence that this person has completed the required training will be available for inspection at the renovation or demolition site.

Signature of Owner or Abatement Contractor Date

Signature of Owner or Demolition Contractor Date

17. Signature Requirements for Projects with Negative Pressure Enclosures: (required by LARA) Per Section 221(1)(2) of P.A. 135 of 1986, as amended, clearance air monitoring is required for any asbestos abatement project involving 10 linear feet/15 square feet or more of friable material which is performed within a negative pressure enclosure. I (the building owner or lessee) have been advised by the contractor of my responsibility under Act 135 to have clearance air monitoring performed on this project.

Signature of Building Owner or Lessee Date

Signature of Asbestos Abatement Contractor Representative Date

NOTE: It is not mandatory that a signed copy be sent to LARA unless requested. For affected projects, this section of the notification form must be completed, signed, and made part of your records before the project begins.

18. I certify that the above information is correct:

Printed Name of Owner/Operator Date

Signature of Owner/Operator Date

MAILING ADDRESSES/PHONE NUMBERS: (See Item 1 to determine which agency requirements/regulations are applicable to your project.)

For Public Act 135 of 1986, as amended, Section 220 (1-4) or (8), mail to address below. For more info visit: http://www.michigan.gov/asbestos

MIOSHA Asbestos Program LARA, CSHD P.O. Box 30671 Lansing, MI 48909-8171

517.636.4551 (office), 517.322.1713 (fax)

For NESHAP Demolitions/Renovations, 40 CFR, Part 61, Subpart M, please use the e-submittal process. For more information visit http://www.michigan.gov/air, under Air Links click on Asbestos NESHAP Program.

NESHAP Asbestos Program DEQ, AQD P.O. Box 30260 Lansing, MI 48909-7760

517.284.6777 (Office)



December 29, 2017

Ms. Roxanne Case  
 Grant Manager  
 Ingham County Land Bank  
 3024 Turner Street  
 Lansing, Ingham County, Michigan 48906

Re: Pre-Demolition Regulated Materials Survey  
 621 Brook St, Lansing, Ingham County, MI

Dear Ms. Case:

The Mannik & Smith Group, Inc. (MSG) is pleased to present Ingham County with the results of the limited pre-demolition regulated materials survey (RMS) performed at 621 Brook St, Lansing, Ingham County, Michigan (hereinafter referred to as the "Site") by Kory McKay (Accreditation Number A47903).

**SUMMARY**

Building Information	
Property Address	621 Brook St, Lansing, MI
Parcel #	33-01-01-09-352-211
No. Stories	2
Square Footage (approx.)	1,800 SF
Siding	Asphalt and wood
Basement	Yes
Garage	No



Asbestos Containing Material				
Location	Material Group	Friable/Non Friable	Asbestos	Quantity
RM-3, RM-4, RM-6	Vent wrap	Friable	65% Chrysotile	210 SF
RM-6	Tan tile	Non Friable	30% Chrysotile	180 SF
RM-6	Dark brown tile	Non Friable	10% Chrysotile	20 SF
RM-11	Sink under coating	Non Friable	5% Chrysotile	3 SF
RM-13	Gold tile	Non Friable	5% Chrysotile	35 SF



TECHNICAL SKILL.  
 CREATIVE SPIRIT.

Universal Waste Inventory		
Location	Material Description	Quantity
RM-1	Thermostat	1

Hazardous Materials		
Location	Material Description	Quantity
RM-8, Basement	1 Quart varnish	7
Basement	1 Gallon antifreeze	2
RM-8	1 Gallon bleach	2
RM-8	Starting fluid can	3

## PURPOSE AND SCOPE OF WORK

The purpose of the RMS was to identify, quantify and document the location of regulated materials that may be encountered during demolition of the on-site structure. To accomplish this purpose, MSG performed the following scope of work:

- 1) Pre-demolition asbestos-containing material (ACM) survey.
- 2) Universal wastes, hazardous materials, and other regulated wastes survey.

## METHODOLOGIES

The RMS was conducted on December 19, 2017. Methodologies employed during the completion of each task of the RMS are detailed below.

### ACM Survey Procedures

The ACM survey was performed in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763. The National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations govern demolition and renovation activities in which asbestos is present. The NESHAP rule distinguishes between Regulated Asbestos-Containing Materials (RACM) that would readily release asbestos fibers when damaged or disturbed and those materials that are unlikely to result in significant fiber release during demolition activities. The purpose of this survey is to determine if ACM within the Site building are RACM and thus, subject to the NESHAP, and to comply with the Michigan Occupational Safety and Health Administration (MIOSHA) and guidelines set forth in the Occupational Safety and Health Administration (OSHA) Regulations Standards 29 CFR 1910.1101.

RACM, as defined by NESHAP, is classified into four parts, (1) friable asbestos material, (2) Category I non-friable ACM (packing, gaskets, floor tile and roofing products) that has become friable, (3) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (4) Category II non-friable ACM (all other ACM products) 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.

The suspect ACM identified during this survey was grouped into homogeneous materials (i.e. similar materials which are uniform in color and texture) and:

- Described and quantified it in linear feet (LF) or square feet (SF);
- Identified and classified as friable or non-friable;
- Assessed as being in good, fair or poor condition;
- Assigned an EPA classification type (surfacing material, thermal system insulation or miscellaneous);
- Classified as RACM or non-RACM; and

- Sampled, or identified as presumed ACM (PACM).

MSG performed services associated with the ACM survey in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. The ACM survey included a systematic visual inspection of readily accessible areas of the Site building. Destructive sampling methods were used and suspect ACM samples were collected by State of Michigan Accredited Asbestos Inspector, Kory McKay (Accreditation Number A47903). Based on the quantity of each classification of material, MSG collected samples of each suspect ACM in accordance with EPA guidelines.

### **Universal Wastes and Hazardous Material Survey Procedures**

MSG identified and inventoried universal wastes and hazardous materials by a visual reconnaissance of the Site. Materials were identified, described, and quantified to the extent possible; however, no equipment or containers were opened and/or sampled as part of this survey.

A hazardous material, as defined in OSHA 29 CFR 1910.1200, is any item or chemical which is a "health hazard" or "physical hazard", including the following:

- Chemicals that are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, hepatotoxins, nephrotoxins, neurotoxins, agents that act on the hematopoietic system, and agents that damage the lungs, skin, eyes, or mucous membranes;
- Chemicals that are combustible liquids, compressed gases, explosives, flammable liquids, flammable solids, organic peroxides, oxidizers, pyrophorics, unstable (reactive) or water-reactive;
- Chemicals that, in the course of normal handling, use or storage, may produce or release dusts, gases, fumes, vapors, mists or smoke which have any of the above characteristics; and
- Any item or chemical which, when being transported or moved, is a risk to public safety or an environmental hazard, and is regulated as such by one or more of the following:
  - DOT - Department of Transportation; Hazardous Materials Regulations (49 CFR 100-180);
  - IMO - International Maritime Organization; International Maritime Dangerous Goods (IMDG) Code;
  - IATA - International Air Transport Association; Dangerous Goods Regulations;
  - ICAO - International Civil Aviation Organization; Technical Instructions; and
  - AF - Air Force "INTERSERVICE" Manual, Preparing Hazmat for Military Air Shipments (AFMAN 24-204).

Hazardous materials may also include:

- Any item or chemical listed in the United States Environmental Protection Agency (USEPA) *List of Hazardous Substances and Reportable Quantities*, dated September 1992.
- Noticeable as inventory under the reporting requirements of the Hazardous Chemical Reporting (40 CFR Part 302).
- An environmental release under the reporting requirements of the Toxic Chemical Release Reporting: Community Right To Know (40 CFR Part 372) or under Part 201, Environmental Remediation of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 201) and Part 213, Leaking Underground Storage Tanks (Part 213).

These would include chemicals with special characteristics which, in the opinion of the manufacturer, can cause harm to people, plants, or animals when released by spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other receptacles).

Universal wastes are waste that comes primarily from consumer products containing mercury, lead, cadmium or other substances that are hazardous to human health and the environment. These items cannot be discarded in household trash nor disposed of in landfills but have less stringent handling and

disposal requirements than hazardous waste streams. In Michigan, universal wastes are regulated by the MDEQ Office of Waste Management and Radiological Protection under Part 111 of Act 451 and the federal Resource Conservation and Recovery Act (RCRA) of 1976 under 40 CFR Part 273. Universal waste is also regulated by the US Department of Transportation (US DOT) under 49 CFR Parts 171 through 180. Most of the universal waste requirements overseen by the DEQ are addressed by R 299.9228 of Part 111 of 1994 P.A. 451, as amended and 40 CFR Part 273. These regulations are designed to encourage proper collection, recycling, treatment, or disposal of these wastes.

Examples of universal waste are mercury-containing equipment (e.g. thermostats, barometers, manometers, temperature and pressure gauges, and mercury switches), nickel-cadmium and spent lead-acid batteries, lamps (e.g. incandescent, fluorescent, high intensity discharge, neon, mercury vapor, and high pressure sodium and metal halide), pesticides, polychlorinated biphenyl (PCB) containing transformers and light ballasts, stored chemical and/or petroleum products, etc. In Michigan, Part 111 also includes pharmaceutical and consumer electronics as additional types of universal wastes.

### **Other Regulated Materials**

This RMS also included identifying and inventorying other regulated materials which may pose physical or chemical concerns during demolition of the Site building(s) including chlorofluorocarbon (CFC) containing devices, tanks, vessels, equipment, and building materials that may contain or become contaminated with hazardous materials.

Specifically, CFC containing devices are regulated Under Title VI of the Clean Air Act (CAA). The Stratospheric Protection Division of the EPA manages programs protecting the stratospheric ozone layer. Title 40, Part 82 of the Code of Federal Regulations contains the EPA regulations protecting the ozone layer. The RMS survey of the premises identified and quantified any CFC containers and CFC containing equipment, which could include the following:

- Drinking fountains, air conditioners, refrigerators
- Air conditioners in control panels and other process equipment
- Water and air chillers
- Roof top and stand-alone air conditioners
- Cafeteria equipment: freezers, walk-in coolers/freezers
- CFC canisters and cylinders

In Michigan, underground storage tanks are regulated under the authority of Part 211, Underground Storage Tank Regulations, of Act 451 of 1994, as amended, and the Michigan Underground Storage Tank Rules (MUSTR). Therefore, this survey included whether any evidence of underground storage tanks and related piping and dispensers were present at the Site.

MSG also surveyed for the presence of equipment, other storage tanks, and materials that may contain or be contaminated by regulated chemicals. These include, but may not be comprehensive of:

- Above ground storage tanks
- Oil-containing equipment (hydraulic equipment, blowers, fans, motors, elevators, compressors, etc.)
- Fire brick
- Contaminated building materials (concrete, block walls, wood, plaster, etc.) with staining, odor or other signs of a hazardous chemical release

## **SURVEY RESULTS**

The following subsections include a discussion of the RMS results. Photographs of the residence are located in the *Attachment A, Photo Log*. The results of this report are valid as of the report date, subject to the limitations presented in *Attachment B, Limitations*.



## **ACM Survey Results**

MSG identified twenty-three (23) homogenous materials that were suspect as asbestos containing during the ACM survey. Fifty-four (54) bulk samples were collected from these suspect homogeneous materials and were submitted to Apex Research, Inc. for laboratory analysis of Bulk Materials by Polarized Light Microscopy using USEPA Method 600/R-93/116. Apex is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) to analyze bulk samples for asbestos content. Of the aforementioned suspect homogenous materials identified during this ACM survey, laboratory analysis found five (5) homogenous materials (samples 9-1, 10-1, 17-1, 19-1 and 22-1) contained greater than 1% asbestos. The EPA defines ACM as materials containing greater than 1% asbestos.

A point-count quantification procedure (PCQM) allows for lower detection limits than calibrated visual estimation (CVES), which is the quantification method widely used in asbestos analysis via Polarized Light Microscopy (PLM). If the asbestos content is found to contain less than 10% asbestos as determined by a method other than point counting by PLM, it can only be treated as non-ACM if verified to contain less than 1% by the PCQM. If not point-counted, the sample must be assumed to be greater than 1% and thus considered and treated as ACM. It is MSG's experience that point counting samples with an estimated PLM asbestos content of more than 3% does not yield significantly different analytical results. No samples were point counted.

Suspect ACM sample locations are depicted on the attached figure. See *Table 1, Asbestos Sampling Results* for a listing of homogeneous materials identified by MSG during this survey. A copy of the analytical reports including chains of custody is attached in *Attachment C, Analytical Reports and Chains of Custody*.

## **Universal Wastes, Hazardous Materials, and Other Regulated Materials Survey Results**

Universal wastes, hazardous materials, and/or other regulated materials wastes were identified within the Site building. Quantities identified are provided in *Table 2, Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory*.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Asbestos Containing Materials**

Of the twenty-three (23) homogenous materials collected as part of the ACM survey, five (5) homogenous materials contained asbestos greater than 1% (samples 9-1, 10-1, 17-1, 19-1 and 22-1) with these five (5) homogenous materials being classified as RACM. All materials containing ACM must be disposed of in a licensed landfill.

Prior to demolition, a notification of intent to demolish shall be made to the Michigan Department of Environmental Quality Air Quality Division (MDEQ-AQD) and Licensing and Regulatory Affairs (LARA), Asbestos Program. Notification, according to the procedure described by the NESHAP, Title 40 of the Code of Federal Regulations, Part 61, Subpart M, Notification, for renovation and demolition projects should be followed. A copy of this notification form is provided in *Attachment D, Notification of Intent to Renovate/Demolish*. This form shall be completed by the contractor who completes the demolition.

If additional suspect ACMs are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, shall be surveyed, tested, and abated if warranted. If suspect ACMs are determined to be RACM that would be disturbed during demolition activities, the RACM must be properly removed by a licensed asbestos abatement contractor.

Category I and Category II Non-Friable ACM may often be left in place during demolition activities if the ACM is not subjected to sanding, grinding, cutting, or abrading or has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material during the course of demolition.

**Universal Wastes, Hazardous Materials, and Other Regulated Materials**

The universal waste, hazardous materials, and other regulated materials (see Table 2) must be properly characterized (as necessary) and properly removed from the Site building for recycling and/or disposed of in accordance with Parts 111, 115, or 147 of Michigan Public Act 451 of 1994, as amended. If additional universal wastes, hazardous materials, and other regulated materials are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, these materials shall be characterized (as necessary) and properly removed in accordance with the above-mentioned regulations.

If you have any questions or concerns regarding the above information please contact us at 517-316-9232.

Sincerely,



Kory McKay  
Environmental Scientist  
Accreditation Number A47903



Charlie Bush  
Senior Project Manager  
Accreditation Number A34293

Attachments

FIGURE





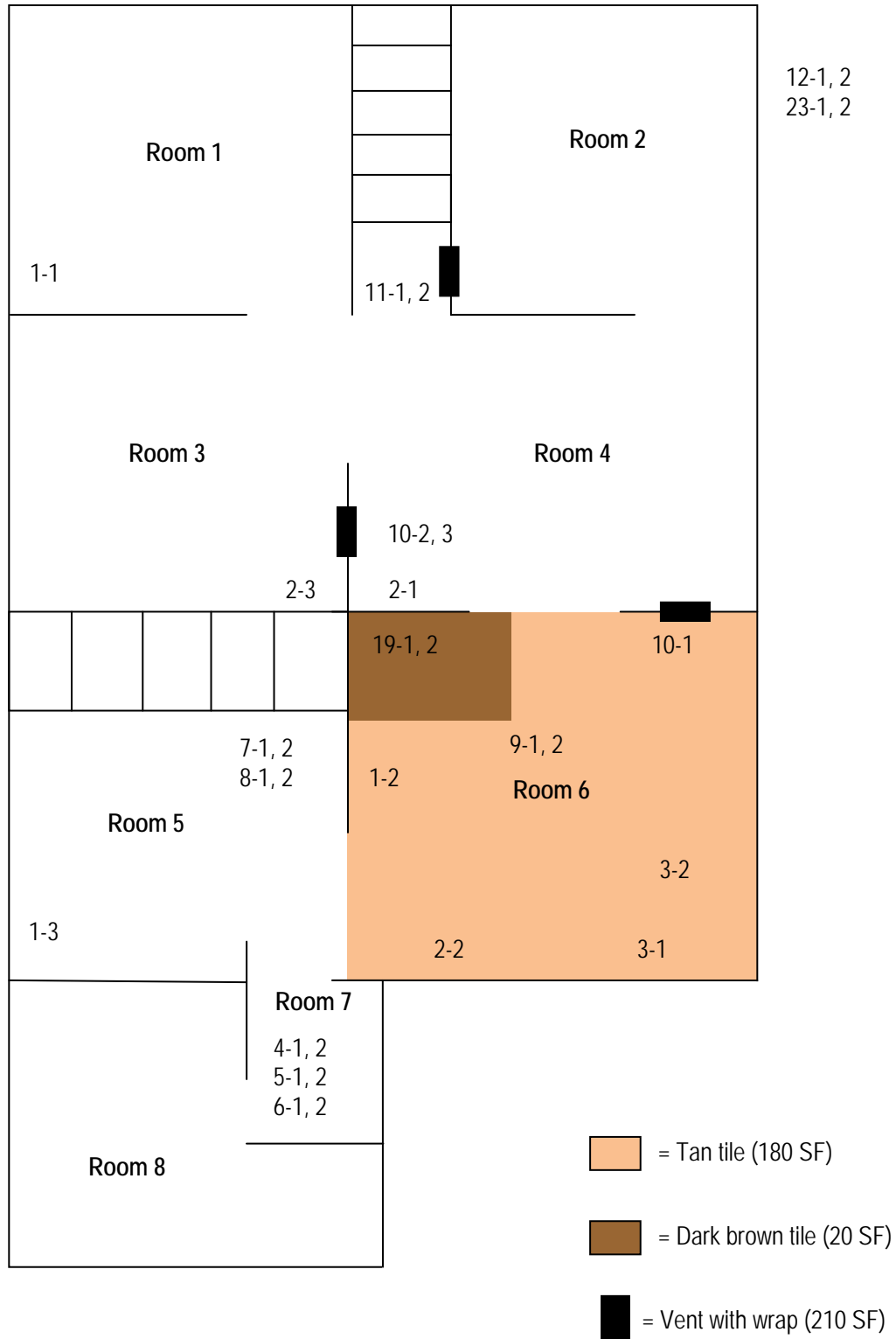
TECHNICAL SKILL.  
CREATIVE SPIRIT.

721 N. Capitol Avenue, Suite 2, Lansing, Michigan 48906 Tel: 517.316.9232 Fax: 517.316.9233 www.MannikSmithGroup.com

Address: 621 Brook St Date: December 21, 2017

Drawing not to scale

1<sup>st</sup> Floor



#-# = Asbestos Sample



TECHNICAL SKILL.  
CREATIVE SPIRIT.

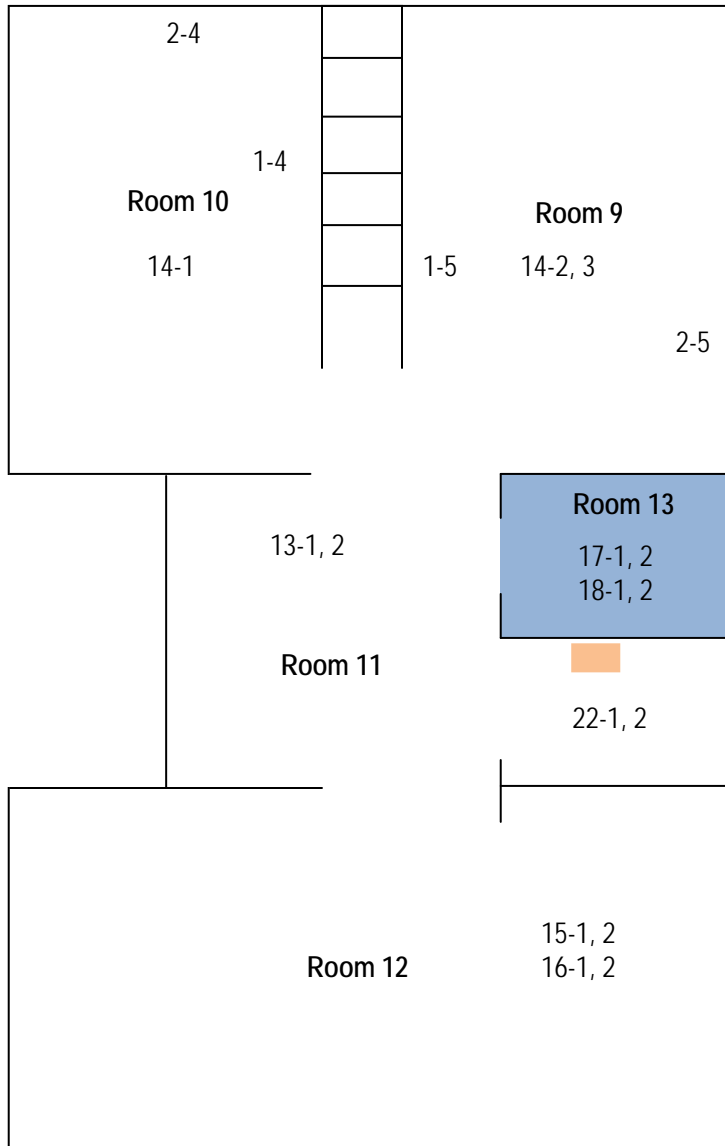
721 N. Capitol Avenue, Suite 2, Lansing, Michigan 48906 Tel: 517.316.9232 Fax: 517.316.9233 www.MannikSmithGroup.com

Address: 621 Brook St

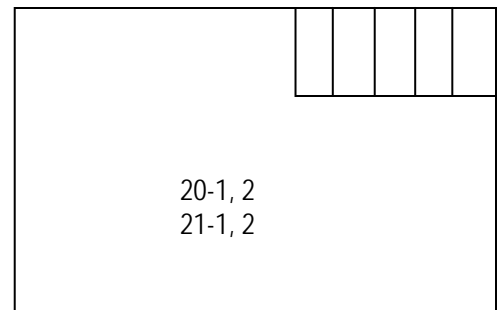
Date: December 21, 2017

Drawing not to scale

2<sup>nd</sup> Floor



Basement



 = Gold Tile (35 SF)

 = Sink Under Coating (3 SF)

#-# = Asbestos Sample

## TABLES



**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		621 Brook St								
Survey Date		December 19, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-1	1	AS 1-1	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	2000 SF
RM-6	1	AS 1-2	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	2000 SF
RM-5	1	AS 1-3	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	2000 SF
RM-10	2	AS 1-4	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	2000 SF
RM-9	2	AS 1-5	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	2000 SF
RM-4	1	AS 2-1	HA-2	Plaster	Non-Friable	Good	Miscellaneous	No	No	2000 SF
RM-6	1	AS 2-2	HA-2	Plaster	Non-Friable	Good	Miscellaneous	No	No	2000 SF
RM-3	1	AS 2-3	HA-2	Plaster	Non-Friable	Good	Miscellaneous	No	No	2000 SF
RM-10	2	AS 2-4	HA-2	Plaster	Non-Friable	Good	Miscellaneous	No	No	2000 SF
RM-9	2	AS 2-5	HA-2	Plaster	Non-Friable	Good	Miscellaneous	No	No	2000 SF
RM-6	1	AS 3-1	HA-3	Window glaze	Non-Friable	Good	Miscellaneous	No	No	200 SF
RM-6	1	AS 3-2	HA-3	Window glaze	Non-Friable	Good	Miscellaneous	No	No	200 SF
RM-7	1	AS 4-1	HA-4	Faux wood Linoleum	Non-Friable	Good	Miscellaneous	No	No	200 SF
RM-7	1	AS 4-2	HA-4	Faux wood Linoleum	Non-Friable	Good	Miscellaneous	No	No	200 SF
RM-7	1	AS 5-1	HA-5	Green 9x9 tile	Non-Friable	Good	Miscellaneous	No	No	40 SF
RM-7	1	AS 5-2	HA-5	Green 9x9 tile	Non-Friable	Good	Miscellaneous	No	No	40 SF
RM-7	1	AS 6-1	HA-6	White 9x9 tile	Non-Friable	Good	Miscellaneous	No	No	40 SF

**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		621 Brook St								
Survey Date		December 19, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-7	1	AS 6-2	HA-6	White 9x9 tile	Non-Friable	Good	Miscellaneous	No	No	40 SF
RM-5	1	AS 7-1	HA-7	Cream Linoleum	Non-Friable	Good	Miscellaneous	No	No	80 SF
RM-5	1	AS 7-2	HA-7	Cream Linoleum	Non-Friable	Good	Miscellaneous	No	No	80 SF
RM-5	1	AS 8-1	HA-8	Brown tile	Non-Friable	Good	Miscellaneous	No	No	80 SF
RM-5	1	AS 8-2	HA-8	Brown tile	Non-Friable	Good	Miscellaneous	No	No	80 SF
RM-6	1	AS 9-1	HA-9	Tan tile	Non-Friable	Good	Miscellaneous	Yes	30% Chrysotile	180 SF
RM-6	1	AS 9-2	HA-9	Tan tile	Non-Friable	Good	Miscellaneous	Yes	NA	180 SF
RM-6	1	AS 10-1	HA-10	Vent wrap	Friable	Good	Miscellaneous	Yes	65% Chrysotile	210 SF
RM-4	1	AS 10-2	HA-10	Vent wrap	Friable	Good	Miscellaneous	Yes	NA	210 SF
RM-4	1	AS 10-3	HA-10	Vent wrap	Friable	Good	Miscellaneous	Yes	NA	210 SF
RM-4	1	AS 11-1	HA-11	Blue linoleum	Non-Friable	Good	Miscellaneous	No	No	20 SF
RM-4	1	AS 11-2	HA-11	Blue linoleum	Non-Friable	Good	Miscellaneous	No	No	20 SF
Roof	E	AS 12-1	HA-12	Shingles	Non-Friable	Good	Miscellaneous	No	No	850 SF
Roof	E	AS 12-2	HA-12	Shingles	Non-Friable	Good	Miscellaneous	No	No	850 SF
RM-11	2	AS 13-1	HA-13	Tan 9x9 tile	Non-Friable	Good	Miscellaneous	No	No	100 SF



**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		621 Brook St								
Survey Date		December 19, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-11	2	AS 13-2	HA-13	Tan 9x9 tile	Non-Friable	Good	Miscellaneous	No	No	100 SF
RM-10	2	AS 14-1	HA-14	Textured ceiling	Friable	Good	Miscellaneous	No	No	250 SF
RM-9	2	AS 14-2	HA-14	Textured ceiling	Friable	Good	Miscellaneous	No	No	250 SF
RM-9	2	AS 14-3	HA-14	Textured ceiling	Friable	Good	Miscellaneous	No	No	250 SF
RM-12	2	AS 15-1	HA-15	White linoleum	Non-Friable	Good	Miscellaneous	No	No	180 SF
RM-12	2	AS 15-2	HA-15	White linoleum	Non-Friable	Good	Miscellaneous	No	No	180 SF
RM-12	2	AS 16-1	HA-16	Turquoise Linoleum	Non-Friable	Good	Miscellaneous	No	No	180 SF
RM-12	2	AS 16-2	HA-16	Turquoise Linoleum	Non-Friable	Good	Miscellaneous	No	No	180 SF
RM-13	2	AS 17-1	HA-17	Gold tile	Non-Friable	Good	Miscellaneous	Yes	5% Chrysotile	35 SF
RM-13	2	AS 17-2	HA-17	Gold tile	Non-Friable	Good	Miscellaneous	Yes	NA	35 SF
RM-13	2	AS 18-1	HA-18	Black tile	Non-Friable	Good	Miscellaneous	No	No	35 SF
RM-13	2	AS 18-2	HA-18	Black tile	Non-Friable	Good	Miscellaneous	No	No	35 SF
RM-6	1	AS 19-1	HA-19	Dark brown tile	Non-Friable	Good	Miscellaneous	Yes	10% Chrysotile	20 SF
RM-6	1	AS 19-2	HA-19	Dark brown tile	Non-Friable	Good	Miscellaneous	Yes	NA	20 SF
Basement	B	AS 20-1	HA-20	Basement cement floor	Non-Friable	Good	Miscellaneous	No	No	400 SF

**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		621 Brook St								
Survey Date		December 19, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
Basement	B	AS 20-2	HA-20	Basement cement floor	Non-Friable	Good	Miscellaneous	No	No	400 SF
Basement	B	AS 21-1	HA-21	Stack Cement	Non-Friable	Good	Miscellaneous	No	No	4 SF
Basement	B	AS 21-2	HA-21	Stack Cement	Non-Friable	Good	Miscellaneous	No	No	4 SF
RM-11	2	AS 22-1	HA-22	Sink under coating	Non-Friable	Good	Miscellaneous	Yes	5% Chrysotile	3 SF
RM-11	2	AS 22-2	HA-22	Sink under coating	Non-Friable	Good	Miscellaneous	Yes	NA	3 SF
Exterior	E	AS 23-1	HA-23	Siding	Non-Friable	Good	Miscellaneous	No	No	2600 SF
Exterior	E	AS 23-2	HA-23	Siding	Non-Friable	Good	Miscellaneous	No	No	2600 SF

**Table 2**  
**Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory**  
 621 Brook St.  
 Lansing, Ingham County, Michigan

<b>Universal Waste Inventory</b>		
Location	Type of Waste	Approximate Quantity
RM-1	Thermostat	1
<b>Hazardous Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
RM-8, Basement	1 Quart varnish	7
Basement	1 Gallon antifreeze	2
RM-8	1 Gallon bleach	2
RM-8	Starting fluid can	3
<b>Other Regulated Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
-	-	-

**ATTACHMENT A**

**PHOTO LOG**



Property Photos



621 Brook St, Front of House



Back of House

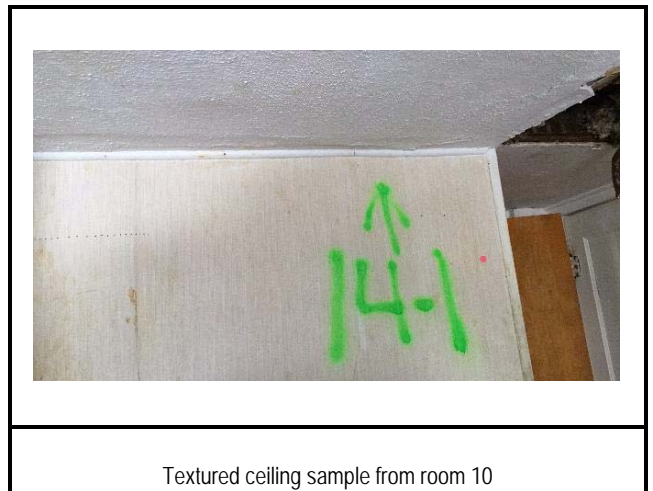
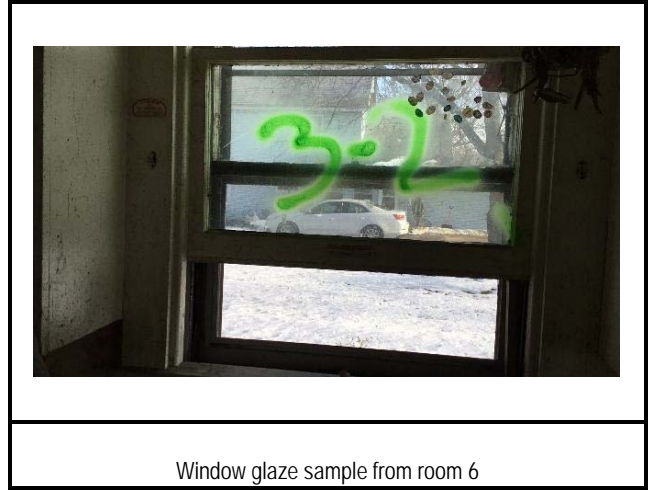
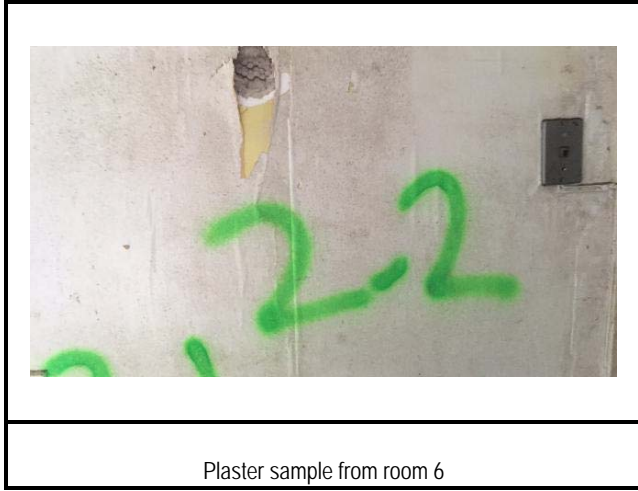


Side of House



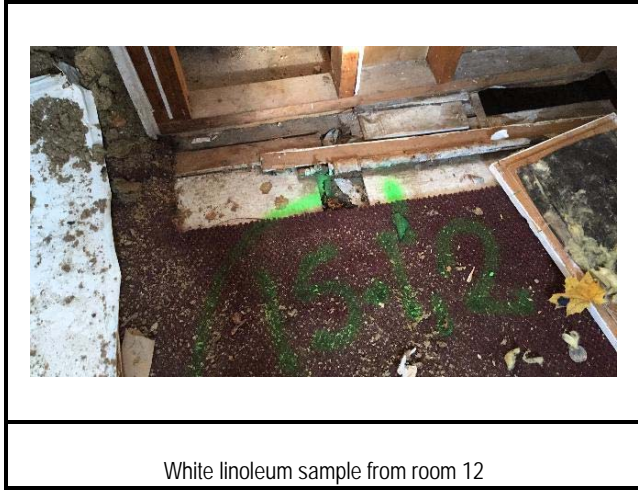
Side of House

Sample Photos





Sample Photos



# ATTACHMENT B

## LIMITATIONS







## REGULATED MATERIALS SURVEY LIMITATIONS

The Mannik & Smith Group, Inc. (MSG) performed its services associated with this Regulated Materials Survey (RMS) in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763, Occupational Safety and Health Administration (OHSA) 29 CFR 1926.62, and in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. This RMS and related documentation are site-specific, which means they pertain to the conditions of the site surveyed.

Unless otherwise noted, MSG's RMS is limited to accessible areas. Areas determined to be not structurally sound, safely reached, limited by excessive accumulated obstructions, require specialized equipment to access, in operable windows, etc., are not included in this survey. There may be areas where regulated materials, such as suspected asbestos-containing materials (SACM) and lead containing paint cannot be viewed and/or tested. MSG shall not be responsible for identifying all SACM, lead containing paint, or other hazardous materials located in inaccessible locations, including but not limited to, above a plaster ceiling, behind a wall, embedded in concrete, buried, confined spaces, unsafe areas, or otherwise not readily identifiable.

Destructive sampling will only be conducted when permission has been granted by the owner. Destructive survey locations are limited to areas where hidden SACM, lead containing paint, or other hazardous materials is reasonably thought to be present and sampling can be conducted in a safe manner. If regulated materials are found during the course of demolition and/or renovation activities that are not listed in this report, the material should be assumed as asbestos-containing, lead containing, or hazardous until it can be sampled and analyzed at an accredited laboratory and safe work practices should always be used if those areas are to be disturbed.

MSG has prepared a logical assessment program to reduce the client's risk of discovering unknown regulated materials and/or hazardous substances. The presence of subsurface regulated materials and/or hazardous substances is based solely on surface observations and/or information provided by others. Descriptions of subsurface conditions provided in this report are not warranted to be complete or accurate. This risk may be reduced by more extensive exploration on the site, but even with additional exploration, it is not possible to completely eliminate the risk of discovering regulated materials and/or hazardous conditions. It cannot and should not be assumed that samples collected and conditions observed at the time of the RMS are representative of an area that has not been sampled and/or tested.

In preparing this report, MSG may have relied on information obtained from or provided by others. MSG makes no representation or warranty regarding the accuracy or completeness of this information gathered through outside sources or subcontracted services. No warranty, guarantee, or certification of any kind, expressed or implied, at common law or created by statute, is extended, made, or intended by rendering these environmental consulting services or by furnishing this written report. Environmental conditions and regulations are subject to constant change and reinterpretation. One should not assume that any on-site conditions and/or regulatory statutes or rules will remain constant after MSG has completed the scope of work for this project. Furthermore, because the facts stated in this report are subject to professional interpretation, differing conclusions could be reached by other environmental professionals.

The report is intended to offer support to a building owner, construction manager, general contractor, abatement contractor, architect, and/or other parties authorized by the owner in generally locating asbestos-containing materials (ACM), lead containing paint, universal and hazardous wastes, and/or other regulated materials. This report does not have the required components to serve as an Asbestos Project Design document, Asbestos and/or Lead Containing Paint Abatement Work Plan, and/or a Health and Safety Plan. Therefore, this report should not be utilized as a project specification document. The results, findings, conclusions, and recommendations expressed in

this report are based only on conditions that were noted during this survey. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated. Quantities have been conservatively estimated and sampling locations have been described representatively; however, current site conditions should be field-verified by contractors bidding on and/or prior to abatement work.

**ATTACHMENT C**

**ANALYTICAL REPORTS AND CHAINS OF CUSTODY**





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 621 Brook St.  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73858  
Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 01 Cust. #: AS 10-1 Material: Vent Wrap Location: Room 6 Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 65%	Other - 35%
Lab ID #: 73858 - 02 Cust. #: AS 9-1 Material: Tan Tile Location: Room 6 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 30%	Other - 70%
Lab ID #: 73858 - 03 Cust. #: AS 9-2 Material: Tan Tile Location: Room 6 Appearance: Layer: of	Asbestos Present:  <b>NOT ANALYZED</b>	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 621 Brook St.  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73858  
Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 04 Cust. #: AS 1-2 Material: Drywall Location: Room 6 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 73858 - 05 Cust. #: AS 2-2 Material: Plaster - Finish Coat Location: Room 6 Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73858 - 05a Cust. #: AS 2-2 Material: Base Coat Location: Room 6 Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



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## Test Method, Polarized Light Microscopy (PLM)

Project: 621 Brook St.  
Project # I1440002

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Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73858  
Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 06 Cust. #: AS 3-1 Material: Window Glaze Location: Room 6 Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73858 - 07 Cust. #: AS 3-2 Material: Window Glaze Location: Room 6 Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73858 - 08 Cust. #: AS 19-1 Material: Dark Brown Tile Location: Room 6 Appearance: brown,fibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 621 Brook St.  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73858  
Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 08a Cust. #: AS 19-1 Material: Mastic Location: Room 6 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73858 - 09 Cust. #: AS 19-2 Material: Dark Brown Tile Location: Room 6 Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 73858 - 09a Cust. #: AS 19-2 Material: Mastic Location: Room 6 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



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## Test Method, Polarized Light Microscopy (PLM)

Project: 621 Brook St.  
Project # I1440002

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2193 Association Drive, Suite 200  
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ARI Report # 17-73858  
Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 10 Cust. #: AS 7-1 Material: Cream Linoleum Location: Room 5 Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73858 - 11 Cust. #: AS 7-2 Material: Cream Linoleum Location: Room 5 Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73858 - 12 Cust. #: AS 8-1 Material: Brown Tile Location: Room 5 Appearance: grey, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 2% Other - 98%

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Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 621 Brook St.  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73858  
Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 12a Cust. #: AS 8-1 Material: Mastic Location: Room 5 Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73858 - 13 Cust. #: AS 8-2 Material: Brown Tile Location: Room 5 Appearance: grey,fibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 2% Other - 98%
Lab ID #: 73858 - 13a Cust. #: AS 8-2 Material: Mastic Location: Room 5 Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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ARI Report # 17-73858  
Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 14 Cust. #: AS 1-3 Material: Drywall Location: Room 5 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 73858 - 15 Cust. #: AS 4-1 Material: Faux Wood Linoleum Location: Room 7 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%
Lab ID #: 73858 - 16 Cust. #: AS 4-2 Material: Faux Wood Linoleum Location: Room 7 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 10% Other - 70%

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Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 17 Cust. #: AS 5-1 Material: 9x9 Green Tile Location: Room 7 Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73858 - 18 Cust. #: AS 5-2 Material: 9x9 Green Tile Location: Room 7 Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73858 - 19 Cust. #: AS 6-1 Material: 9x9 White Tile Location: Room 7 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 20 Cust. #: AS 6-2 Material: 9x9 White Tile Location: Room 7 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73858 - 21 Cust. #: AS 2-1 Material: Plaster - Finish Coat Location: Room 4 Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73858 - 21a Cust. #: AS 2-1 Material: Base Coat Location: Room 4 Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%

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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 22 Cust. #: AS 10-2 Material: Vent Wrap Location: Room 4 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73858 - 23 Cust. #: AS 10-3 Material: Vent Wrap Location: Room 4 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73858 - 24 Cust. #: AS 11-1 Material: Blue Linoleum Location: Room 4 Appearance: blue, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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Date Collected: 12/19/17  
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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 25 Cust. #: AS 11-2 Material: Blue Linoleum Location: Room 4 Appearance: blue, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73858 - 26 Cust. #: AS 2-4 Material: Base Coat Location: Room 10 Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 73858 - 27 Cust. #: AS 1-4 Material: Drywall Location: Room 10 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Date Collected: 12/19/17  
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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 28 Cust. #: AS 12-1 Material: Shingles Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 73858 - 29 Cust. #: AS 12-2 Material: Shingles Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 73858 - 30 Cust. #: AS 14-1 Material: Textured Ceiling Location: Room 10 Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 2% Other - 98%

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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 31 Cust. #: AS 2-5 Material: Base Coat Location: Room 9 Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 73858 - 32 Cust. #: AS 14-2 Material: Textured Ceiling Location: Room 9 Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 2% Other - 98%
Lab ID #: 73858 - 33 Cust. #: AS 14-3 Material: Textured Ceiling Location: Room 9 Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 2% Other - 98%

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Date Collected: 12/19/17  
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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 34 Cust. #: AS 1-5 Material: Drywall Location: Room 9 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 73858 - 35 Cust. #: AS 13-1 Material: 9x9 Tan Tile Location: Room 11 Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73858 - 35a Cust. #: AS 13-1 Material: Mastic Location: Room 11 Appearance: brown, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 36 Cust. #: AS 13-2 Material: 9x9 Tan Tile Location: Room 11 Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73858 - 36a Cust. #: AS 13-2 Material: Mastic Location: Room 11 Appearance: brown, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73858 - 37 Cust. #: AS 22-1 Material: Sink Undercoating Location: Room 11 Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%

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Date Collected: 12/19/17  
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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 38 Cust. #: AS 22-2 Material: Sink Undercoating Location: Room 11 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73858 - 39 Cust. #: AS 15-1 Material: White Linoleum Location: Room 12 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73858 - 40 Cust. #: AS 15-2 Material: White Linoleum Location: Room 12 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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Date Collected: 12/19/17  
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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 41 Cust. #: AS 16-1 Material: Turquoise Linoleum Location: Room 12 Appearance: blue, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73858 - 42 Cust. #: AS 16-2 Material: Turquoise Linoleum Location: Room 12 Appearance: blue, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73858 - 43 Cust. #: AS 17-1 Material: Gold Tile Location: Room 13 Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%

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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 43a Cust. #: AS 17-1 Material: Mastic Location: Room 13 Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73858 - 44 Cust. #: AS 17-2 Material: Gold Tile Location: Room 13 Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73858 - 44a Cust. #: AS 17-2 Material: Mastic Location: Room 13 Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 45 Cust. #: AS 18-1 Material: Black Tile Location: Room 13 Appearance: blue, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73858 - 46 Cust. #: AS 18-2 Material: Black Tile Location: Room 13 Appearance: blue, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73858 - 47 Cust. #: AS 20-1 Material: Cement Floor Location: Basement Appearance: grey, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 48 Cust. #: AS 20-2 Material: Cement Floor Location: Basement Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73858 - 49 Cust. #: AS 21-1 Material: Stack Cement Location: Basement Appearance: grey,fibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 10% Other - 90%
Lab ID #: 73858 - 50 Cust. #: AS 21-2 Material: Stack Cement Location: Basement Appearance: grey,fibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 10% Other - 90%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 621 Brook St.  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73858  
Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 51 Cust. #: AS 23-1 Material: Siding Location: Exterior Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73858 - 52 Cust. #: AS 23-2 Material: Siding Location: Exterior Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73858 - 53 Cust. #: AS 1-1 Material: Drywall Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 621 Brook St.  
Project # I1440002

**Report To:**  
Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73858  
Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73858 - 54 Cust. #: AS 2-3 Material: Plaster - Finish Coat Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73858 - 54a Cust. #: AS 2-3 Material: Base Coat Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

## APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: 2193 Association Drive, Suite 200  
 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/19/2017 5:00  
 Project: 621 BROOK ST  
 Project #: 11440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

## Lab Use Only

Log-In: \_\_\_\_\_

Report: \_\_\_\_\_

Fax: \_\_\_\_\_

Verbal: \_\_\_\_\_

Email: \_\_\_\_\_

Turn Around Time: (circle one) \*\*\*\*Terms and conditions on the other side.

Rush \_\_\_\_\_ 24 Hour \_\_\_\_\_  
 48 Hour \_\_\_\_\_ 72 Hour \_\_\_\_\_  
 Other: \_\_\_\_\_ TTP yes / no  
 (Test Till Positive)

Samples received after 3pm  
 logged in next morning

## Circle analyses required, indicate type and quantity

Asbestos:    Bulk X Wipe    Point Count    PCM     
 Lead / Cad / Chrome: Air    Paint    Wipe (ASTM)    Bulk     
 Mold: Bulk    Air    BioSIS    Tape     
 TEM: Bulk    NIOSH    EPA Level II    Other   

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	AS 10-1	RM-6 - Vent wrap	Bag	HA-10	
2	AS 9-1	RM-6 - Tan tile	Bag	HA-9	
3	AS 9-2	RM-6 - Tan tile	Bag	HA-9	
4	AS 1-2	RM-6 - Drywall	Bag	HA-1	
5	AS 2-2	RM-6 - Plaster	Bag	HA-2	
6	AS 3-1	RM-6 - Window glaze	Bag	HA-3	
7	AS 3-2	RM-6 - Window glaze	Bag	HA-3	
8	AS 19-1	RM-6 - Dark brown tile	Bag	HA-19	
9	AS 19-2	RM-6 - Dark brown tile	Bag	HA-19	
10	AS 7-1	RM-5 - Cream Linoleum	Bag	HA-7	
11	AS 7-2	RM-5 - Cream Linoleum	Bag	HA-7	
12	AS 8-1	RM-5 - Brown tile	Bag	HA-8	

Relinquished By: [Signature]Received By: [Signature]

Relinquished By: \_\_\_\_\_

Received By: \_\_\_\_\_

Date: 12/21/17Time/Date: 12/21/17

Date: \_\_\_\_\_

Time/Date: \_\_\_\_\_

Revision R4 Date: May/2017

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11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
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 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/19/2017 5:00  
 Project: 621 BROOK ST  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) Terms and conditions on the other side.

Rush \_\_\_\_\_ 24 Hour \_\_\_\_\_  
 48 Hour \_\_\_\_\_ **72 Hour** \_\_\_\_\_  
 Other: \_\_\_\_\_ TTP **yes** / no  
 (Test Till Positive)

Samples received after 3pm  
 logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
13	AS 8-2	RM-5 - Brown tile	Bag	HA-8	
14	AS 1-3	RM-5 - Drywall	Bag	HA-1	
15	AS 4-1	RM-7 - Faux wood Linoleum	Bag	HA-4	
16	AS 4-2	RM-7 - Faux wood Linoleum	Bag	HA-4	
17	AS 5-1	RM-7 - Green 9x9 tile	Bag	HA-5	
18	AS 5-2	RM-7 - Green 9x9 tile	Bag	HA-5	
19	AS 6-1	RM-7 - White 9x9 tile	Bag	HA-6	
20	AS 6-2	RM-7 - White 9x9 tile	Bag	HA-6	
21	AS 2-1	RM-4 - Plaster	Bag	HA-2	
22	AS 10-2	RM-4 - Vent wrap	Bag	HA-10	
23	AS 10-3	RM-4 - Vent wrap	Bag	HA-10	
24	AS 11-1	RM-4 - Blue linoleum	Bag	HA-11	

Relinquished By: [Signature]

Date: 12/21/17

Revision R4 Date: May/2017

Received By: [Signature]

Time/Date: 12/21/17

Relinquished By: \_\_\_\_\_ Received By: \_\_\_\_\_

Date: \_\_\_\_\_ Time/Date: DEC 21 2017

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Customer Name: **MANNIK & SMITH GROUP**  
 Address: 2193 Association Drive, Suite 200  
 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/19/2017 5:00  
 Project: 621 BROOK ST  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) Terms and conditions on the other side.

Rush 24 Hour  
 48 Hour 72 Hour  
 Other: TTP (yes / no)  
 (Test Till Positive)

Samples received after 3pm  
 logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
25	AS 11-2	RM-4 - Blue linoleum	Bag	HA-11	
26	AS 2-4	RM-10 - Plaster	Bag	HA-2	
27	AS 1-4	RM-10 - Drywall	Bag	HA-1	
28	AS 12-1	Roof - Shingles	Bag	HA-12	
29	AS 12-2	Roof - Shingles	Bag	HA-12	
30	AS 14-1	RM-10 - Textured ceiling	Bag	HA-14	
31	AS 2-5	RM-9 - Plaster	Bag	HA-2	
32	AS 14-2	RM-9 - Textured ceiling	Bag	HA-14	
33	AS 14-3	RM-9 - Textured ceiling	Bag	HA-14	
34	AS 1-5	RM-9 - Drywall	Bag	HA-1	
35	AS 13-1	RM-11 - Tan 9x9 tile	Bag	HA-13	
36	AS 13-2	RM-11 - Tan 9x9 tile	Bag	HA-13	

Relinquished By: [Signature]

Date: 12/21/17

Revision R4 Date: May/2017

Received By: [Signature]

Time/Date: 12/21/17

Relinquished By: \_\_\_\_\_ Received By: \_\_\_\_\_

Date: \_\_\_\_\_ Time/Date: DEC 21 2017

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Date of Survey: 12/19/2017 5:00  
 Project: 621 BROOK ST  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) Terms and conditions on the other side.

Rush 24 Hour  
 48 Hour 72 Hour  
 Other: TTP yes / no  
 (Test Till Positive)

Samples received after 3pm  
 logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
37	AS 22-1	RM-11 - Sink under coating	Bag	HA-22	
38	AS 22-2	RM-11 - Sink under coating	Bag	HA-22	
39	AS 15-1	RM-12 - White linoleum	Bag	HA-15	
40	AS 15-2	RM-12 - White linoleum	Bag	HA-15	
41	AS 16-1	RM-12 - Turquoise Linoleum	Bag	HA-16	
42	AS 16-2	RM-12 - Turquoise Linoleum	Bag	HA-16	
43	AS 17-1	RM-13 - Gold tile	Bag	HA-17	
44	AS 17-2	RM-13 - Gold tile	Bag	HA-17	
45	AS 18-1	RM-13 - Black tile	Bag	HA-18	
46	AS 18-2	RM-13 - Black tile	Bag	HA-18	
47	AS 20-1	Basement - Basement cement floor	Bag	HA-20	
48	AS 20-2	Basement - Basement cement floor	Bag	HA-20	

Relinquished By: [Signature]

Received By: 12/21/17

Relinquished By: \_\_\_\_\_ Received By: **RECEIVED**

Date: 12/21/17

Time/Date: 12/21/17

Date: \_\_\_\_\_ Time/Date: DEC 21 2017

Revision R4 Date: May/2017

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**APEX Research, Inc.**

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: 2193 Association Drive, Suite 200  
 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/19/2017 5:00  
 Project: 621 BROOK ST  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) Terms and conditions on the other side.

Rush 24 Hour  
 48 Hour 72 Hour  
 Other: \_\_\_\_\_ TTP yes / no  
 (Test Till Positive)

Samples received after 3pm  
 logged in next morning

Circle analyses required, indicate type and quantity

Asbestos:   X   Bulk   X   Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
49	AS 21-1	Basement - Stack Cement	Bag	HA-21	
50	AS 21-2	Basement - Stack Cement	Bag	HA-21	
51	AS 23-1	Exterior - Siding	Bag	HA-23	
52	AS 23-2	Exterior - Siding	Bag	HA-23	
53	AS1-1	Drywall			
54	AS 2-3	Plaster			

Relinquished By: [Signature]

Received By: [Signature]

Relinquished By: \_\_\_\_\_ Received By: \_\_\_\_\_

Date: 12/21/17

Time/Date: 12/21/17

Date: \_\_\_\_\_ Time/Date: DEC 21 2017

Revision R4 Date: May/2017

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**ATTACHMENT D**

**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH**



# NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
(MDEQ) AIR QUALITY DIVISION  
NESHAP, 40 CFR Part 61, Subpart M



MICHIGAN DEPARTMENT OF LICENSING AND  
REGULATORY AFFAIRS (LARA), ASBESTOS PROGRAM,  
P.A. 135 OF 1986, AS AMENDED, Section 220 (1-4) or (8)

### DEQ/LARA USE ONLY

Postmark Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Rec'd Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Emergency Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Valid No. \_\_\_\_\_

OK  Send Def Ltr. Date of Def Ltr. \_\_\_\_/\_\_\_\_/\_\_\_\_

FOLLOW UP \_\_\_\_/\_\_\_\_/\_\_\_\_ Spoke w/ \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Notification No. \_\_\_\_\_ Trans No. \_\_\_\_\_

### Calculate LARA Asbestos Project Fee: (1% Project Fee)

Total Project Cost: \_\_\_\_\_ x 0.01 = \_\_\_\_\_

Type of Contractor: \_\_\_\_\_ License No.: \_\_\_\_\_

Licensing Authority: \_\_\_\_\_

### 1. NOTIFICATION:

Date of Notification: \_\_\_\_\_

Date of Revision(s): \_\_\_\_\_

Notification Type:  Original  Revised  Canceled  Annual

#### Mark appropriate boxes: (both DEQ and LARA may apply):

#### DEQ (NESHAP) [260 ln. ft./160 sq. ft. or more is threshold]

Planned Renovation – 10 **working** days notice

Emergency Renovation

Scheduled Demolition – 10 **working** days notice

Intentional Burn – 10 **working** days notice

Ordered Demolition

#### LARA (MIOSHA) [Will not accept annual notifications]

Demo, Reno, Encap. (>10 ln. ft./15 sq. ft.) 10 **calendar** days notice

Emergency Renovation/Encapsulation

### 2. PROJECT SCHEDULE:

**START DATE**                      **END DATE**

\* Renovation                      \_\_\_\_\_                      \_\_\_\_\_

+Asb. Removal                      \_\_\_\_\_                      \_\_\_\_\_

+Demolition:                      \_\_\_\_\_                      \_\_\_\_\_

Encapsulation:                      \_\_\_\_\_                      \_\_\_\_\_

**Work Schedule:** Please indicate the anticipated days of the week and work hours for the purpose of scheduling a compliance inspection.

**Days of the Week**                      **Work Hours**

Asb. Removal:                      \_\_\_\_\_                      \_\_\_\_\_

Demolition:                      \_\_\_\_\_                      \_\_\_\_\_

Encapsulation:                      \_\_\_\_\_                      \_\_\_\_\_

\* Includes setup, build enclosure, asbestos removal, demobilizing, etc.

+Include **only** those dates you are conducting asbestos removal/demo.

Check here if this is a multi-phased project, attach a schedule showing the start/end date of each phase.

### 3. ABATEMENT CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 4. DEMOLITION CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 5. FACILITY OWNER: ("Facility" includes Bridges)

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 6. FACILITY DESCRIPTION:

Facility Name: \_\_\_\_\_

Location Address/Description: \_\_\_\_\_

\_\_\_\_\_ If Apt. # of units: \_\_\_\_\_

City/Twp. \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

County: \_\_\_\_\_ Nearest Crossroad: \_\_\_\_\_

Size: (sq. ft.) \_\_\_\_\_ No. of Floors: \_\_\_\_\_ Floor No.: \_\_\_\_\_

Age: \_\_\_\_\_ Present Use: \_\_\_\_\_ Prior Use: \_\_\_\_\_

Specific Location(s) in Facility: \_\_\_\_\_

### 7. DISPOSAL SITE:

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

Location Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

### 8. WASTE TRANSPORTER 1:

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

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

### WASTE TRANSPORTER 2:

### 9. ORDERED DEMOLITIONS: (See NESHAP regulations for definition of "Ordered Demolition.") A copy of the official Order must accompany this notification.

Gov't Agency Ordering Demo: \_\_\_\_\_

Name/Title of Person Signing Order: \_\_\_\_\_

Date of Order: \_\_\_\_\_ Date Ordered to Begin: \_\_\_\_\_

### 10. IS ASBESTOS PRESENT? Yes No

To be removed prior to demolition

**Estimate the amount of asbestos:** Include RACM (Regulated Asbestos Containing Material) to be removed, encapsulated, etc. Also include the amount and type (floor tile, roofing, etc.) of non-friable Category I and/or Category II ACM that **will not** be removed prior to demolition. (**NOTE:** In a demolition, cementitious ACM **cannot** remain in a structure, as it is likely to become regulated in the demolition/handling process. It **must** be removed prior to demolition.)

RACM to be Removed

RACM to be Encapsulated

Non-friable ACM **not** removed prior to demo.

Category I

Category II

Units of Measure

				<input type="checkbox"/> Ln. Ft.	<input type="checkbox"/> Ln. M.
				<input type="checkbox"/> Sq. Ft.	<input type="checkbox"/> Sq. M.
				<input type="checkbox"/> Cu. Ft.*	<input type="checkbox"/> Cu. M.*

\*Volume (cubic ft./meters) should be used only if unable to measure by linear/square measure (example: asbestos has fallen off of surface).

(continued on reverse side)



**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH (continued)**

**11. PROJECT DESCRIPTION:** Complete **A) for Renovation** (asbestos removal/encapsulation) and/or **B) for Demolition**:

**A) RENOVATION:** Mark all surfaces/types of RACM to be removed:

- Piping     Fittings     Boiler(s)     Tanks(s)  
 Beam(s)     Duct(s)     Tunnel(s)     Ceiling Tile(s)  
 Mag Block     Other (describe) \_\_\_\_\_

**Encapsulation (for LARA):** Mark surfaces/types to be encapsulated:

- Piping     Fittings     Boiler(s)     Tank(s)  
 Beam(s)     Duct(s)     Tunnel(s)     Ceiling Tile(s)  
 Other (describe) \_\_\_\_\_

**Method of removal:** Describe how the asbestos will be removed from the surface (example: glove bag, scrape with hand tools, cut in sections and carefully lower, etc.): \_\_\_\_\_  
 \_\_\_\_\_

**B) DEMOLITION:** Describe the method of demolition of facility, bridge, etc., and indicate if complete or partial. If partial, describe which part of facility bridge, etc., will be demolished: \_\_\_\_\_  
 \_\_\_\_\_

**12. ENGINEERING CONTROLS:** Describe work practices and engineering controls used to prevent visible emissions before, during, and after removal, and until proper disposal: \_\_\_\_\_  
 \_\_\_\_\_

**13. UNEXPECTED ASBESTOS:** Describe the steps you intend to follow in the event that unexpected RACM is found or previously non-friable asbestos becomes friable (crumbled, pulverized, reduced to powder, etc.) and therefore regulated: \_\_\_\_\_  
 \_\_\_\_\_

**14. PROCEDURE(S) USED TO DETECT THE PRESENCE OF ASBESTOS:** **A)** Indicate how you determined whether or not asbestos is in the facility. If analytical sampling was used, describe method of analysis. (The determination of the presence or absence of asbestos must be made prior to submitting a renovation/demolition notification.): \_\_\_\_\_  
 \_\_\_\_\_

**B)** Name, address, and phone number of company performing asbestos survey: \_\_\_\_\_

**C)** Name, accreditation number of inspector, and date of inspection: \_\_\_\_\_

**15. EMERGENCY RENOVATIONS:** Date/time of emergency: \_\_\_\_\_ Describe the sudden, unexpected event: \_\_\_\_\_  
 \_\_\_\_\_

Explain how the event caused unsafe conditions, and/or would cause equipment damage and/or an unreasonable financial burden: \_\_\_\_\_  
 \_\_\_\_\_

**16.** I certify that an individual trained in the provisions of 40 CFR Part 61, Subpart M, will be on-site during the renovation and during demolition involving RACM above the threshold and/or during an ordered demolition. Evidence that this person has completed the required training will be available for inspection at the renovation or demolition site.

\_\_\_\_\_  
*Signature of Owner or Abatement Contractor      Date*

\_\_\_\_\_  
*Signature of Owner or Demolition Contractor      Date*

**17. Signature Requirements for Projects with Negative Pressure Enclosures: (required by LARA)**  
**Per Section 221(1)(2) of P.A. 135 of 1986, as amended, clearance air monitoring is required for any asbestos abatement project involving 10 linear feet/15 square feet or more of friable material which is performed within a negative pressure enclosure. I (the building owner or lessee) have been advised by the contractor of my responsibility under Act 135 to have clearance air monitoring performed on this project.**

\_\_\_\_\_  
*Signature of Building Owner or Lessee      Date*

\_\_\_\_\_  
*Signature of Asbestos Abatement Contractor Representative      Date*

**NOTE:** It is not mandatory that a signed copy be sent to LARA unless requested. For affected projects, this section of the notification form must be completed, signed, and made part of your records before the project begins.

**18. I certify that the above information is correct:**

\_\_\_\_\_  
*Printed Name of Owner/Operator      Date*

\_\_\_\_\_  
*Signature of Owner/Operator      Date*

**MAILING ADDRESSES/PHONE NUMBERS:** (See Item 1 to determine which agency requirements/regulations are applicable to your project.)

For **Public Act 135 of 1986, as amended, Section 220 (1-4) or (8)**, mail to address below. For more info visit:  
<http://www.michigan.gov/asbestos>

MIOSHA Asbestos Program  
 LARA, CSHD  
 P.O. Box 30671  
 Lansing, MI 48909-8171

517.636.4551 (office), 517.322.1713 (fax)

For **NESHAP Demolitions/Renovations, 40 CFR, Part 61, Subpart M**, please use the e-submittal process. For more information visit <http://www.michigan.gov/air>, under Air Links click on Asbestos NESHAP Program.

NESHAP Asbestos Program  
 DEQ, AQD  
 P.O. Box 30260  
 Lansing, MI 48909-7760

517.284.6777 (Office)



December 29, 2017

Ms. Roxanne Case  
 Grant Manager  
 Ingham County Land Bank  
 3024 Turner Street  
 Lansing, Ingham County, Michigan 48906

Re: Pre-Demolition Regulated Materials Survey  
 910 N Chestnut St, Lansing, Ingham County, MI

Dear Ms. Case:

The Mannik & Smith Group, Inc. (MSG) is pleased to present Ingham County with the results of the limited pre-demolition regulated materials survey (RMS) performed at 910 N Chestnut St, Lansing, Ingham County, Michigan (hereinafter referred to as the "Site") by Kory McKay (Accreditation Number A47903).

**SUMMARY**

Building Information	
Property Address	910 N Chestnut St, Lansing, MI
Parcel #	33-01-01-09-354-051
No. Stories	2
Square Footage (approx.)	1,300 SF
Siding	Transite
Basement	Yes
Garage	No



Asbestos Containing Material				
Location	Material Group	Friable/Non Friable	Asbestos	Quantity
RM-1, RM-2, RM-3, RM-4, RM-5, RM-6, RM-7, RM-8, RM-9, RM-10, RM-11	Plaster	Non Friable	2% Chrysotile	3,100 SF
RM-1, RM-3, RM-5, RM-6	Vent wrap	Friable	65% Chrysotile	140 SF
RM-4	Brown tile	Non Friable	10% Chrysotile	120 SF
Exterior	Siding	Non Friable	20% Chrysotile	2,900 SF

Hazardous Materials		
Location	Material Description	Quantity
RM-4	Spray paint can	1

TECHNICAL SKILL.  
 CREATIVE SPIRIT.

Universal Waste Inventory		
Location	Material Description	Quantity
RM-11	Smoke detector	1
RM-1	Thermostat	1
RM-4	Fire extinguisher	1

## PURPOSE AND SCOPE OF WORK

The purpose of the RMS was to identify, quantify and document the location of regulated materials that may be encountered during demolition of the on-site structure. To accomplish this purpose, MSG performed the following scope of work:

- 1) Pre-demolition asbestos-containing material (ACM) survey.
- 2) Universal wastes, hazardous materials, and other regulated wastes survey.

## METHODOLOGIES

The RMS was conducted on December 19, 2017. Methodologies employed during the completion of each task of the RMS are detailed below.

### ACM Survey Procedures

The ACM survey was performed in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763. The National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations govern demolition and renovation activities in which asbestos is present. The NESHAP rule distinguishes between Regulated Asbestos-Containing Materials (RACM) that would readily release asbestos fibers when damaged or disturbed and those materials that are unlikely to result in significant fiber release during demolition activities. The purpose of this survey is to determine if ACM within the Site building are RACM and thus, subject to the NESHAP, and to comply with the Michigan Occupational Safety and Health Administration (MIOSHA) and guidelines set forth in the Occupational Safety and Health Administration (OSHA) Regulations Standards 29 CFR 1910.1101.

RACM, as defined by NESHAP, is classified into four parts, (1) friable asbestos material, (2) Category I non-friable ACM (packing, gaskets, floor tile and roofing products) that has become friable, (3) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (4) Category II non-friable ACM (all other ACM products) 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.

The suspect ACM identified during this survey was grouped into homogeneous materials (i.e. similar materials which are uniform in color and texture) and:

- Described and quantified it in linear feet (LF) or square feet (SF);
- Identified and classified as friable or non-friable;
- Assessed as being in good, fair or poor condition;
- Assigned an EPA classification type (surfacing material, thermal system insulation or miscellaneous);
- Classified as RACM or non-RACM; and
- Sampled, or identified as presumed ACM (PACM).

MSG performed services associated with the ACM survey in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. The ACM survey included a systematic visual inspection of readily accessible areas of the Site building. Destructive sampling methods were used and suspect ACM samples were collected by State of Michigan Accredited Asbestos Inspector, Kory McKay (Accreditation Number

A47903). Based on the quantity of each classification of material, MSG collected samples of each suspect ACM in accordance with EPA guidelines.

### **Universal Wastes and Hazardous Material Survey Procedures**

MSG identified and inventoried universal wastes and hazardous materials by a visual reconnaissance of the Site. Materials were identified, described, and quantified to the extent possible; however, no equipment or containers were opened and/or sampled as part of this survey.

A hazardous material, as defined in OSHA 29 CFR 1910.1200, is any item or chemical which is a "health hazard" or "physical hazard", including the following:

- Chemicals that are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, hepatotoxins, nephrotoxins, neurotoxins, agents that act on the hematopoietic system, and agents that damage the lungs, skin, eyes, or mucous membranes;
- Chemicals that are combustible liquids, compressed gases, explosives, flammable liquids, flammable solids, organic peroxides, oxidizers, pyrophorics, unstable (reactive) or water-reactive;
- Chemicals that, in the course of normal handling, use or storage, may produce or release dusts, gases, fumes, vapors, mists or smoke which have any of the above characteristics; and
- Any item or chemical which, when being transported or moved, is a risk to public safety or an environmental hazard, and is regulated as such by one or more of the following:
  - DOT - Department of Transportation; Hazardous Materials Regulations (49 CFR 100-180);
  - IMO - International Maritime Organization; International Maritime Dangerous Goods (IMDG) Code;
  - IATA - International Air Transport Association; Dangerous Goods Regulations;
  - ICAO - International Civil Aviation Organization; Technical Instructions; and
  - AF - Air Force "INTERSERVICE" Manual, Preparing Hazmat for Military Air Shipments (AFMAN 24-204).

Hazardous materials may also include:

- Any item or chemical listed in the United States Environmental Protection Agency (USEPA) *List of Hazardous Substances and Reportable Quantities*, dated September 1992.
- Noticeable as inventory under the reporting requirements of the Hazardous Chemical Reporting (40 CFR Part 302).
- An environmental release under the reporting requirements of the Toxic Chemical Release Reporting: Community Right To Know (40 CFR Part 372) or under Part 201, Environmental Remediation of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 201) and Part 213, Leaking Underground Storage Tanks (Part 213).

These would include chemicals with special characteristics which, in the opinion of the manufacturer, can cause harm to people, plants, or animals when released by spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other receptacles).

Universal wastes are waste that comes primarily from consumer products containing mercury, lead, cadmium or other substances that are hazardous to human health and the environment. These items cannot be discarded in household trash nor disposed of in landfills but have less stringent handling and disposal requirements than hazardous waste streams. In Michigan, universal wastes are regulated by the MDEQ Office of Waste Management and Radiological Protection under Part 111 of Act 451 and the federal Resource Conservation and Recovery Act (RCRA) of 1976 under 40 CFR Part 273. Universal waste is also regulated by the US Department of Transportation (US DOT) under 49 CFR Parts 171 through 180. Most of the universal waste requirements overseen by the DEQ are addressed by R 299.9228 of Part 111 of 1994 P.A. 451, as amended and 40 CFR Part 273. These regulations are designed to encourage proper collection, recycling, treatment, or disposal of these wastes.

Examples of universal waste are mercury-containing equipment (e.g. thermostats, barometers, manometers, temperature and pressure gauges, and mercury switches), nickel-cadmium and spent lead-acid batteries, lamps (e.g. incandescent, fluorescent, high intensity discharge, neon, mercury vapor, and high pressure sodium and metal halide), pesticides, polychlorinated biphenyl (PCB) containing transformers and light ballasts, stored chemical and/or petroleum products, etc. In Michigan, Part 111 also includes pharmaceutical and consumer electronics as additional types of universal wastes.

### **Other Regulated Materials**

This RMS also included identifying and inventorying other regulated materials which may pose physical or chemical concerns during demolition of the Site building(s) including chlorofluorocarbon (CFC) containing devices, tanks, vessels, equipment, and building materials that may contain or become contaminated with hazardous materials.

Specifically, CFC containing devices are regulated Under Title VI of the Clean Air Act (CAA). The Stratospheric Protection Division of the EPA manages programs protecting the stratospheric ozone layer. Title 40, Part 82 of the Code of Federal Regulations contains the EPA regulations protecting the ozone layer. The RMS survey of the premises identified and quantified any CFC containers and CFC containing equipment, which could include the following:

- Drinking fountains, air conditioners, refrigerators
- Air conditioners in control panels and other process equipment
- Water and air chillers
- Roof top and stand-alone air conditioners
- Cafeteria equipment: freezers, walk-in coolers/freezers
- CFC canisters and cylinders

In Michigan, underground storage tanks are regulated under the authority of Part 211, Underground Storage Tank Regulations, of Act 451 of 1994, as amended, and the Michigan Underground Storage Tank Rules (MUSTR). Therefore, this survey included whether any evidence of underground storage tanks and related piping and dispensers were present at the Site.

MSG also surveyed for the presence of equipment, other storage tanks, and materials that may contain or be contaminated by regulated chemicals. These include, but may not be comprehensive of:

- Above ground storage tanks
- Oil-containing equipment (hydraulic equipment, blowers, fans, motors, elevators, compressors, etc.)
- Fire brick
- Contaminated building materials (concrete, block walls, wood, plaster, etc.) with staining, odor or other signs of a hazardous chemical release

## **SURVEY RESULTS**

The following subsections include a discussion of the RMS results. Photographs of the residence are located in the *Attachment A, Photo Log*. The results of this report are valid as of the report date, subject to the limitations presented in *Attachment B, Limitations*.

### **ACM Survey Results**

MSG identified sixteen (16) homogenous materials that were suspect as asbestos containing during the ACM survey. Thirty-six (36) bulk samples were collected from these suspect homogeneous materials and were submitted to Apex Research, Inc. for laboratory analysis of Bulk Materials by Polarized Light Microscopy using USEPA Method 600/R-93/116. Apex is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) to analyzed bulk samples for asbestos content. Of the aforementioned suspect homogenous materials identified during this ACM survey, laboratory analysis found four (4)

homogenous materials (samples 1-5, 7-3, 10-1 and 16-1) contained greater than 1% asbestos. The EPA defines ACM as materials containing greater than 1% asbestos.

A point-count quantification procedure (PCQM) allows for lower detection limits than calibrated visual estimation (CVES), which is the quantification method widely used in asbestos analysis via Polarized Light Microscopy (PLM). If the asbestos content is found to contain less than 10% asbestos as determined by a method other than point counting by PLM, it can only be treated as non-ACM if verified to contain less than 1% by the PCQM. If not point-counted, the sample must be assumed to be greater than 1% and thus considered and treated as ACM. It is MSG's experience that point counting samples with an estimated PLM asbestos content of more than 3% does not yield significantly different analytical results. A point count was conducted on sample 1-5.

Suspect ACM sample locations are depicted on the attached figure. See *Table 1, Asbestos Sampling Results* for a listing of homogeneous materials identified by MSG during this survey. A copy of the analytical reports including chains of custody is attached in *Attachment C, Analytical Reports and Chains of Custody*.

### **Universal Wastes, Hazardous Materials, and Other Regulated Materials Survey Results**

Universal wastes, hazardous materials, and/or other regulated materials wastes were identified within the Site building. Quantities identified are provided in *Table 2, Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory*.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Asbestos Containing Materials**

Of the sixteen (16) homogenous materials collected as part of the ACM survey, four (4) homogenous materials contained asbestos greater than 1% (samples 1-5, 7-3, 10-1 and 16-1) with these four (4) homogenous materials being classified as RACM. All materials containing ACM must be disposed of in a licensed landfill.

Prior to demolition, a notification of intent to demolish shall be made to the Michigan Department of Environmental Quality Air Quality Division (MDEQ-AQD) and Licensing and Regulatory Affairs (LARA), Asbestos Program. Notification, according to the procedure described by the NESHAP, Title 40 of the Code of Federal Regulations, Part 61, Subpart M, Notification, for renovation and demolition projects should be followed. A copy of this notification form is provided in *Attachment D, Notification of Intent to Renovate/Demolish*. This form shall be completed by the contractor who completes the demolition.

If additional suspect ACMs are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, shall be surveyed, tested, and abated if warranted. If suspect ACMs are determined to be RACM that would be disturbed during demolition activities, the RACM must be properly removed by a licensed asbestos abatement contractor.

Category I and Category II Non-Friable ACM may often be left in place during demolition activities if the ACM is not subjected to sanding, grinding, cutting, or abrading or has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material during the course of demolition.

### **Universal Wastes, Hazardous Materials, and Other Regulated Materials**

The universal waste, hazardous materials, and other regulated materials (see Table 2) must be properly characterized (as necessary) and properly removed from the Site building for recycling and/or disposed of in accordance with Parts 111, 115, or 147 of Michigan Public Act 451 of 1994, as amended. If additional universal wastes, hazardous materials, and other regulated materials are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe,

inaccessible, concealed and/or in buried areas, these materials shall be characterized (as necessary) and properly removed in accordance with the above-mentioned regulations.

If you have any questions or concerns regarding the above information please contact us at 517-316-9232.

Sincerely,



Kory McKay  
Environmental Scientist  
Accreditation Number A47903



Charlie Bush  
Senior Project Manager  
Accreditation Number A34293

Attachments

FIGURE







TECHNICAL SKILL.  
CREATIVE SPIRIT.

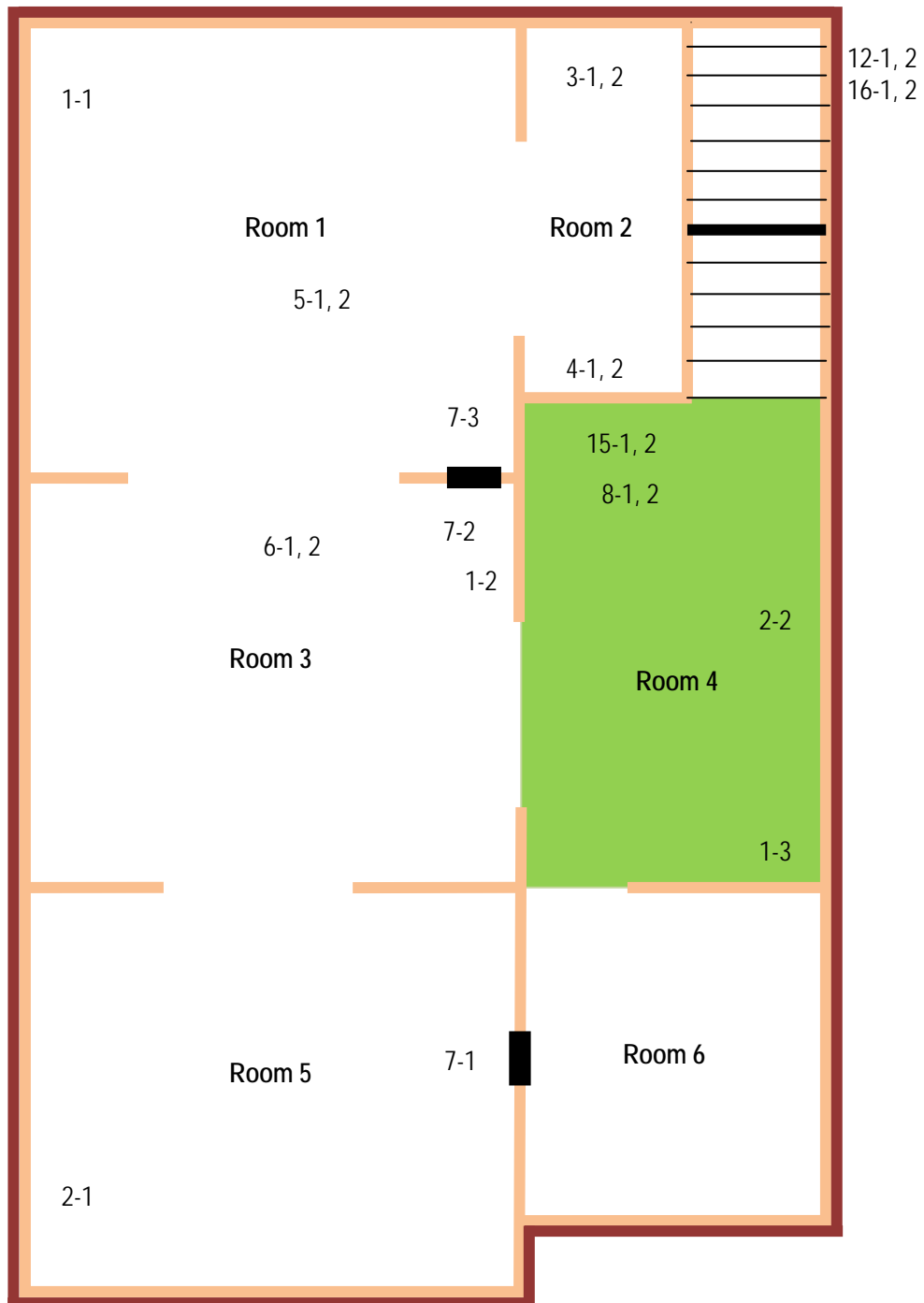
721 N. Capitol Avenue, Suite 2, Lansing, Michigan 48906 Tel: 517.316.9232 Fax: 517.316.9233 www.MannikSmithGroup.com

Address: 910 N Chestnut St

Date: December 121, 2017

Drawing not to scale

1<sup>st</sup> Floor



= Plaster (3,100 SF)

= Brown tile (120 SF)

= Siding (2,900 SF)

= Vent with wrap (140 SF)

#-# = Asbestos Sample



TECHNICAL SKILL.  
CREATIVE SPIRIT.

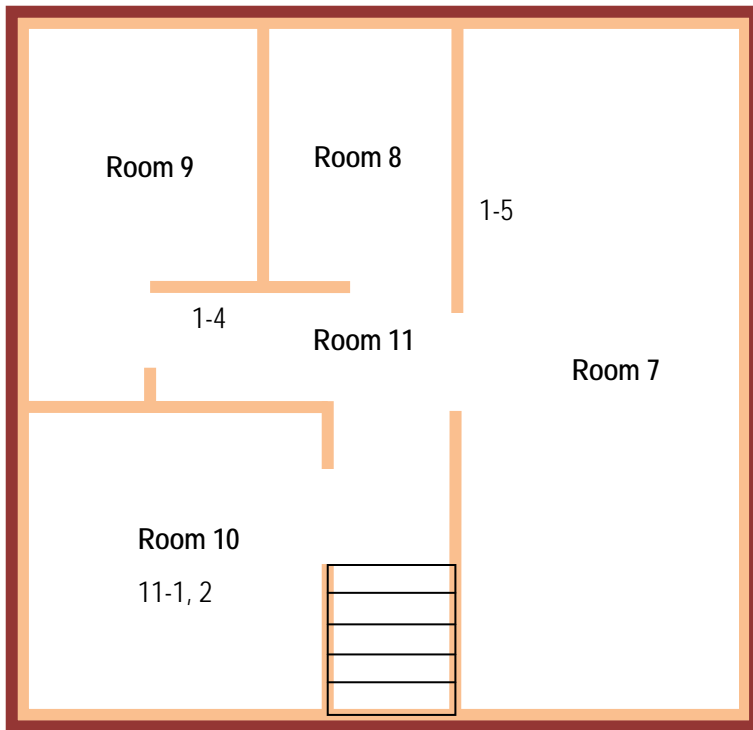
721 N. Capitol Avenue, Suite 2, Lansing, Michigan 48906 Tel: 517.316.9232 Fax: 517.316.9233 www.MannikSmithGroup.com

Address: 910 N Chestnut St

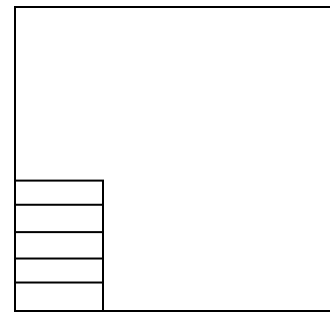
Date: December 21, 2017

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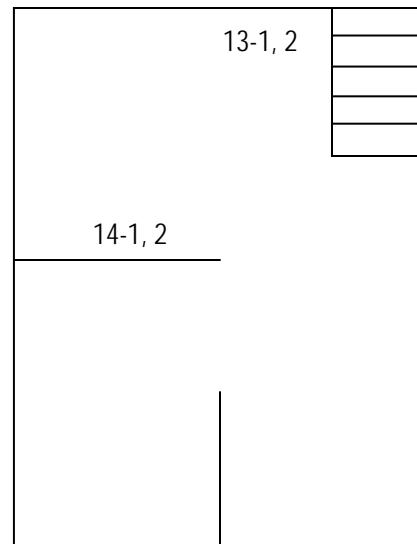
2<sup>nd</sup> Floor




Attic



Basement



#-# = Asbestos Sample

 = Plaster (3,100 SF)

 = Siding (2,900 SF)

TABLES



**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		910 N Chestnut St								
Survey Date		December 19, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-1	1	AS 1-1	HA-1	Plaster	Non-Friable	Good	Miscellaneous	Yes	NA	3100 SF
RM-3	1	AS 1-2	HA-1	Plaster	Non-Friable	Good	Miscellaneous	Yes	NA	3100 SF
RM-4	1	AS 1-3	HA-1	Plaster	Non-Friable	Good	Miscellaneous	Yes	NA	3100 SF
RM-11	2	AS 1-4	HA-1	Plaster	Non-Friable	Good	Miscellaneous	Yes	NA	3100 SF
RM-7	2	AS 1-5	HA-1	Plaster	Non-Friable	Good	Miscellaneous	Yes	2% Chrysotile	3100 SF
RM-5	1	AS 2-1	HA-2	Window glaze	Non-Friable	Good	Miscellaneous	No	No	220 SF
RM-4	1	AS 2-2	HA-2	Window glaze	Non-Friable	Good	Miscellaneous	No	No	220 SF
RM-2	1	AS 3-1	HA-3	Green red tile	Non-Friable	Good	Miscellaneous	No	No	60 SF
RM-2	1	AS 3-2	HA-3	Green red tile	Non-Friable	Good	Miscellaneous	No	No	60 SF
RM-2	1	AS 4-1	HA-4	Faux stone tile	Non-Friable	Good	Miscellaneous	No	No	240 SF
RM-2	1	AS 4-2	HA-4	Faux stone tile	Non-Friable	Good	Miscellaneous	No	No	240 SF
RM-1	1	AS 5-1	HA-5	Cream blue tile	Non-Friable	Good	Miscellaneous	No	No	600 SF
RM-1	1	AS 5-2	HA-5	Cream blue tile	Non-Friable	Good	Miscellaneous	No	No	600 SF
RM-3	1	AS 6-1	HA-6	Blue tile	Non-Friable	Good	Miscellaneous	No	No	150 SF
RM-3	1	AS 6-2	HA-6	Blue tile	Non-Friable	Good	Miscellaneous	No	No	150 SF

**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		910 N Chestnut St								
Survey Date		December 19, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-5	1	AS 7-1	HA-7	Vent wrap	Friable	Good	Miscellaneous	Yes	NA	140 SF
RM-3	1	AS 7-2	HA-7	Vent wrap	Friable	Good	Miscellaneous	Yes	NA	140 SF
RM-1	1	AS 7-3	HA-7	Vent wrap	Friable	Good	Miscellaneous	Yes	65% Chrysotile	140 SF
RM-4	1	AS 8-1	HA-8	White tile	Non-Friable	Good	Miscellaneous	No	No	120 SF
RM-4	1	AS 8-2	HA-8	White tile	Non-Friable	Good	Miscellaneous	No	No	120 SF
RM-4	1	AS 9-1	HA-9	Faux wood tile	Non-Friable	Good	Miscellaneous	No	No	120 SF
RM-4	1	AS 9-2	HA-9	Faux wood tile	Non-Friable	Good	Miscellaneous	No	N	120 SF
RM-4	1	AS 10-1	HA-10	Brown tile	Non-Friable	Good	Miscellaneous	Yes	10% Chrysotile	120 SF
RM-4	1	AS 10-2	HA-10	Brown tile	Non-Friable	Good	Miscellaneous	Yes	NA	120 SF
RM-10	2	AS 11-1	HA-11	Black white tile sandwich	Non-Friable	Good	Miscellaneous	No	No	100 SF
RM-10	2	AS 11-2	HA-11	Black white tile sandwich	Non-Friable	Good	Miscellaneous	No	No	100 SF
Roof	E	AS 12-1	HA-12	Shingles	Non-Friable	Good	Miscellaneous	No	No	500 SF
Roof	E	AS 12-2	HA-12	Shingles	Non-Friable	Good	Miscellaneous	No	No	500 SF
Basement	B	AS 13-1	HA-13	Basement cement floor	Non-Friable	Good	Miscellaneous	No	No	400 SF
Basement	B	AS 13-2	HA-13	Basement cement floor	Non-Friable	Good	Miscellaneous	No	No	400 SF

**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		910 N Chestnut St								
Survey Date		December 19, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
Basement	B	AS 14-1	HA-14	Stack Cement	Non-Friable	Good	Miscellaneous	No	No	4 SF
Basement	B	AS 14-2	HA-14	Stack Cement	Non-Friable	Good	Miscellaneous	No	No	4 SF
RM-4	1	AS 15-1	HA-15	Sink coating	Non-Friable	Good	Miscellaneous	No	No	3 SF
RM-4	1	AS 15-2	HA-15	Sink coating	Non-Friable	Good	Miscellaneous	No	No	3 SF
Exterior	E	AS 16-1	HA-16	Siding	Non-Friable	Good	Miscellaneous	Yes	20% Chrysotile	2900 SF
Exterior	E	AS 16-2	HA-16	Siding	Non-Friable	Good	Miscellaneous	Yes	NA	2900 SF

**Table 2**  
**Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory**  
 910 N Chestnut St.  
 Lansing, Ingham County, Michigan

<b>Universal Waste Inventory</b>		
Location	Type of Waste	Approximate Quantity
RM-11	Smoke detector	1
RM-1	Thermostat	1
RM-4	Fire extinguisher	1
<b>Hazardous Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
RM-4	Spray paint can	1
<b>Other Regulated Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
-	-	-

**ATTACHMENT A**

**PHOTO LOG**





Property Photos



910 N Chestnut St, Front of House



Back of House

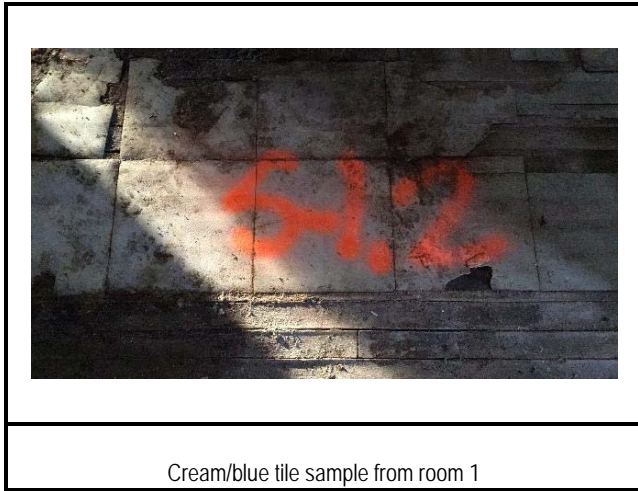
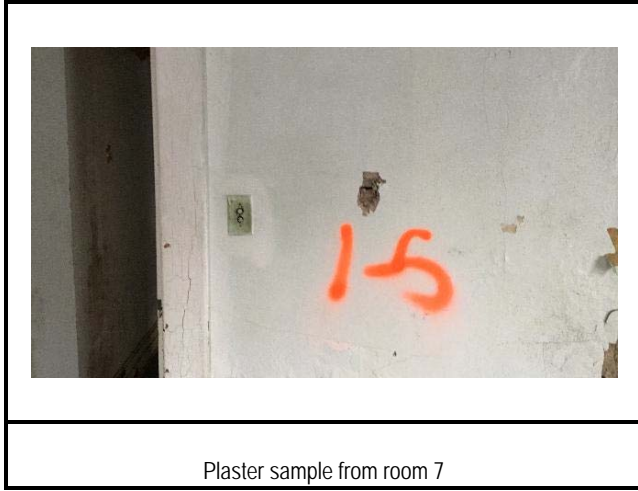


Side of House

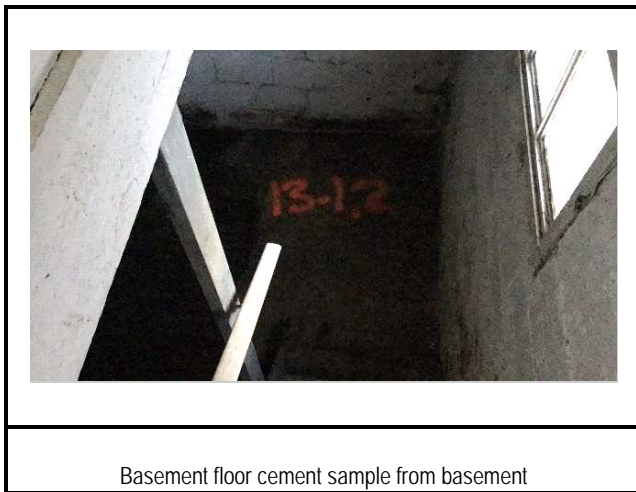


Side of House

Sample Photos



### Sample Photos





# ATTACHMENT B

## LIMITATIONS





## REGULATED MATERIALS SURVEY LIMITATIONS

The Mannik & Smith Group, Inc. (MSG) performed its services associated with this Regulated Materials Survey (RMS) in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763, Occupational Safety and Health Administration (OHSA) 29 CFR 1926.62, and in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. This RMS and related documentation are site-specific, which means they pertain to the conditions of the site surveyed.

Unless otherwise noted, MSG's RMS is limited to accessible areas. Areas determined to be not structurally sound, safely reached, limited by excessive accumulated obstructions, require specialized equipment to access, in operable windows, etc., are not included in this survey. There may be areas where regulated materials, such as suspected asbestos-containing materials (SACM) and lead containing paint cannot be viewed and/or tested. MSG shall not be responsible for identifying all SACM, lead containing paint, or other hazardous materials located in inaccessible locations, including but not limited to, above a plaster ceiling, behind a wall, embedded in concrete, buried, confined spaces, unsafe areas, or otherwise not readily identifiable.

Destructive sampling will only be conducted when permission has been granted by the owner. Destructive survey locations are limited to areas where hidden SACM, lead containing paint, or other hazardous materials is reasonably thought to be present and sampling can be conducted in a safe manner. If regulated materials are found during the course of demolition and/or renovation activities that are not listed in this report, the material should be assumed as asbestos-containing, lead containing, or hazardous until it can be sampled and analyzed at an accredited laboratory and safe work practices should always be used if those areas are to be disturbed.

MSG has prepared a logical assessment program to reduce the client's risk of discovering unknown regulated materials and/or hazardous substances. The presence of subsurface regulated materials and/or hazardous substances is based solely on surface observations and/or information provided by others. Descriptions of subsurface conditions provided in this report are not warranted to be complete or accurate. This risk may be reduced by more extensive exploration on the site, but even with additional exploration, it is not possible to completely eliminate the risk of discovering regulated materials and/or hazardous conditions. It cannot and should not be assumed that samples collected and conditions observed at the time of the RMS are representative of an area that has not been sampled and/or tested.

In preparing this report, MSG may have relied on information obtained from or provided by others. MSG makes no representation or warranty regarding the accuracy or completeness of this information gathered through outside sources or subcontracted services. No warranty, guarantee, or certification of any kind, expressed or implied, at common law or created by statute, is extended, made, or intended by rendering these environmental consulting services or by furnishing this written report. Environmental conditions and regulations are subject to constant change and reinterpretation. One should not assume that any on-site conditions and/or regulatory statutes or rules will remain constant after MSG has completed the scope of work for this project. Furthermore, because the facts stated in this report are subject to professional interpretation, differing conclusions could be reached by other environmental professionals.

The report is intended to offer support to a building owner, construction manager, general contractor, abatement contractor, architect, and/or other parties authorized by the owner in generally locating asbestos-containing materials (ACM), lead containing paint, universal and hazardous wastes, and/or other regulated materials. This report does not have the required components to serve as an Asbestos Project Design document, Asbestos and/or Lead Containing Paint Abatement Work Plan, and/or a Health and Safety Plan. Therefore, this report should not be utilized as a project specification document. The results, findings, conclusions, and recommendations expressed in

this report are based only on conditions that were noted during this survey. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated. Quantities have been conservatively estimated and sampling locations have been described representatively; however, current site conditions should be field-verified by contractors bidding on and/or prior to abatement work.

**ATTACHMENT C**

**ANALYTICAL REPORTS AND CHAINS OF CUSTODY**





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 910 N. Chestnut  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73862  
Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73862 - 01 Cust. #: AS 12-1 Material: Shingles Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 73862 - 02 Cust. #: AS 12-2 Material: Shingles Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 20% Other - 80%
Lab ID #: 73862 - 03 Cust. #: AS 1-5 Material: Plaster - Base Coat Location: Room 7 Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 2.0%  <b>POINT COUNT RESULT</b>	Cellulose - 2% Other - 96%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0





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Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73862 - 04 Cust. #: AS 1-4 Material: Plaster - Base Coat Location: Room 11 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73862 - 05 Cust. #: AS 11-1 Material: Black/White Tile Location: Room 10 Appearance: black,nonfibrous,homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 05a Cust. #: AS 11-1 Material: Mastic Location: Room 10 Appearance: clear,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73862 - 05b Cust. #: AS 11-1 Material: Flooring Location: Room 10 Appearance: beige, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73862 - 06 Cust. #: AS 11-2 Material: Black/White Tile Location: Room 10 Appearance: black, nonfibrous, homogenous Layer: 1 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 06a Cust. #: AS 11-2 Material: Mastic Location: Room 10 Appearance: clear, nonfibrous, homogenous Layer: 2 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73862 - 06b Cust. #: AS 11-2 Material: Flooring Location: Room 10 Appearance: beige, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73862 - 07 Cust. #: AS 3-1 Material: Green/Red Tile Location: Room 2 Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 07a Cust. #: AS 3-1 Material: Mastic Location: Room 2 Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73862 - 08 Cust. #: AS 3-2 Material: Green/Red Tile Location: Room 2 Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 08a Cust. #: AS 3-2 Material: Mastic Location: Room 2 Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 09 Cust. #: AS 4-1 Material: Faux Stone Tile Location: Room 2 Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73862 - 09a Cust. #: AS 4-1 Material: Mastic Location: Room 2 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 10 Cust. #: AS 4-2 Material: Faux Stone Tile Location: Room 2 Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 10a Cust. #: AS 4-2 Material: Mastic Location: Room 2 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73862 - 11 Cust. #: AS 5-1 Material: Cream/Blue Tile Location: Room 1 Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 11a Cust. #: AS 5-1 Material: Mastic Location: Room 1 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 12 Cust. #: AS 5-2 Material: Cream/Blue Tile Location: Room 1 Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73862 - 12a Cust. #: AS 5-2 Material: Mastic Location: Room 1 Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 13 Cust. #: AS 7-3 Material: Vent Wrap Location: Room 1 Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 65%	Other - 35%
Lab ID #: 73862 - 14 Cust. #: AS 1-1 Material: Plaster Location: Room 1 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73862 - 15 Cust. #: AS 6-1 Material: Blue Tile Location: Room 3 Appearance: grey,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 15a Cust. #: AS 6-1 Material: Mastic Location: Room 3 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 16 Cust. #: AS 6-2 Material: Blue Tile Location: Room 3 Appearance: grey,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73862 - 16a Cust. #: AS 6-2 Material: Mastic Location: Room 3 Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 17 Cust. #: AS 7-2 Material: Vent Wrap Location: Room 3 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73862 - 18 Cust. #: AS 1-2 Material: Plaster Location: Room 3 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73862 - 19 Cust. #: AS 7-1 Material: Vent Wrap Location: Room 5 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73862 - 20 Cust. #: AS 2-1 Material: Window Glaze Location: Room 5 Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 21 Cust. #: AS 2-2 Material: Window Glaze Location: Room 4 Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73862 - 22 Cust. #: AS 1-3 Material: Plaster Location: Room 4 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73862 - 23 Cust. #: AS 8-1 Material: White Tile Location: Room 4 Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 23a Cust. #: AS 8-1 Material: Mastic Location: Room 4 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73862 - 24 Cust. #: AS 8-2 Material: White Tile Location: Room 4 Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 24a Cust. #: AS 8-2 Material: Mastic Location: Room 4 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 25 Cust. #: AS 9-1 Material: Faux Wood Tile Location: Room 4 Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73862 - 25a Cust. #: AS 9-1 Material: Mastic Location: Room 4 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 26 Cust. #: AS 9-2 Material: Faux Wood Tile Location: Room 4 Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 26a Cust. #: AS 9-2 Material: Mastic Location: Room 4 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73862 - 27 Cust. #: AS 10-1 Material: Brown Tile Location: Room 4 Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%
Lab ID #: 73862 - 27a Cust. #: AS 10-1 Material: Mastic Location: Room 4 Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 28 Cust. #: AS 10-2 Material: Brown Tile Location: Room 4 Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 910 N. Chestnut  
Project # I1440002

**Report To:**  
Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73862  
Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73862 - 28a Cust. #: AS 10-2 Material: Mastic Location: Room 4 Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 29 Cust. #: AS 16-1 Material: Siding Location: Exterior Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 20%	Other - 80%
Lab ID #: 73862 - 30 Cust. #: AS 16-2 Material: Siding Location: Exterior Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 910 N. Chestnut  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73862  
Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73862 - 31 Cust. #: AS 15-1 Material: Sink Coating Location: Room 4 Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 5% Other - 95%
Lab ID #: 73862 - 32 Cust. #: AS 15-2 Material: Sink Coating Location: Room 4 Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 5% Other - 95%
Lab ID #: 73862 - 33 Cust. #: AS 13-1 Material: Cement Floor Location: Basement Appearance: grey, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 910 N. Chestnut  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73862  
Date Collected: 12/19/17  
Date Received: 12/21/17  
Date Analyzed: 12/27/17  
Date Reported: 12/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73862 - 34 Cust. #: AS 13-2 Material: Cement Floor Location: Basement Appearance: grey, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73862 - 35 Cust. #: AS 14-1 Material: Stack Cement Location: Basement Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 5% Other - 95%
Lab ID #: 73862 - 36 Cust. #: AS 14-2 Material: Stack Cement Location: Basement Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 5% Other - 95%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

## APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: 2193 Association Drive, Suite 200  
 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/19/2017 5:00  
 Project: 910 N Chestnut St  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

## Lab Use Only

Log-In: \_\_\_\_\_

Report: \_\_\_\_\_

Fax: \_\_\_\_\_

Verbal: \_\_\_\_\_

Email: \_\_\_\_\_

Turn Around Time: (circle one) Terms and conditions on the other side.

Rush 24 Hour  
 48 Hour **72 Hour**  
 Other: TTP **yes** / no  
 (Test Till Positive)

Samples received after 3pm  
 logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	AS 12-1	Roof - Shingles	Bag	HA-12	
2	AS 12-2	Roof - Shingles	Bag	HA-12	
3	AS 1-5	RM-7 - Plaster	Bag	HA-1	
4	AS 1-4	RM-11 - Plaster	Bag	HA-1	
5	AS 11-1	RM-10 - Black white tile sandwich	Bag	HA-11	
6	AS 11-2	RM-10 - Black white tile sandwich	Bag	HA-11	
7	AS 3-1	RM-2 - Green red tile	Bag	HA-3	
8	AS 3-2	RM-2 - Green red tile	Bag	HA-3	
9	AS 4-1	RM-2 - Faux stone tile	Bag	HA-4	
10	AS 4-2	RM-2 - Faux stone tile	Bag	HA-4	
11	AS 5-1	RM-1 - Cream blue tile	Bag	HA-5	
12	AS 5-2	RM-1 - Cream blue tile	Bag	HA-5	

Relinquished By: [Signature]Received By: [Signature]

Relinquished By: \_\_\_\_\_ Received By: \_\_\_\_\_

Date: 12/21/17Time/Date: 12/21/17 **DEC 21 2017**

Date: \_\_\_\_\_ Time/Date: \_\_\_\_\_

Revision R4 Date: May/2017

APEX RESEARCH

73862

### APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: 2193 Association Drive, Suite 200  
 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/19/2017 5:00  
 Project: 910 N Chestnut St  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) Terms and conditions on the other side.

Rush 24 Hour  
 48 Hour **72 Hour**  
 Other: TTP **yes** / no  
 (Test Till Positive)

Samples received after 3pm  
logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
13	AS 7-3	RM-1 - Vent wrap	Bag	HA-7	
14	AS 1-1	RM-1 - Plaster	Bag	HA-1	
15	AS 6-1	RM-3 - Blue tile	Bag	HA-6	
16	AS 6-2	RM-3 - Blue tile	Bag	HA-6	
17	AS 7-2	RM-3 - Vent wrap	Bag	HA-7	
18	AS 1-2	RM-3 - Plaster	Bag	HA-1	
19	AS 7-1	RM-5 - Vent wrap	Bag	HA-7	
20	AS 2-1	RM-5 - Window glaze	Bag	HA-2	
21	AS 2-2	RM-4 - Window glaze	Bag	HA-2	
22	AS 1-3	RM-4 - Plaster	Bag	HA-1	
23	AS 8-1	RM-4 - White tile	Bag	HA-8	
24	AS 8-2	RM-4 - White tile	Bag	HA-8	

Relinquished By: [Signature]

Received By: [Signature]

Relinquished By: \_\_\_\_\_ Received By: \_\_\_\_\_

Date: 12/21/17

Time/Date: 12/21/17 **RECEIVED** **DEC 21 2017**

Date: \_\_\_\_\_ Time/Date: \_\_\_\_\_

Revision R4 Date: May/2017



73862

### APEX Research, Inc.

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 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/19/2017 5:00  
 Project: 910 N Chestnut St  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) Terms and conditions on the other side.

Rush \_\_\_\_\_ 24 Hour \_\_\_\_\_  
 48 Hour \_\_\_\_\_ 72 Hour \_\_\_\_\_  
 Other: \_\_\_\_\_ TTP yes / no  
 (Test Till Positive)

Samples received after 3pm  
logged in next morning

Circle analyses required, indicate type and quantity

Asbestos:    Bulk X Wipe    Point Count    PCM     
 Lead / Cad / Chrome: Air    Paint    Wipe (ASTM)    Bulk     
 Mold: Bulk    Air    BioSIS    Tape     
 TEM: Bulk    NIOSH    EPA Level II    Other   

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
25	AS 9-1	RM-4 - Faux wood tile	Bag	HA-9	
26	AS 9-2	RM-4 - Faux wood tile	Bag	HA-9	
27	AS 10-1	RM-4 - Brown tile	Bag	HA-10	
28	AS 10-2	RM-4 - Brown tile	Bag	HA-10	
29	AS 16-1	Exterior - Siding	Bag	HA-16	
30	AS 16-2	Exterior - Siding	Bag	HA-16	
31	AS 15-1	RM-4 - Sink coating	Bag	HA-15	
32	AS 15-2	RM-4 - Sink coating	Bag	HA-15	
33	AS 13-1	Basement - Basement cement floor	Bag	HA-13	
34	AS 13-2	Basement - Basement cement floor	Bag	HA-13	
35	AS 14-1	Basement - Stack Cement	Bag	HA-14	
36	AS 14-2	Basement - Stack Cement	Bag	HA-14	

Relinquished By: [Signature]

Received By: [Signature] RECEIVED

Date: 12/21/17

Time/Date: 12/21/17 DEC 21 2017 Date: \_\_\_\_\_ Time/Date: \_\_\_\_\_

Revision R4 Date: May/2017

**ATTACHMENT D**

**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH**



# NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
(MDEQ) AIR QUALITY DIVISION  
NESHAP, 40 CFR Part 61, Subpart M



MICHIGAN DEPARTMENT OF LICENSING AND  
REGULATORY AFFAIRS (LARA), ASBESTOS PROGRAM,  
P.A. 135 OF 1986, AS AMENDED, Section 220 (1-4) or (8)

### DEQ/LARA USE ONLY

Postmark Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Rec'd Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Emergency Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Valid No. \_\_\_\_\_

OK  Send Def Ltr. Date of Def Ltr. \_\_\_\_/\_\_\_\_/\_\_\_\_

FOLLOW UP \_\_\_\_/\_\_\_\_/\_\_\_\_ Spoke w/ \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Notification No. \_\_\_\_\_ Trans No. \_\_\_\_\_

### Calculate LARA Asbestos Project Fee: (1% Project Fee)

Total Project Cost: \_\_\_\_\_ x 0.01 = \_\_\_\_\_

Type of Contractor: \_\_\_\_\_ License No.: \_\_\_\_\_

Licensing Authority: \_\_\_\_\_

### 1. NOTIFICATION:

Date of Notification: \_\_\_\_\_

Date of Revision(s): \_\_\_\_\_

Notification Type:  Original  Revised  Canceled  Annual

#### Mark appropriate boxes: (both DEQ and LARA may apply):

#### DEQ (NESHAP) [260 ln. ft./160 sq. ft. or more is threshold]

Planned Renovation – 10 **working** days notice

Emergency Renovation

Scheduled Demolition – 10 **working** days notice

Intentional Burn – 10 **working** days notice

Ordered Demolition

#### LARA (MIOSHA) [Will not accept annual notifications]

Demo, Reno, Encap. (>10 ln. ft./15 sq. ft.) 10 **calendar** days notice

Emergency Renovation/Encapsulation

### 2. PROJECT SCHEDULE:

**START DATE**                      **END DATE**

\* Renovation                      \_\_\_\_\_                      \_\_\_\_\_

+Asb. Removal                      \_\_\_\_\_                      \_\_\_\_\_

+Demolition:                      \_\_\_\_\_                      \_\_\_\_\_

Encapsulation:                      \_\_\_\_\_                      \_\_\_\_\_

**Work Schedule:** Please indicate the anticipated days of the week and work hours for the purpose of scheduling a compliance inspection.

**Days of the Week**                      **Work Hours**

Asb. Removal:                      \_\_\_\_\_                      \_\_\_\_\_

Demolition:                      \_\_\_\_\_                      \_\_\_\_\_

Encapsulation:                      \_\_\_\_\_                      \_\_\_\_\_

\* Includes setup, build enclosure, asbestos removal, demobilizing, etc.

+Include **only** those dates you are conducting asbestos removal/demo.

Check here if this is a multi-phased project, attach a schedule showing the start/end date of each phase.

### 3. ABATEMENT CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 4. DEMOLITION CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 5. FACILITY OWNER: ("Facility" includes Bridges)

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 6. FACILITY DESCRIPTION:

Facility Name: \_\_\_\_\_

Location Address/Description: \_\_\_\_\_

\_\_\_\_\_ If Apt. # of units: \_\_\_\_\_

City/Twp. \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

County: \_\_\_\_\_ Nearest Crossroad: \_\_\_\_\_

Size: (sq. ft.) \_\_\_\_\_ No. of Floors: \_\_\_\_\_ Floor No.: \_\_\_\_\_

Age: \_\_\_\_\_ Present Use: \_\_\_\_\_ Prior Use: \_\_\_\_\_

Specific Location(s) in Facility: \_\_\_\_\_

### 7. DISPOSAL SITE:

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

Location Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

### 8. WASTE TRANSPORTER 1:

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

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

### WASTE TRANSPORTER 2:

### 9. ORDERED DEMOLITIONS: (See NESHAP regulations for definition of "Ordered Demolition.") A copy of the official Order must accompany this notification.

Gov't Agency Ordering Demo: \_\_\_\_\_

Name/Title of Person Signing Order: \_\_\_\_\_

Date of Order: \_\_\_\_\_ Date Ordered to Begin: \_\_\_\_\_

### 10. IS ASBESTOS PRESENT? Yes No

To be removed prior to demolition

**Estimate the amount of asbestos:** Include RACM (Regulated Asbestos Containing Material) to be removed, encapsulated, etc. Also include the amount and type (floor tile, roofing, etc.) of non-friable Category I and/or Category II ACM that **will not** be removed prior to demolition. (**NOTE:** In a demolition, cementitious ACM **cannot** remain in a structure, as it is likely to become regulated in the demolition/handling process. It **must** be removed prior to demolition.)

RACM to be Removed

RACM to be Encapsulated

Non-friable ACM **not** removed prior to demo.

Category I

Category II

Units of Measure

				<input type="checkbox"/> Ln. Ft.	<input type="checkbox"/> Ln. M.
				<input type="checkbox"/> Sq. Ft.	<input type="checkbox"/> Sq. M.
				<input type="checkbox"/> Cu. Ft.*	<input type="checkbox"/> Cu. M.*

\*Volume (cubic ft./meters) should be used only if unable to measure by linear/square measure (example: asbestos has fallen off of surface).

(continued on reverse side)

**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH (continued)**

**11. PROJECT DESCRIPTION:** Complete **A) for Renovation** (asbestos removal/encapsulation) and/or **B) for Demolition**:

**A) RENOVATION:** Mark all surfaces/types of RACM to be removed:

- Piping     Fittings     Boiler(s)     Tanks(s)  
 Beam(s)     Duct(s)     Tunnel(s)     Ceiling Tile(s)  
 Mag Block     Other (describe) \_\_\_\_\_

**Encapsulation (for LARA):** Mark surfaces/types to be encapsulated:

- Piping     Fittings     Boiler(s)     Tank(s)  
 Beam(s)     Duct(s)     Tunnel(s)     Ceiling Tile(s)  
 Other (describe) \_\_\_\_\_

**Method of removal:** Describe how the asbestos will be removed from the surface (example: glove bag, scrape with hand tools, cut in sections and carefully lower, etc.): \_\_\_\_\_  
 \_\_\_\_\_

**B) DEMOLITION:** Describe the method of demolition of facility, bridge, etc., and indicate if complete or partial. If partial, describe which part of facility bridge, etc., will be demolished: \_\_\_\_\_  
 \_\_\_\_\_

**12. ENGINEERING CONTROLS:** Describe work practices and engineering controls used to prevent visible emissions before, during, and after removal, and until proper disposal: \_\_\_\_\_  
 \_\_\_\_\_

**13. UNEXPECTED ASBESTOS:** Describe the steps you intend to follow in the event that unexpected RACM is found or previously non-friable asbestos becomes friable (crumbled, pulverized, reduced to powder, etc.) and therefore regulated: \_\_\_\_\_  
 \_\_\_\_\_

**14. PROCEDURE(S) USED TO DETECT THE PRESENCE OF ASBESTOS:** **A)** Indicate how you determined whether or not asbestos is in the facility. If analytical sampling was used, describe method of analysis. (The determination of the presence or absence of asbestos must be made prior to submitting a renovation/demolition notification.): \_\_\_\_\_  
 \_\_\_\_\_

**B)** Name, address, and phone number of company performing asbestos survey: \_\_\_\_\_

**C)** Name, accreditation number of inspector, and date of inspection: \_\_\_\_\_

**15. EMERGENCY RENOVATIONS:** Date/time of emergency: \_\_\_\_\_ Describe the sudden, unexpected event: \_\_\_\_\_  
 \_\_\_\_\_

Explain how the event caused unsafe conditions, and/or would cause equipment damage and/or an unreasonable financial burden: \_\_\_\_\_  
 \_\_\_\_\_

**16.** I certify that an individual trained in the provisions of 40 CFR Part 61, Subpart M, will be on-site during the renovation and during demolition involving RACM above the threshold and/or during an ordered demolition. Evidence that this person has completed the required training will be available for inspection at the renovation or demolition site.

\_\_\_\_\_  
*Signature of Owner or Abatement Contractor      Date*

\_\_\_\_\_  
*Signature of Owner or Demolition Contractor      Date*

**17. Signature Requirements for Projects with Negative Pressure Enclosures: (required by LARA)**  
**Per Section 221(1)(2) of P.A. 135 of 1986, as amended, clearance air monitoring is required for any asbestos abatement project involving 10 linear feet/15 square feet or more of friable material which is performed within a negative pressure enclosure. I (the building owner or lessee) have been advised by the contractor of my responsibility under Act 135 to have clearance air monitoring performed on this project.**

\_\_\_\_\_  
*Signature of Building Owner or Lessee      Date*

\_\_\_\_\_  
*Signature of Asbestos Abatement Contractor Representative      Date*

**NOTE:** It is not mandatory that a signed copy be sent to LARA unless requested. For affected projects, this section of the notification form must be completed, signed, and made part of your records before the project begins.

**18. I certify that the above information is correct:**

\_\_\_\_\_  
*Printed Name of Owner/Operator      Date*

\_\_\_\_\_  
*Signature of Owner/Operator      Date*

**MAILING ADDRESSES/PHONE NUMBERS:** (See Item 1 to determine which agency requirements/regulations are applicable to your project.)

For **Public Act 135 of 1986, as amended, Section 220 (1-4) or (8)**, mail to address below. For more info visit:  
<http://www.michigan.gov/asbestos>

MIOSHA Asbestos Program  
 LARA, CSHD  
 P.O. Box 30671  
 Lansing, MI 48909-8171

517.636.4551 (office), 517.322.1713 (fax)

For **NESHAP Demolitions/Renovations, 40 CFR, Part 61, Subpart M**, please use the e-submittal process. For more information visit <http://www.michigan.gov/air>, under Air Links click on Asbestos NESHAP Program.

NESHAP Asbestos Program  
 DEQ, AQD  
 P.O. Box 30260  
 Lansing, MI 48909-7760

517.284.6777 (Office)



December 29, 2017

Ms. Roxanne Case  
 Grant Manager  
 Ingham County Land Bank  
 3024 Turner Street  
 Lansing, Ingham County, Michigan 48906

Re: Pre-Demolition Regulated Materials Survey  
 1527 Hull Ct, Lansing, Ingham County, Michigan

Dear Ms. Case:

The Mannik & Smith Group, Inc. (MSG) is pleased to present Ingham County with the results of the limited pre-demolition regulated materials survey (RMS) performed at 1527 Hull Ct, Lansing, Ingham County, Michigan (hereinafter referred to as the "Site") by Kory McKay (Accreditation Number A47903).

**SUMMARY**

Building Information	
Property Address	1527 Hull Ct, Lansing, MI
Parcel #	33-01-01-08-378-101
No. Stories	2
Square Footage (approx.)	700 SF
Siding	Wood
Basement	Yes
Garage	Yes



Asbestos Containing Material				
Location	Material Group	Friable/Non Friable	Asbestos	Quantity
RM-7	White tile	Non friable	5% Chrysotile	240 SF
RM-1, RM-2	Vent wrap	Friable	70% Chrysotile	80 SF
RM-4	Tan tile	Non friable	5% Chrysotile	80 SF
RM-2	Black tile	Non friable	15% Chrysotile	80 SF
RM-3	Faux brick linoleum	Non friable	30% Chrysotile	50 SF
RM-3	Red tile	Non friable	10% Chrysotile	50 SF
Basement	Stack cement	Non friable	2% Chrysotile	4 SF



TECHNICAL SKILL.  
 CREATIVE SPIRIT.



Universal Waste Inventory		
Location	Material Description	Quantity
RM-1	Thermostat	1
RM-1, RM-2, RM-7	Smoke detector	3

Hazardous Materials		
Location	Material Description	Quantity
**No hazardous materials were found on site**		

## PURPOSE AND SCOPE OF WORK

The purpose of the RMS was to identify, quantify and document the location of regulated materials that may be encountered during demolition of the on-site structure. To accomplish this purpose, MSG performed the following scope of work:

- 1) Pre-demolition asbestos-containing material (ACM) survey.
- 2) Universal wastes, hazardous materials, and other regulated wastes survey.

## METHODOLOGIES

The RMS was conducted on December 13, 2017. Methodologies employed during the completion of each task of the RMS are detailed below.

### ACM Survey Procedures

The ACM survey was performed in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763. The National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations govern demolition and renovation activities in which asbestos is present. The NESHAP rule distinguishes between Regulated Asbestos-Containing Materials (RACM) that would readily release asbestos fibers when damaged or disturbed and those materials that are unlikely to result in significant fiber release during demolition activities. The purpose of this survey is to determine if ACM within the Site building are RACM and thus, subject to the NESHAP, and to comply with the Michigan Occupational Safety and Health Administration (MIOSHA) and guidelines set forth in the Occupational Safety and Health Administration (OSHA) Regulations Standards 29 CFR 1910.1101.

RACM, as defined by NESHAP, is classified into four parts, (1) friable asbestos material, (2) Category I non-friable ACM (packing, gaskets, floor tile and roofing products) that has become friable, (3) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (4) Category II non-friable ACM (all other ACM products) 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.

The suspect ACM identified during this survey was grouped into homogeneous materials (i.e. similar materials which are uniform in color and texture) and:

- Described and quantified it in linear feet (LF) or square feet (SF);
- Identified and classified as friable or non-friable;
- Assessed as being in good, fair or poor condition;
- Assigned an EPA classification type (surfacing material, thermal system insulation or miscellaneous);

- Classified as RACM or non-RACM; and
- Sampled, or identified as presumed ACM (PACM).

MSG performed services associated with the ACM survey in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. The ACM survey included a systematic visual inspection of readily accessible areas of the Site building. Destructive sampling methods were used and suspect ACM samples were collected by State of Michigan Accredited Asbestos Inspector, Kory McKay (Accreditation Number A47903). Based on the quantity of each classification of material, MSG collected samples of each suspect ACM in accordance with EPA guidelines.

### **Universal Wastes and Hazardous Material Survey Procedures**

MSG identified and inventoried universal wastes and hazardous materials by a visual reconnaissance of the Site. Materials were identified, described, and quantified to the extent possible; however, no equipment or containers were opened and/or sampled as part of this survey.

A hazardous material, as defined in OSHA 29 CFR 1910.1200, is any item or chemical which is a "health hazard" or "physical hazard", including the following:

- Chemicals that are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, hepatotoxins, nephrotoxins, neurotoxins, agents that act on the hematopoietic system, and agents that damage the lungs, skin, eyes, or mucous membranes;
- Chemicals that are combustible liquids, compressed gases, explosives, flammable liquids, flammable solids, organic peroxides, oxidizers, pyrophorics, unstable (reactive) or water-reactive;
- Chemicals that, in the course of normal handling, use or storage, may produce or release dusts, gases, fumes, vapors, mists or smoke which have any of the above characteristics; and
- Any item or chemical which, when being transported or moved, is a risk to public safety or an environmental hazard, and is regulated as such by one or more of the following:
  - DOT - Department of Transportation; Hazardous Materials Regulations (49 CFR 100-180);
  - IMO - International Maritime Organization; International Maritime Dangerous Goods (IMDG) Code;
  - IATA - International Air Transport Association; Dangerous Goods Regulations;
  - ICAO - International Civil Aviation Organization; Technical Instructions; and
  - AF - Air Force "INTERSERVICE" Manual, Preparing Hazmat for Military Air Shipments (AFMAN 24-204).

Hazardous materials may also include:

- Any item or chemical listed in the United States Environmental Protection Agency (USEPA) *List of Hazardous Substances and Reportable Quantities*, dated September 1992.
- Noticeable as inventory under the reporting requirements of the Hazardous Chemical Reporting (40 CFR Part 302).
- An environmental release under the reporting requirements of the Toxic Chemical Release Reporting: Community Right To Know (40 CFR Part 372) or under Part 201, Environmental Remediation of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 201) and Part 213, Leaking Underground Storage Tanks (Part 213).

These would include chemicals with special characteristics which, in the opinion of the manufacturer, can cause harm to people, plants, or animals when released by spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other receptacles).

Universal wastes are waste that comes primarily from consumer products containing mercury, lead, cadmium or other substances that are hazardous to human health and the environment. These items

cannot be discarded in household trash nor disposed of in landfills but have less stringent handling and disposal requirements than hazardous waste streams. In Michigan, universal wastes are regulated by the MDEQ Office of Waste Management and Radiological Protection under Part 111 of Act 451 and the federal Resource Conservation and Recovery Act (RCRA) of 1976 under 40 CFR Part 273. Universal waste is also regulated by the US Department of Transportation (US DOT) under 49 CFR Parts 171 through 180. Most of the universal waste requirements overseen by the DEQ are addressed by R 299.9228 of Part 111 of 1994 P.A. 451, as amended and 40 CFR Part 273. These regulations are designed to encourage proper collection, recycling, treatment, or disposal of these wastes.

Examples of universal waste are mercury-containing equipment (e.g. thermostats, barometers, manometers, temperature and pressure gauges, and mercury switches), nickel-cadmium and spent lead-acid batteries, lamps (e.g. incandescent, fluorescent, high intensity discharge, neon, mercury vapor, and high pressure sodium and metal halide), pesticides, polychlorinated biphenyl (PCB) containing transformers and light ballasts, stored chemical and/or petroleum products, etc. In Michigan, Part 111 also includes pharmaceutical and consumer electronics as additional types of universal wastes.

### **Other Regulated Materials**

This RMS also included identifying and inventorying other regulated materials which may pose physical or chemical concerns during demolition of the Site building(s) including chlorofluorocarbon (CFC) containing devices, tanks, vessels, equipment, and building materials that may contain or become contaminated with hazardous materials.

Specifically, CFC containing devices are regulated Under Title VI of the Clean Air Act (CAA). The Stratospheric Protection Division of the EPA manages programs protecting the stratospheric ozone layer. Title 40, Part 82 of the Code of Federal Regulations contains the EPA regulations protecting the ozone layer. The RMS survey of the premises identified and quantified any CFC containers and CFC containing equipment, which could include the following:

- Drinking fountains, air conditioners, refrigerators
- Air conditioners in control panels and other process equipment
- Water and air chillers
- Roof top and stand-alone air conditioners
- Cafeteria equipment: freezers, walk-in coolers/freezers
- CFC canisters and cylinders

In Michigan, underground storage tanks are regulated under the authority of Part 211, Underground Storage Tank Regulations, of Act 451 of 1994, as amended, and the Michigan Underground Storage Tank Rules (MUSTR). Therefore, this survey included whether any evidence of underground storage tanks and related piping and dispensers were present at the Site.

MSG also surveyed for the presence of equipment, other storage tanks, and materials that may contain or be contaminated by regulated chemicals. These include, but may not be comprehensive of:

- Above ground storage tanks
- Oil-containing equipment (hydraulic equipment, blowers, fans, motors, elevators, compressors, etc.)
- Fire brick
- Contaminated building materials (concrete, block walls, wood, plaster, etc.) with staining, odor or other signs of a hazardous chemical release

## **SURVEY RESULTS**

The following subsections include a discussion of the RMS results. Photographs of the residence are located in the *Attachment A, Photo Log*. The results of this report are valid as of the report date, subject to the limitations presented in *Attachment B, Limitations*.

### **ACM Survey Results**

MSG identified fifteen (15) homogenous materials that were suspect as asbestos containing during the ACM survey. Thirty-two (32) bulk samples were collected from these suspect homogeneous materials and were submitted to APEX Research, Inc. (APEX) for laboratory analysis of Bulk Materials by Polarized Light Microscopy using USEPA Method 600/R-93/116. APEX is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) to analyze bulk samples for asbestos content. Of the aforementioned suspect homogenous materials identified during this ACM survey, laboratory analysis found seven (7) homogenous materials to contain greater than 1% asbestos (samples 3-1, 5-1, 8-1, 10-1, 11-1, 12-1, and 15-1). The EPA defines ACM as materials containing greater than 1% asbestos.

A point-count quantification procedure (PCQM) allows for lower detection limits than calibrated visual estimation (CVES), which is the quantification method widely used in asbestos analysis via Polarized Light Microscopy (PLM). If the asbestos content is found to contain less than 10% asbestos as determined by a method other than point counting by PLM, it can only be treated as non-ACM if verified to contain less than 1% by the PCQM. If not point-counted, the sample must be assumed to be greater than 1% and thus considered and treated as ACM. No samples were point counted.

Suspect ACM sample locations are depicted on the attached figure. See *Table 1, Asbestos Sampling Results* for a listing of homogeneous materials identified by MSG during this survey. A copy of the analytical reports including chains of custody is attached in *Attachment C, Analytical Reports and Chains of Custody*.

### **Universal Wastes, Hazardous Materials, and Other Regulated Materials Survey Results**

Universal wastes, hazardous materials, and/or other regulated materials wastes were identified within the Site building. Quantities identified are provided in *Table 2, Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory*.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Asbestos Containing Materials**

Of the fifteen (15) homogenous materials collected as part of the ACM survey, seven (7) homogenous materials contained asbestos greater than 1% (samples 3-1, 5-1, 8-1, 10-1, 11-1, 12-1, and 15-1) with these seven (7) materials (samples 3-1, 5-1, 8-1, 10-1, 11-1, 12-1, and 15-1) being classified as RACM. All materials containing ACM must be disposed of in a licensed landfill.

Prior to demolition, a notification of intent to demolish shall be made to the Michigan Department of Environmental Quality Air Quality Division (MDEQ-AQD) and Licensing and Regulatory Affairs (LARA), Asbestos Program. Notification, according to the procedure described by the NESHAP, Title 40 of the Code of Federal Regulations, Part 61, Subpart M, Notification, for renovation and demolition projects should be followed. A copy of this notification form is provided in *Attachment D, Notification of Intent to Renovate/Demolish*. This form shall be completed by the contractor who completes the demolition.

If additional suspect ACMs are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, shall be surveyed, tested, and abated if warranted. If suspect ACMs are determined to be RACM that would be disturbed during demolition activities, the RACM must be properly removed by a licensed asbestos abatement contractor.

Category I and Category II Non-Friable ACM may often be left in place during demolition activities if the ACM is not subjected to sanding, grinding, cutting, or abrading or has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material during the course of demolition.

**Universal Wastes, Hazardous Materials, and Other Regulated Materials**

The universal waste, hazardous materials, and other regulated materials (see Table 2) must be properly characterized (as necessary) and properly removed from the Site building for recycling and/or disposed of in accordance with Parts 111, 115, or 147 of Michigan Public Act 451 of 1994, as amended. If additional universal wastes, hazardous materials, and other regulated materials are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, these materials shall be characterized (as necessary) and properly removed in accordance with the above-mentioned regulations.

If you have any questions or concerns regarding the above information please contact us at 734-397-3100.

Sincerely,



Kory McKay  
Environmental Scientist  
Accreditation Number A47903



Charlie Bush  
Senior Project Manager  
Accreditation Number A34293

Attachments

FIGURE

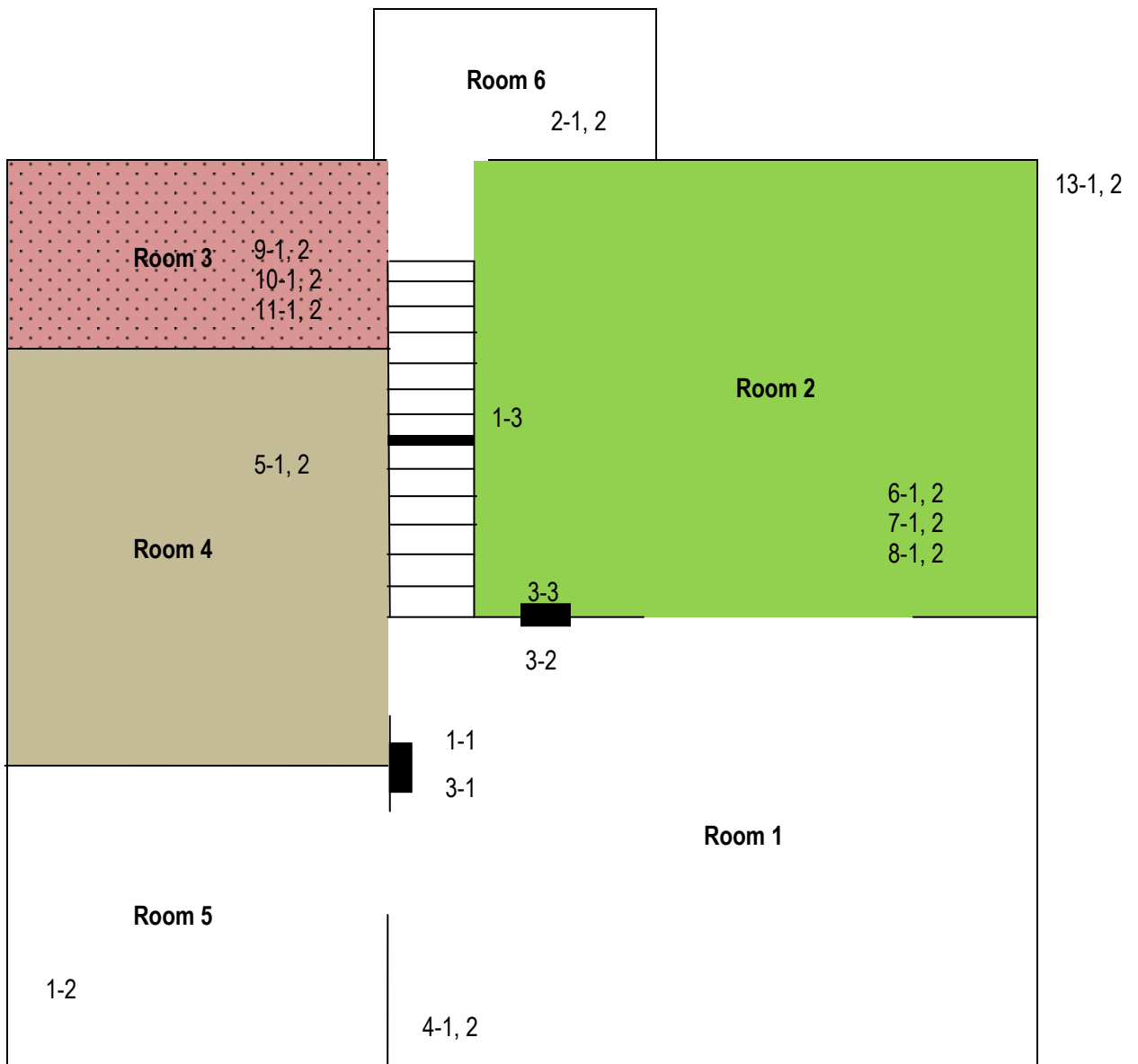







Address: 1527 Hull Ct

Date: December 15, 2017

Drawing not to scale

1<sup>st</sup> Floor



-  Vent with wrap (150 SF)
-  Red Tile (50 SF)
-  Black Tile (80 SF)
-  Faux Brick Linoleum (50 SF)
-  Tan Tile (80 SF)

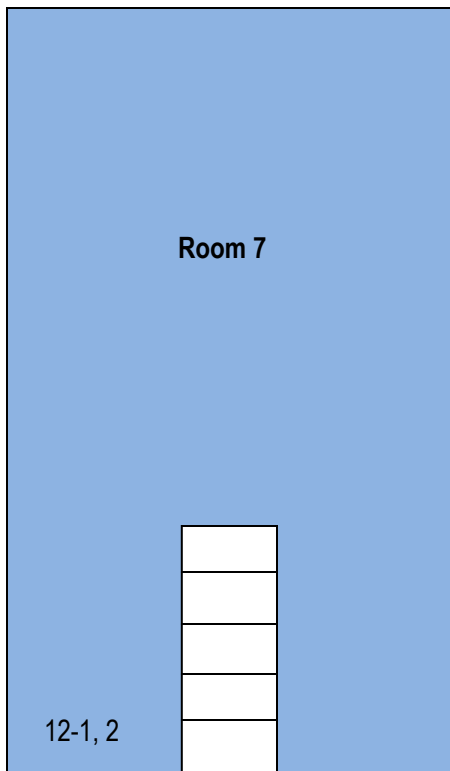
#-# = Asbestos Sample

Address: 1527 Hull Ct

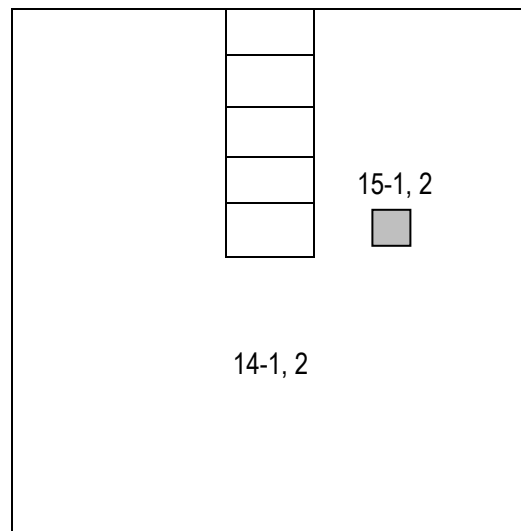
Date: December 15, 2017



Drawing not to scale

**2<sup>nd</sup> Floor**



**Basement**



-  White Tile (240 SF)
-  Stack Cement (4 SF)

#-# = Asbestos Sample



TABLES



**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		1527 Hull Ct								
Survey Date		December 13, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-1	1	AS 1-1	HA-1	Plaster	Non-Friable	Good	Miscellaneous	No	Not Detected	1300 SF
RM-5	1	AS 1-2	HA-1	Plaster	Non-Friable	Good	Miscellaneous	No	Not Detected	1300 SF
RM-2	1	AS 1-3	HA-1	Plaster	Non-Friable	Good	Miscellaneous	No	Not Detected	1300 SF
RM-6	1	AS 2-1	HA-2	Window glaze	Non-Friable	Good	Miscellaneous	No	Not Detected	10 SF
RM-6	1	AS 2-2	HA-2	Window glaze	Non-Friable	Good	Miscellaneous	No	Not Detected	10 SF
RM-1	1	AS 3-1	HA-3	Vent wrap	Friable	Good	Miscellaneous	Yes	70% Chrysotile	150 SF
RM-1	1	AS 3-2	HA-3	Vent wrap	Friable	Good	Miscellaneous	Yes	NA	150 SF
RM-2	1	AS 3-3	HA-3	Vent wrap	Friable	Good	Miscellaneous	Yes	NA	150 SF
RM-1	1	AS 4-1	HA-4	Gray tile	Non-Friable	Good	Miscellaneous	No	Not Detected	10 SF
RM-1	1	AS 4-2	HA-4	Gray tile	Non-Friable	Good	Miscellaneous	No	Not Detected	10 SF
RM-4	1	AS 5-1	HA-5	Tan tile	Non-Friable	Good	Miscellaneous	Yes	5% Chrysotile	80 SF
RM-4	1	AS 5-2	HA-5	Tan tile	Non-Friable	Good	Miscellaneous	Yes	NA	80 SF
RM-2	1	AS 6-1	HA-6	Yellow Linoleum	Non-Friable	Good	Miscellaneous	No	Not Detected	80 SF
RM-2	1	AS 6-2	HA-6	Yellow Linoleum	Non-Friable	Good	Miscellaneous	No	Not Detected	80 SF
RM-2	1	AS 7-1	HA-7	Brown Linoleum	Non-Friable	Good	Miscellaneous	No	Not Detected	80 SF
RM-2	1	AS 7-2	HA-7	Brown Linoleum	Non-Friable	Good	Miscellaneous	No	Not Detected	80 SF

**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		1527 Hull Ct								
Survey Date		December 13, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-2	1	AS 8-1	HA-8	Black tile	Non-Friable	Good	Miscellaneous	Yes	15% Chrysotile	80 SF
RM-2	1	AS 8-2	HA-8	Black tile	Non-Friable	Good	Miscellaneous	Yes	NA	80 SF
RM-3	1	AS 9-1	HA-9	White linoleum	Non-Friable	Good	Miscellaneous	No	Not Detected	50 SF
RM-3	1	AS 9-2	HA-9	White linoleum	Non-Friable	Good	Miscellaneous	No	Not Detected	50 SF
RM-3	1	AS 10-1	HA-10	Faux brick Linoleum	Non-Friable	Good	Miscellaneous	Yes	30% Chrysotile	50 SF
RM-3	1	AS 10-2	HA-10	Faux brick Linoleum	Non-Friable	Good	Miscellaneous	Yes	NA	50 SF
RM-3	1	AS 11-1	HA-11	Red tile	Non-Friable	Good	Miscellaneous	Yes	10% Chrysotile	50 SF
RM-3	1	AS 11-2	HA-11	Red tile	Non-Friable	Good	Miscellaneous	Yes	NA	50 SF
RM-7	2	AS 12-1	HA-12	White tile	Non-Friable	Good	Miscellaneous	Yes	5% Chrysotile	240 SF
RM-7	2	AS 12-2	HA-12	White tile	Non-Friable	Good	Miscellaneous	Yes	NA	240 SF
Roof	E	AS 13-1	HA-13	Shingles	Non-Friable	Good	Miscellaneous	No	Not Detected	280 SF
Roof	E	AS 13-2	HA-13	Shingles	Non-Friable	Good	Miscellaneous	No	Not Detected	280 SF
Basement	B	AS 14-1	HA-14	Basement cement floor	Non-Friable	Good	Miscellaneous	No	Not Detected	100 SF
Basement	B	AS 14-2	HA-14	Basement cement floor	Non-Friable	Good	Miscellaneous	No	Not Detected	100 SF
Basement	B	AS 15-1	HA-15	Stack Cement	Non-Friable	Good	Miscellaneous	Yes	2% Chrysotile	4 SF
Basement	B	AS 15-2	HA-15	Stack Cement	Non-Friable	Good	Miscellaneous	Yes	NA	4 SF

**Table 2**  
**Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory**  
 1527 Hull Ct.  
 Lansing, Ingham County, Michigan

<b>Universal Waste Inventory</b>		
Location	Type of Waste	Approximate Quantity
RM-1	Thermostat	1
RM-1, RM-2, RM-7	Smoke detector	3
<b>Hazardous Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
-	-	-
<b>Other Regulated Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
-	-	-

**ATTACHMENT A**

**PHOTO LOG**



Property Photos



1527 Hull Ct, Front of House



Back of House



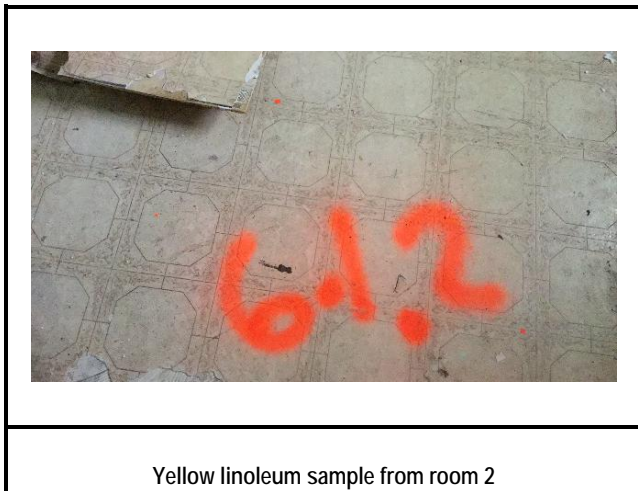
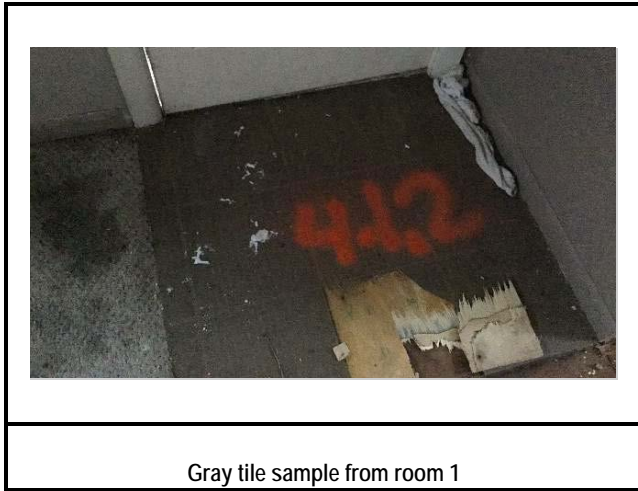
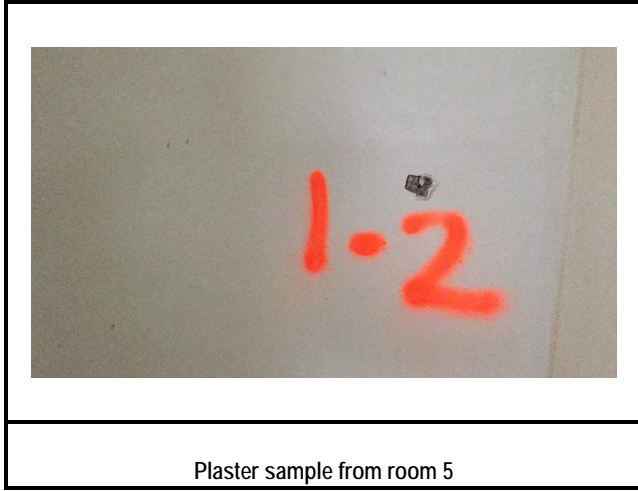
Side of House



Side of House



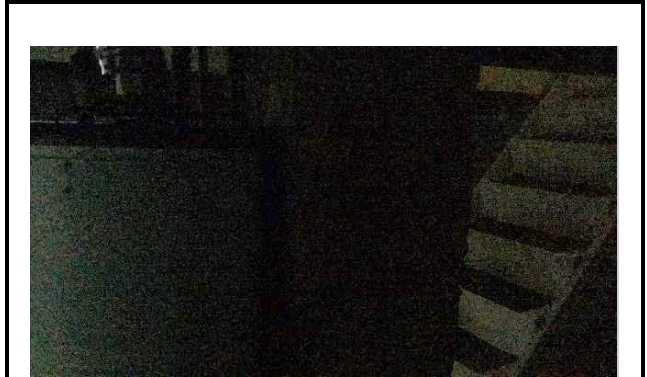
Sample Photos



Sample Photos



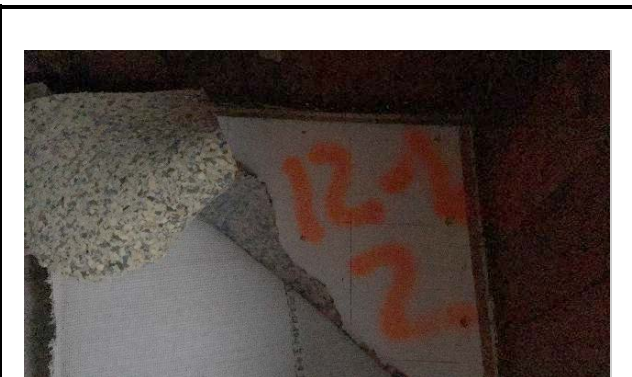
Faux brick linoleum sample from room 3



Stack cement sample from basement



Red tile sample from room 3



White tile sample from room 7



# ATTACHMENT B

## LIMITATIONS





## REGULATED MATERIALS SURVEY LIMITATIONS

The Mannik & Smith Group, Inc. (MSG) performed its services associated with this Regulated Materials Survey (RMS) in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763, Occupational Safety and Health Administration (OHSA) 29 CFR 1926.62, and in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. This RMS and related documentation are site-specific, which means they pertain to the conditions of the site surveyed.

Unless otherwise noted, MSG's RMS is limited to accessible areas. Areas determined to be not structurally sound, safely reached, limited by excessive accumulated obstructions, require specialized equipment to access, in operable windows, etc., are not included in this survey. There may be areas where regulated materials, such as suspected asbestos-containing materials (SACM) and lead containing paint cannot be viewed and/or tested. MSG shall not be responsible for identifying all SACM, lead containing paint, or other hazardous materials located in inaccessible locations, including but not limited to, above a plaster ceiling, behind a wall, embedded in concrete, buried, confined spaces, unsafe areas, or otherwise not readily identifiable.

Destructive sampling will only be conducted when permission has been granted by the owner. Destructive survey locations are limited to areas where hidden SACM, lead containing paint, or other hazardous materials is reasonably thought to be present and sampling can be conducted in a safe manner. If regulated materials are found during the course of demolition and/or renovation activities that are not listed in this report, the material should be assumed as asbestos-containing, lead containing, or hazardous until it can be sampled and analyzed at an accredited laboratory and safe work practices should always be used if those areas are to be disturbed.

MSG has prepared a logical assessment program to reduce the client's risk of discovering unknown regulated materials and/or hazardous substances. The presence of subsurface regulated materials and/or hazardous substances is based solely on surface observations and/or information provided by others. Descriptions of subsurface conditions provided in this report are not warranted to be complete or accurate. This risk may be reduced by more extensive exploration on the site, but even with additional exploration, it is not possible to completely eliminate the risk of discovering regulated materials and/or hazardous conditions. It cannot and should not be assumed that samples collected and conditions observed at the time of the RMS are representative of an area that has not been sampled and/or tested.

In preparing this report, MSG may have relied on information obtained from or provided by others. MSG makes no representation or warranty regarding the accuracy or completeness of this information gathered through outside sources or subcontracted services. No warranty, guarantee, or certification of any kind, expressed or implied, at common law or created by statute, is extended, made, or intended by rendering these environmental consulting services or by furnishing this written report. Environmental conditions and regulations are subject to constant change and reinterpretation. One should not assume that any on-site conditions and/or regulatory statutes or rules will remain constant after MSG has completed the scope of work for this project. Furthermore, because the facts stated in this report are subject to professional interpretation, differing conclusions could be reached by other environmental professionals.

The report is intended to offer support to a building owner, construction manager, general contractor, abatement contractor, architect, and/or other parties authorized by the owner in generally locating asbestos-containing materials (ACM), lead containing paint, universal and hazardous wastes, and/or other regulated materials. This report does not have the required components to serve as an Asbestos Project Design document, Asbestos and/or Lead Containing Paint Abatement Work Plan, and/or a Health and Safety Plan. Therefore, this report should not be utilized as a project specification document. The results, findings, conclusions, and recommendations expressed in

this report are based only on conditions that were noted during this survey. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated. Quantities have been conservatively estimated and sampling locations have been described representatively; however, current site conditions should be field-verified by contractors bidding on and/or prior to abatement work.

**ATTACHMENT C**

**ANALYTICAL REPORTS AND CHAINS OF CUSTODY**





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1527 Hull Ct  
Project # I1440002

**Report To:**  
Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73781  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73781 - 01 Cust. #: AS12-1 Material: White Tile Location: Room 7 Appearance: yellow, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%
Lab ID #: 73781 - 01a Cust. #: AS12-1 Material: Glue Location: Room 7 Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73781 - 02 Cust. #: AS12-2 Material: White Tile Location: Room 7 Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1527 Hull Ct  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73781  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73781 - 02a Cust. #: AS12-2 Material: Glue Location: Room 7 Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73781 - 03 Cust. #: AS13-1 Material: Shingles Location: Roof Appearance: black,fibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%
Lab ID #: 73781 - 04 Cust. #: AS13-2 Material: Shingles Location: Roof Appearance: black,fibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 30% Other - 70%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1527 Hull Ct  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73781  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73781 - 05 Cust. #: AS1-2 Material: Plaster Finish Coat Location: Room 5 Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73781 - 05a Cust. #: AS1-2 Material: Plaster Base Coat Location: Room 5 Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> Chrysotile - <1%	Hair - 5% Other - >94%
Lab ID #: 73781 - 06 Cust. #: AS4-1 Material: Grey Tile Location: Room 1 Appearance: brown, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1527 Hull Ct  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73781  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73781 - 06a Cust. #: AS4-1 Material: Glue Location: Room 1 Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 73781 - 07 Cust. #: AS4-2 Material: Grey Tile Location: Room 1 Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73781 - 07a Cust. #: AS4-2 Material: Glue Location: Room 1 Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-73781  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73781 - 08 Cust. #: AS1-1 Material: Plaster Finish Coat Location: Room 1 Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73781 - 08a Cust. #: AS1-1 Material: Plaster Base Coat Location: Room 1 Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 1% Hair - 2% Other - 97%
Lab ID #: 73781 - 09 Cust. #: AS3-1 Material: Vent Wrap Location: Room 1 Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 70%	Other - 30%

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ARI Report # 17-73781  
Date Collected: 12/13/17  
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Date Analyzed: 12/19/17  
Date Reported: 12/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73781 - 10 Cust. #: AS3-2 Material: Vent Wrap Location: Room 1 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73781 - 11 Cust. #: AS5-1 Material: Tan Tile Location: Room 4 Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%
Lab ID #: 73781 - 11a Cust. #: AS5-1 Material: Mastic Location: Room 4 Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Okemos, MI, 48864

ARI Report # 17-73781  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73781 - 12 Cust. #: AS5-2 Material: Tan Tile Location: Room 4 Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73781 - 12a Cust. #: AS5-2 Material: Mastic Location: Room 4 Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73781 - 13 Cust. #: AS6-1 Material: Yellow Linoleum Location: Room 2 Appearance: yellow,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-73781  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73781 - 14 Cust. #: AS6-2 Material: Yellow Linoleum Location: Room 2 Appearance: yellow, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 73781 - 15 Cust. #: AS7-1 Material: Brown Linoleum Location: Room 2 Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 73781 - 16 Cust. #: AS7-2 Material: Brown Linoleum Location: Room 2 Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-73781  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73781 - 17 Cust. #: AS8-1 Material: Black Tile Location: Room 2 Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 15%	Other - 85%
Lab ID #: 73781 - 17a Cust. #: AS8-1 Material: Mastic Location: Room 2 Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73781 - 18 Cust. #: AS8-2 Material: Black Tile Location: Room 2 Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	

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Robert T. Letarte Jr., Laboratory Director

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Project # I1440002

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Okemos, MI, 48864

ARI Report # 17-73781  
Date Collected: 12/13/17  
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Date Analyzed: 12/19/17  
Date Reported: 12/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73781 - 18a Cust. #: AS8-2 Material: Mastic Location: Room 2 Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73781 - 19 Cust. #: AS1-3 Material: Plaster Base Coat Location: Room 2 Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> Chrysotile - <1%	Hair - 2% Other - >97%
Lab ID #: 73781 - 20 Cust. #: AS3-3 Material: Vent Wrap Location: Room 2 Appearance: Layer: of	Asbestos Present:  <b>NOT ANALYZED</b>	

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Date Collected: 12/13/17  
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Date Analyzed: 12/19/17  
Date Reported: 12/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73781 - 21 Cust. #: AS2-1 Material: Window Glaze Location: Room 6 Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73781 - 22 Cust. #: AS2-2 Material: Window Glaze Location: Room 6 Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73781 - 23 Cust. #: AS9-1 Material: White Linoleum Location: Room 3 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%

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Date Collected: 12/13/17  
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Date Analyzed: 12/19/17  
Date Reported: 12/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73781 - 24 Cust. #: AS9-2 Material: White Linoleum Location: Room 3 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 73781 - 25 Cust. #: AS10-1 Material: Faux Brick Linoleum Location: Room 3 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 30%	Other - 70%
Lab ID #: 73781 - 26 Cust. #: AS10-2 Material: Faux Brick Linoleum Location: Room 3 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	

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ARI Report # 17-73781  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73781 - 27 Cust. #: AS11-1 Material: Red Tile Location: Room 3 Appearance: red, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 10%	Other - 90%
Lab ID #: 73781 - 27a Cust. #: AS11-1 Material: Mastic Location: Room 3 Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73781 - 28 Cust. #: AS11-2 Material: Red Tile Location: Room 3 Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	

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ARI Report # 17-73781  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73781 - 28a Cust. #: AS11-2 Material: Mastic Location: Room 3 Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73781 - 29 Cust. #: AS14-1 Material: Basement Cement Floor Location: Basement Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73781 - 30 Cust. #: AS14-2 Material: Basement Cement Floor Location: Basement Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73781 - 31 Cust. #: AS15-1 Material: Stack Cement Location: Basement Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 2%	Other - 98%
Lab ID #: 73781 - 32 Cust. #: AS15-2 Material: Stack Cement Location: Basement Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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NVLAP Lab Code 102118-0

**APEX Research, Inc.**

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: **2193 Association Drive, Suite 200**  
 City, St., Zip: **Okemos, MI, 48864**  
 Phone: **(517) 316-9232** Fax: **(517) 316-9233**

Date of Survey: **12/13/2017 5:00**  
 Project: **1527 Hull Ct**  
 Project #: **11440002**  
 Contact Person: **Charlie Bush**  
 Email: **cbush@manniksmithgroup.com**

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) Terms and conditions on the other side.

Rush  24 Hour  
 48 Hour  **72 Hour**  
 Other: \_\_\_\_\_ TTP  /  no  
 (Test Till Positive)

Samples received after 3pm  
 logged in next morning

Circle analyses required, indicate type and quantity

Asbestos:  Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	AS 12-1	RM-7 - White tile	Bag	HA-12	
2	AS 12-2	RM-7 - White tile	Bag	HA-12	
3	AS 13-1	Roof - Shingles	Bag	HA-13	
4	AS 13-2	Roof - Shingles	Bag	HA-13	
5	AS 1-2	RM-5 - Plaster	Bag	HA-1	
6	AS 4-1	RM-1 - Gray tile	Bag	HA-4	
7	AS 4-2	RM-1 - Gray tile	Bag	HA-4	
8	AS 1-1	RM-1 - Plaster	Bag	HA-1	
9	AS 3-1	RM-1 - Vent wrap	Bag	HA-3	
10	AS 3-2	RM-1 - Vent wrap	Bag	HA-3	
11	AS 5-1	RM-4 - Tan tile	Bag	HA-5	
12	AS 5-2	RM-4 - Tan tile	Bag	HA-5	

Relinquished By: [Signature]  
 Date: **12/15/17**

Received By: [Signature]  
 Time/Date: **12/15/17**

Relinquished By: \_\_\_\_\_ Received By: [Signature]  
 Date: \_\_\_\_\_ Time/Date: **DEC 15 2017**

Revision R4 Date: May/2017

RECEIVED

73781

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
Address: 2193 Association Drive, Suite 200  
City, St., Zip: Okemos, MI, 48864  
Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/13/2017 5:00  
Project: 1527 Hull Ct  
Project #: I1440002  
Contact Person: Charlie Bush  
Email: cbush@manniksmithgroup.com

Lab Use Only  
Log-In: \_\_\_\_\_  
Report: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Verbal: \_\_\_\_\_  
Email: \_\_\_\_\_

Turn Around Time: (circle one) Terms and conditions on the other side.

Rush 24 Hour  
48 Hour 72 Hour  
Other: TTP yes / no  
(Test Till Positive)

Samples received after 3pm  
logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
13	AS 6-1	RM-2 - Yellow Linoleum	Bag	HA-6	
14	AS 6-2	RM-2 - Yellow Linoleum	Bag	HA-6	
15	AS 7-1	RM-2 - Brown Linoleum	Bag	HA-7	
16	AS 7-2	RM-2 - Brown Linoleum	Bag	HA-7	
17	AS 8-1	RM-2 - Black tile	Bag	HA-8	
18	AS 8-2	RM-2 - Black tile	Bag	HA-8	
19	AS 1-3	RM-2 - Plaster	Bag	HA-1	
20	AS 3-3	RM-2 - Vent wrap	Bag	HA-3	
21	AS 2-1	RM-6 - Window glaze	Bag	HA-2	
22	AS 2-2	RM-6 - Window glaze	Bag	HA-2	
23	AS 9-1	RM-3 - White linoleum	Bag	HA-9	
24	AS 9-2	RM-3 - White linoleum	Bag	HA-9	

Relinquished By:

Received By:

Relinquished By: \_\_\_\_\_ Received By:

Date: 12/15/17

Time/Date: 12/15/17

Date: \_\_\_\_\_ Time/Date: \_\_\_\_\_

Revision R4 Date: May/2017

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DEC 15 2017

APEX RESEARCH

73781

### APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: **2193 Association Drive, Suite 200**  
 City, St., Zip: **Okemos, MI, 48864**  
 Phone: **(517) 316-9232** Fax: **(517) 316-9233**

Date of Survey: **12/13/2017 5:00**  
 Project: **1527 Hull Ct**  
 Project #: **I1440002**  
 Contact Person: **Charlie Bush**  
 Email: **cbush@manniksmithgroup.com**

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) \*\*\*Terms and conditions on the other side.

Rush \_\_\_\_\_ 24 Hour \_\_\_\_\_  
 48 Hour \_\_\_\_\_ **72 Hour** \_\_\_\_\_  
 Other: \_\_\_\_\_ TTP **yes / no**  
 (Test Till Positive)

Samples received after 3pm logged in next morning

#### Circle analyses required, indicate type and quantity

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
25	AS 10-1	RM-3 - Faux brick Linoleum	Bag	HA-10	
26	AS 10-2	RM-3 - Faux brick Linoleum	Bag	HA-10	
27	AS 11-1	RM-3 - Red tile	Bag	HA-11	
28	AS 11-2	RM-3 - Red tile	Bag	HA-11	
29	AS 14-1	Basement - Basement cement floor	Bag	HA-14	
30	AS 14-2	Basement - Basement cement floor	Bag	HA-14	
31	AS 15-1	Basement - Stack Cement	Bag	HA-15	
32	AS 15-2	Basement - Stack Cement	Bag	HA-15	

Relinquished By: [Signature]

Received By: [Signature]

Relinquished By: \_\_\_\_\_ Received By: [Signature]

Date: 12/15/17

Time/Date: 12/15/17

Date: \_\_\_\_\_ Time/Date: DEC 15 2017

Revision R4 Date: May/2017

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DEC 15 2017

**ATTACHMENT D**

**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH**



# NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
(MDEQ) AIR QUALITY DIVISION  
NESHAP, 40 CFR Part 61, Subpart M



MICHIGAN DEPARTMENT OF LICENSING AND  
REGULATORY AFFAIRS (LARA), ASBESTOS PROGRAM,  
P.A. 135 OF 1986, AS AMENDED, Section 220 (1-4) or (8)

### DEQ/LARA USE ONLY

Postmark Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Rec'd Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Emergency Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Valid No. \_\_\_\_\_

OK  Send Def Ltr. Date of Def Ltr. \_\_\_\_/\_\_\_\_/\_\_\_\_

FOLLOW UP \_\_\_\_/\_\_\_\_/\_\_\_\_ Spoke w/ \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Notification No. \_\_\_\_\_ Trans No. \_\_\_\_\_

### Calculate LARA Asbestos Project Fee: (1% Project Fee)

Total Project Cost: \_\_\_\_\_ x 0.01 = \_\_\_\_\_

Type of Contractor: \_\_\_\_\_ License No.: \_\_\_\_\_

Licensing Authority: \_\_\_\_\_

### 1. NOTIFICATION:

Date of Notification: \_\_\_\_\_

Date of Revision(s): \_\_\_\_\_

Notification Type:  Original  Revised  Canceled  Annual

#### Mark appropriate boxes: (both DEQ and LARA may apply):

#### DEQ (NESHAP) [260 ln. ft./160 sq. ft. or more is threshold]

Planned Renovation – 10 **working** days notice

Emergency Renovation

Scheduled Demolition – 10 **working** days notice

Intentional Burn – 10 **working** days notice

Ordered Demolition

#### LARA (MIOSHA) [Will not accept annual notifications]

Demo, Reno, Encap. (>10 ln. ft./15 sq. ft.) 10 **calendar** days notice

Emergency Renovation/Encapsulation

### 2. PROJECT SCHEDULE:

**START DATE** **END DATE**

\* Renovation \_\_\_\_\_

+Asb. Removal \_\_\_\_\_

+Demolition: \_\_\_\_\_

Encapsulation: \_\_\_\_\_

**Work Schedule:** Please indicate the anticipated days of the week and work hours for the purpose of scheduling a compliance inspection.

**Days of the Week** **Work Hours**

Asb. Removal: \_\_\_\_\_

Demolition: \_\_\_\_\_

Encapsulation: \_\_\_\_\_

\* Includes setup, build enclosure, asbestos removal, demobilizing, etc.

+Include **only** those dates you are conducting asbestos removal/demo.

Check here if this is a multi-phased project, attach a schedule showing the start/end date of each phase.

### 3. ABATEMENT CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 4. DEMOLITION CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 5. FACILITY OWNER: ("Facility" includes Bridges)

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 6. FACILITY DESCRIPTION:

Facility Name: \_\_\_\_\_

Location Address/Description: \_\_\_\_\_

\_\_\_\_\_ If Apt. # of units: \_\_\_\_\_

City/Twp. \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

County: \_\_\_\_\_ Nearest Crossroad: \_\_\_\_\_

Size: (sq. ft.) \_\_\_\_\_ No. of Floors: \_\_\_\_\_ Floor No.: \_\_\_\_\_

Age: \_\_\_\_\_ Present Use: \_\_\_\_\_ Prior Use: \_\_\_\_\_

Specific Location(s) in Facility: \_\_\_\_\_

### 7. DISPOSAL SITE:

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

Location Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

### 8. WASTE TRANSPORTER 1:

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

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

### WASTE TRANSPORTER 2:

### 9. ORDERED DEMOLITIONS: (See NESHAP regulations for definition of "Ordered Demolition.") A copy of the official Order must accompany this notification.

Gov't Agency Ordering Demo: \_\_\_\_\_

Name/Title of Person Signing Order: \_\_\_\_\_

Date of Order: \_\_\_\_\_ Date Ordered to Begin: \_\_\_\_\_

### 10. IS ASBESTOS PRESENT? Yes No

To be removed prior to demolition

**Estimate the amount of asbestos:** Include RACM (Regulated Asbestos Containing Material) to be removed, encapsulated, etc. Also include the amount and type (floor tile, roofing, etc.) of non-friable Category I and/or Category II ACM that **will not** be removed prior to demolition. (**NOTE:** In a demolition, cementitious ACM **cannot** remain in a structure, as it is likely to become regulated in the demolition/handling process. It **must** be removed prior to demolition.)

RACM to be Removed

RACM to be Encapsulated

Non-friable ACM **not** removed prior to demo.

Category I

Category II

Units of Measure

				<input type="checkbox"/> Ln. Ft.	<input type="checkbox"/> Ln. M.
				<input type="checkbox"/> Sq. Ft.	<input type="checkbox"/> Sq. M.
				<input type="checkbox"/> Cu. Ft.*	<input type="checkbox"/> Cu. M.*

\*Volume (cubic ft./meters) should be used only if unable to measure by linear/square measure (example: asbestos has fallen off of surface).

(continued on reverse side)



**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH (continued)**

**11. PROJECT DESCRIPTION:** Complete **A) for Renovation** (asbestos removal/encapsulation) and/or **B) for Demolition**:

**A) RENOVATION:** Mark all surfaces/types of RACM to be removed:

- Piping     Fittings     Boiler(s)     Tanks(s)  
 Beam(s)     Duct(s)     Tunnel(s)     Ceiling Tile(s)  
 Mag Block     Other (describe) \_\_\_\_\_

**Encapsulation (for LARA):** Mark surfaces/types to be encapsulated:

- Piping     Fittings     Boiler(s)     Tank(s)  
 Beam(s)     Duct(s)     Tunnel(s)     Ceiling Tile(s)  
 Other (describe) \_\_\_\_\_

**Method of removal:** Describe how the asbestos will be removed from the surface (example: glove bag, scrape with hand tools, cut in sections and carefully lower, etc.): \_\_\_\_\_  
 \_\_\_\_\_

**B) DEMOLITION:** Describe the method of demolition of facility, bridge, etc., and indicate if complete or partial. If partial, describe which part of facility bridge, etc., will be demolished: \_\_\_\_\_  
 \_\_\_\_\_

**12. ENGINEERING CONTROLS:** Describe work practices and engineering controls used to prevent visible emissions before, during, and after removal, and until proper disposal: \_\_\_\_\_  
 \_\_\_\_\_

**13. UNEXPECTED ASBESTOS:** Describe the steps you intend to follow in the event that unexpected RACM is found or previously non-friable asbestos becomes friable (crumbled, pulverized, reduced to powder, etc.) and therefore regulated: \_\_\_\_\_  
 \_\_\_\_\_

**14. PROCEDURE(S) USED TO DETECT THE PRESENCE OF ASBESTOS:** **A)** Indicate how you determined whether or not asbestos is in the facility. If analytical sampling was used, describe method of analysis. (The determination of the presence or absence of asbestos must be made prior to submitting a renovation/demolition notification.): \_\_\_\_\_  
 \_\_\_\_\_

**B)** Name, address, and phone number of company performing asbestos survey: \_\_\_\_\_

**C)** Name, accreditation number of inspector, and date of inspection: \_\_\_\_\_

**15. EMERGENCY RENOVATIONS:** Date/time of emergency: \_\_\_\_\_ Describe the sudden, unexpected event: \_\_\_\_\_  
 \_\_\_\_\_

Explain how the event caused unsafe conditions, and/or would cause equipment damage and/or an unreasonable financial burden: \_\_\_\_\_  
 \_\_\_\_\_

**16.** I certify that an individual trained in the provisions of 40 CFR Part 61, Subpart M, will be on-site during the renovation and during demolition involving RACM above the threshold and/or during an ordered demolition. Evidence that this person has completed the required training will be available for inspection at the renovation or demolition site.

\_\_\_\_\_  
*Signature of Owner or Abatement Contractor      Date*

\_\_\_\_\_  
*Signature of Owner or Demolition Contractor      Date*

**17. Signature Requirements for Projects with Negative Pressure Enclosures: (required by LARA)**  
**Per Section 221(1)(2) of P.A. 135 of 1986, as amended, clearance air monitoring is required for any asbestos abatement project involving 10 linear feet/15 square feet or more of friable material which is performed within a negative pressure enclosure. I (the building owner or lessee) have been advised by the contractor of my responsibility under Act 135 to have clearance air monitoring performed on this project.**

\_\_\_\_\_  
*Signature of Building Owner or Lessee      Date*

\_\_\_\_\_  
*Signature of Asbestos Abatement Contractor Representative      Date*

**NOTE:** It is not mandatory that a signed copy be sent to LARA unless requested. For affected projects, this section of the notification form must be completed, signed, and made part of your records before the project begins.

**18. I certify that the above information is correct:**

\_\_\_\_\_  
*Printed Name of Owner/Operator      Date*

\_\_\_\_\_  
*Signature of Owner/Operator      Date*

**MAILING ADDRESSES/PHONE NUMBERS:** (See Item 1 to determine which agency requirements/regulations are applicable to your project.)

For **Public Act 135 of 1986, as amended, Section 220 (1-4) or (8)**, mail to address below. For more info visit:  
<http://www.michigan.gov/asbestos>

MIOSHA Asbestos Program  
 LARA, CSHD  
 P.O. Box 30671  
 Lansing, MI 48909-8171

517.636.4551 (office), 517.322.1713 (fax)

For **NESHAP Demolitions/Renovations, 40 CFR, Part 61, Subpart M**, please use the e-submittal process. For more information visit <http://www.michigan.gov/air>, under Air Links click on Asbestos NESHAP Program.

NESHAP Asbestos Program  
 DEQ, AQD  
 P.O. Box 30260  
 Lansing, MI 48909-7760

517.284.6777 (Office)



December 29, 2017

Ms. Roxanne Case  
 Grant Manager  
 Ingham County Land Bank  
 3024 Turner Street  
 Lansing, Ingham County, Michigan 48906

Re: Pre-Demolition Regulated Materials Survey  
 1222 West Ottawa St, Lansing, Ingham County, MI

Dear Ms. Case:

The Mannik & Smith Group, Inc. (MSG) is pleased to present Ingham County with the results of the limited pre-demolition regulated materials survey (RMS) performed at 1222 West Ottawa St, Lansing, Ingham County, Michigan (hereinafter referred to as the "Site") by Kory McKay (Accreditation Number A47903).

**SUMMARY**

Building Information	
Property Address	1222 W Ottawa St, Lansing, MI
Parcel #	33-01-01-17-258-082
No. Stories	2
Square Footage (approx.)	1,700 SF
Siding	Vinyl
Basement	Yes
Garage	Yes



Asbestos Containing Material				
Location	Material Group	Friable/Non Friable	Asbestos	Quantity
RM-8	Tan tile	Non Friable	5% Chrysotile	100 SF
RM-1, RM-3, RM-4, RM-7, RM-10	Vent wrap	Friable	50% Chrysotile	300 SF

Hazardous Materials		
Location	Material Description	Quantity
RM-7	Spray paint can	5
Basement	1 Gallon paint can	15



TECHNICAL SKILL.  
 CREATIVE SPIRIT.

Universal Waste Inventory		
Location	Material Description	Quantity
RM-1, RM-4, RM-7, RM-8, RM-10, Basement	Smoke detector	8
RM-1, RM-10	Thermostat	2

## PURPOSE AND SCOPE OF WORK

The purpose of the RMS was to identify, quantify and document the location of regulated materials that may be encountered during demolition of the on-site structure. To accomplish this purpose, MSG performed the following scope of work:

- 1) Pre-demolition asbestos-containing material (ACM) survey.
- 2) Universal wastes, hazardous materials, and other regulated wastes survey.

## METHODOLOGIES

The RMS was conducted on December 7, 2017. Methodologies employed during the completion of each task of the RMS are detailed below.

### ACM Survey Procedures

The ACM survey was performed in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763. The National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations govern demolition and renovation activities in which asbestos is present. The NESHAP rule distinguishes between Regulated Asbestos-Containing Materials (RACM) that would readily release asbestos fibers when damaged or disturbed and those materials that are unlikely to result in significant fiber release during demolition activities. The purpose of this survey is to determine if ACM within the Site building are RACM and thus, subject to the NESHAP, and to comply with the Michigan Occupational Safety and Health Administration (MIOSHA) and guidelines set forth in the Occupational Safety and Health Administration (OSHA) Regulations Standards 29 CFR 1910.1101.

RACM, as defined by NESHAP, is classified into four parts, (1) friable asbestos material, (2) Category I non-friable ACM (packing, gaskets, floor tile and roofing products) that has become friable, (3) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (4) Category II non-friable ACM (all other ACM products) 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.

The suspect ACM identified during this survey was grouped into homogeneous materials (i.e. similar materials which are uniform in color and texture) and:

- Described and quantified it in linear feet (LF) or square feet (SF);
- Identified and classified as friable or non-friable;
- Assessed as being in good, fair or poor condition;
- Assigned an EPA classification type (surfacing material, thermal system insulation or miscellaneous);
- Classified as RACM or non-RACM; and
- Sampled, or identified as presumed ACM (PACM).

MSG performed services associated with the ACM survey in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. The ACM survey included a systematic visual inspection of readily accessible areas of the Site building. Destructive sampling methods were used and suspect ACM samples were collected by State of Michigan Accredited Asbestos Inspector, Kory McKay (Accreditation Number

A47903). Based on the quantity of each classification of material, MSG collected samples of each suspect ACM in accordance with EPA guidelines.

### **Universal Wastes and Hazardous Material Survey Procedures**

MSG identified and inventoried universal wastes and hazardous materials by a visual reconnaissance of the Site. Materials were identified, described, and quantified to the extent possible; however, no equipment or containers were opened and/or sampled as part of this survey.

A hazardous material, as defined in OSHA 29 CFR 1910.1200, is any item or chemical which is a "health hazard" or "physical hazard", including the following:

- Chemicals that are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, hepatotoxins, nephrotoxins, neurotoxins, agents that act on the hematopoietic system, and agents that damage the lungs, skin, eyes, or mucous membranes;
- Chemicals that are combustible liquids, compressed gases, explosives, flammable liquids, flammable solids, organic peroxides, oxidizers, pyrophorics, unstable (reactive) or water-reactive;
- Chemicals that, in the course of normal handling, use or storage, may produce or release dusts, gases, fumes, vapors, mists or smoke which have any of the above characteristics; and
- Any item or chemical which, when being transported or moved, is a risk to public safety or an environmental hazard, and is regulated as such by one or more of the following:
  - DOT - Department of Transportation; Hazardous Materials Regulations (49 CFR 100-180);
  - IMO - International Maritime Organization; International Maritime Dangerous Goods (IMDG) Code;
  - IATA - International Air Transport Association; Dangerous Goods Regulations;
  - ICAO - International Civil Aviation Organization; Technical Instructions; and
  - AF - Air Force "INTERSERVICE" Manual, Preparing Hazmat for Military Air Shipments (AFMAN 24-204).

Hazardous materials may also include:

- Any item or chemical listed in the United States Environmental Protection Agency (USEPA) *List of Hazardous Substances and Reportable Quantities*, dated September 1992.
- Noticeable as inventory under the reporting requirements of the Hazardous Chemical Reporting (40 CFR Part 302).
- An environmental release under the reporting requirements of the Toxic Chemical Release Reporting: Community Right To Know (40 CFR Part 372) or under Part 201, Environmental Remediation of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 201) and Part 213, Leaking Underground Storage Tanks (Part 213).

These would include chemicals with special characteristics which, in the opinion of the manufacturer, can cause harm to people, plants, or animals when released by spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other receptacles).

Universal wastes are waste that comes primarily from consumer products containing mercury, lead, cadmium or other substances that are hazardous to human health and the environment. These items cannot be discarded in household trash nor disposed of in landfills but have less stringent handling and disposal requirements than hazardous waste streams. In Michigan, universal wastes are regulated by the MDEQ Office of Waste Management and Radiological Protection under Part 111 of Act 451 and the federal Resource Conservation and Recovery Act (RCRA) of 1976 under 40 CFR Part 273. Universal waste is also regulated by the US Department of Transportation (US DOT) under 49 CFR Parts 171 through 180. Most of the universal waste requirements overseen by the DEQ are addressed by R 299.9228 of Part 111 of 1994 P.A. 451, as amended and 40 CFR Part 273. These regulations are designed to encourage proper collection, recycling, treatment, or disposal of these wastes.

Examples of universal waste are mercury-containing equipment (e.g. thermostats, barometers, manometers, temperature and pressure gauges, and mercury switches), nickel-cadmium and spent lead-acid batteries, lamps (e.g. incandescent, fluorescent, high intensity discharge, neon, mercury vapor, and high pressure sodium and metal halide), pesticides, polychlorinated biphenyl (PCB) containing transformers and light ballasts, stored chemical and/or petroleum products, etc. In Michigan, Part 111 also includes pharmaceutical and consumer electronics as additional types of universal wastes.

### **Other Regulated Materials**

This RMS also included identifying and inventorying other regulated materials which may pose physical or chemical concerns during demolition of the Site building(s) including chlorofluorocarbon (CFC) containing devices, tanks, vessels, equipment, and building materials that may contain or become contaminated with hazardous materials.

Specifically, CFC containing devices are regulated Under Title VI of the Clean Air Act (CAA). The Stratospheric Protection Division of the EPA manages programs protecting the stratospheric ozone layer. Title 40, Part 82 of the Code of Federal Regulations contains the EPA regulations protecting the ozone layer. The RMS survey of the premises identified and quantified any CFC containers and CFC containing equipment, which could include the following:

- Drinking fountains, air conditioners, refrigerators
- Air conditioners in control panels and other process equipment
- Water and air chillers
- Roof top and stand-alone air conditioners
- Cafeteria equipment: freezers, walk-in coolers/freezers
- CFC canisters and cylinders

In Michigan, underground storage tanks are regulated under the authority of Part 211, Underground Storage Tank Regulations, of Act 451 of 1994, as amended, and the Michigan Underground Storage Tank Rules (MUSTR). Therefore, this survey included whether any evidence of underground storage tanks and related piping and dispensers were present at the Site.

MSG also surveyed for the presence of equipment, other storage tanks, and materials that may contain or be contaminated by regulated chemicals. These include, but may not be comprehensive of:

- Above ground storage tanks
- Oil-containing equipment (hydraulic equipment, blowers, fans, motors, elevators, compressors, etc.)
- Fire brick
- Contaminated building materials (concrete, block walls, wood, plaster, etc.) with staining, odor or other signs of a hazardous chemical release

## **SURVEY RESULTS**

The following subsections include a discussion of the RMS results. Photographs of the residence are located in the *Attachment A, Photo Log*. The results of this report are valid as of the report date, subject to the limitations presented in *Attachment B, Limitations*.

### **ACM Survey Results**

MSG identified twelve (12) homogenous materials that were suspect as asbestos containing during the ACM survey. Thirty-one (31) bulk samples were collected from these suspect homogeneous materials and were submitted to Apex Research, Inc. for laboratory analysis of Bulk Materials by Polarized Light Microscopy using USEPA Method 600/R-93/116. Apex is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) to analyzed bulk samples for asbestos content. Of the aforementioned suspect homogenous materials identified during this ACM survey, laboratory analysis found two (2)

homogenous materials (samples 7-1 and 10-1) contained greater than 1% asbestos. The EPA defines ACM as materials containing greater than 1% asbestos.

A point-count quantification procedure (PCQM) allows for lower detection limits than calibrated visual estimation (CVES), which is the quantification method widely used in asbestos analysis via Polarized Light Microscopy (PLM). If the asbestos content is found to contain less than 10% asbestos as determined by a method other than point counting by PLM, it can only be treated as non-ACM if verified to contain less than 1% by the PCQM. If not point-counted, the sample must be assumed to be greater than 1% and thus considered and treated as ACM. It is MSG's experience that point counting samples with an estimated PLM asbestos content of more than 3% does not yield significantly different analytical results. No samples were point counted.

Suspect ACM sample locations are depicted on the attached figure. See *Table 1, Asbestos Sampling Results* for a listing of homogeneous materials identified by MSG during this survey. A copy of the analytical reports including chains of custody is attached in *Attachment C, Analytical Reports and Chains of Custody*.

### **Universal Wastes, Hazardous Materials, and Other Regulated Materials Survey Results**

Universal wastes, hazardous materials, and/or other regulated materials wastes were identified within the Site building. Quantities identified are provided in *Table 2, Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory*.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Asbestos Containing Materials**

Of the twelve (12) homogenous materials collected as part of the ACM survey, two (2) homogenous materials contained asbestos greater than 1% (samples 7-1 and 10-1) with these two (2) homogenous materials being classified as RACM. All materials containing ACM must be disposed of in a licensed landfill.

Prior to demolition, a notification of intent to demolish shall be made to the Michigan Department of Environmental Quality Air Quality Division (MDEQ-AQD) and Licensing and Regulatory Affairs (LARA), Asbestos Program. Notification, according to the procedure described by the NESHAP, Title 40 of the Code of Federal Regulations, Part 61, Subpart M, Notification, for renovation and demolition projects should be followed. A copy of this notification form is provided in *Attachment D, Notification of Intent to Renovate/Demolish*. This form shall be completed by the contractor who completes the demolition.

If additional suspect ACMs are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, shall be surveyed, tested, and abated if warranted. If suspect ACMs are determined to be RACM that would be disturbed during demolition activities, the RACM must be properly removed by a licensed asbestos abatement contractor.

Category I and Category II Non-Friable ACM may often be left in place during demolition activities if the ACM is not subjected to sanding, grinding, cutting, or abrading or has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material during the course of demolition.

### **Universal Wastes, Hazardous Materials, and Other Regulated Materials**

The universal waste, hazardous materials, and other regulated materials (see Table 2) must be properly characterized (as necessary) and properly removed from the Site building for recycling and/or disposed of in accordance with Parts 111, 115, or 147 of Michigan Public Act 451 of 1994, as amended. If additional universal wastes, hazardous materials, and other regulated materials are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, these materials shall be characterized (as necessary) and properly removed in accordance with the above-mentioned regulations.

If you have any questions or concerns regarding the above information please contact us at 517-316-9232.

Sincerely,



Kory McKay  
Environmental Scientist  
Accreditation Number A47903



Charlie Bush  
Senior Project Manager  
Accreditation Number A34293

Attachments

FIGURE







TECHNICAL SKILL.  
CREATIVE SPIRIT.

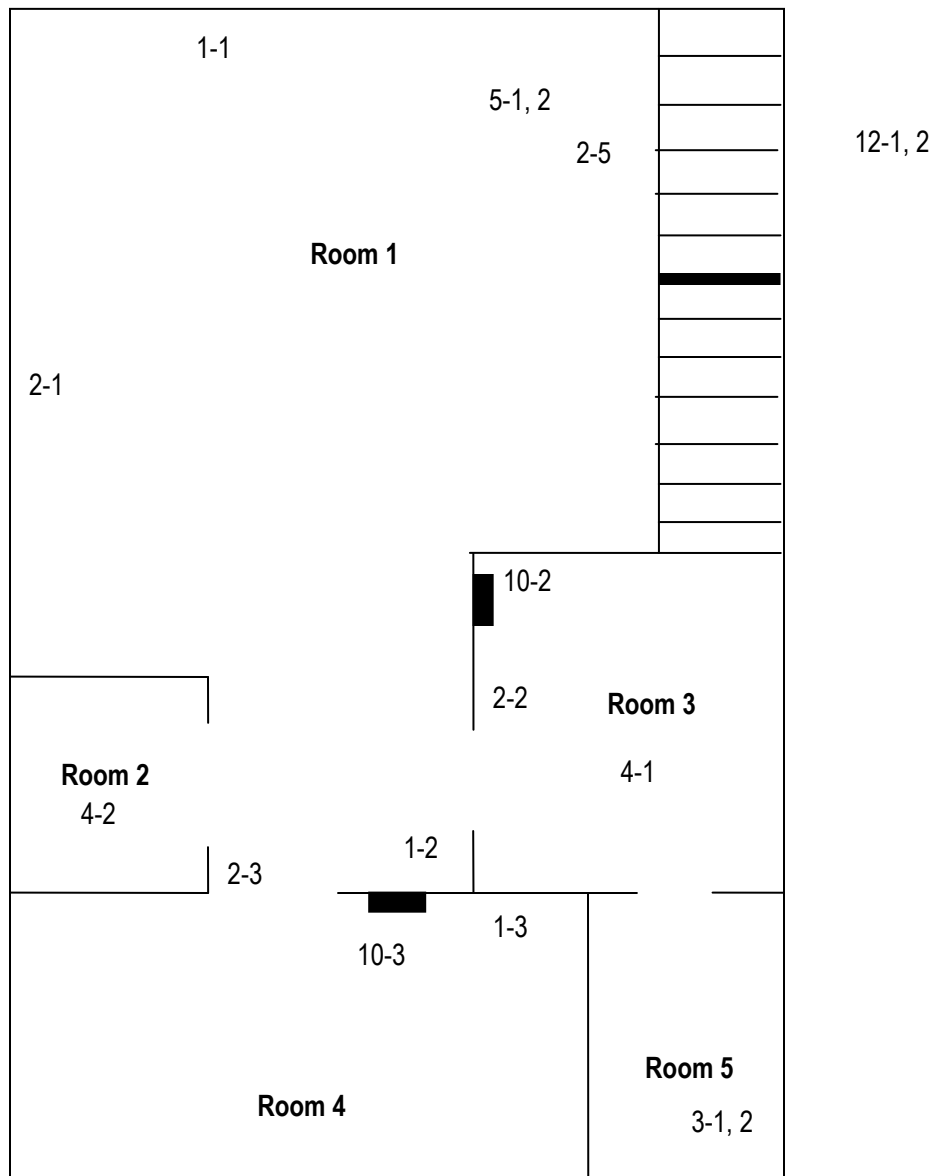
721 N. Capitol Avenue, Suite 2, Lansing, Michigan 48906 Tel: 517.316.9232 Fax: 517.316.9233 www.MannikSmithGroup.com

Address: 1222 W Ottawa

Date: December 15, 2017

Drawing not to scale

1st Floor



■ Vent with wrap (300 SF)

#-# = Asbestos Sample



TECHNICAL SKILL.  
CREATIVE SPIRIT.

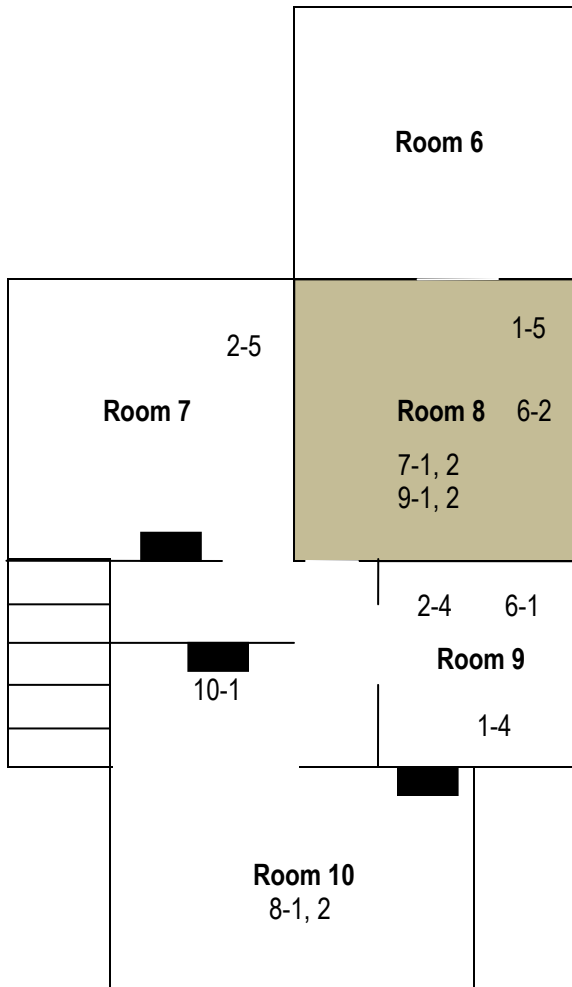
721 N. Capitol Avenue, Suite 2, Lansing, Michigan 48906 Tel: 517.316.9232 Fax: 517.316.9233 www.MannikSmithGroup.com

Address: 1222 W Ottawa

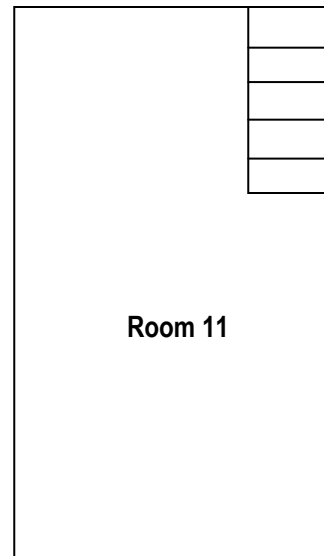
Date: December 15, 2017

Drawing not to scale

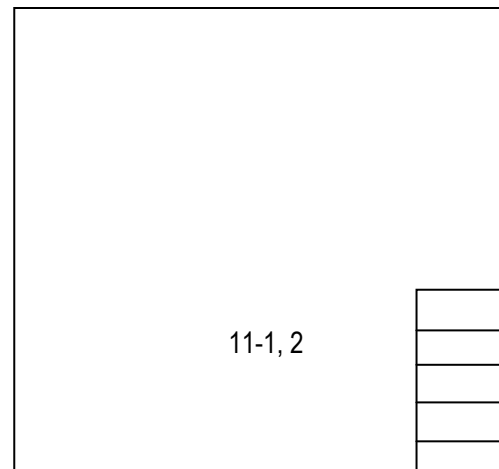
2<sup>nd</sup> Floor




3<sup>rd</sup> Floor



Basement



 Tan Tile (100 SF)

 Vent with wrap (300 SF)

#-# = Asbestos Sample

TABLES



**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		1222 W Ottawa St.								
Survey Date		December 7, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-1	1	AS 1-1	HA-1	Plaster	Non-Friable	Good	Miscellaneous	No	No	1700 SF
RM-1	1	AS 1-2	HA-1	Plaster	Non-Friable	Good	Miscellaneous	No	No	1700 SF
RM-1	1	AS 1-3	HA-1	Plaster	Non-Friable	Good	Miscellaneous	No	No	1700 SF
RM-9	2	AS 1-4	HA-1	Plaster	Non-Friable	Good	Miscellaneous	No	No	1700 SF
RM-8	2	AS 1-5	HA-1	Plaster	Non-Friable	Good	Miscellaneous	No	No	1700 SF
RM-1	1	AS 2-1	HA-2	Drywall	Non-Friable	Good	Miscellaneous	No	No	1700 SF
RM-3	1	AS 2-2	HA-2	Drywall	Non-Friable	Good	Miscellaneous	No	No	1700 SF
RM-1	1	AS 2-3	HA-2	Drywall	Non-Friable	Good	Miscellaneous	No	No	1700 SF
RM-9	2	AS 2-4	HA-2	Drywall	Non-Friable	Good	Miscellaneous	No	No	1700 SF
RM-7	2	AS 2-5	HA-2	Drywall	Non-friable	Good	Miscellaneous	No	No	1700 SF
RM-5	1	AS 3-1	HA-3	Window glaze	Non-Friable	Good	Miscellaneous	No	No	175 SF
RM-5	1	AS 3-2	HA-3	Window glaze	Non-Friable	Good	Miscellaneous	No	No	175 SF
RM-3	1	AS 4-1	HA-4	Beige tile	Non-Friable	Good	Miscellaneous	No	No	150 SF
RM-2	1	AS 4-2	HA-4	Beige tile	Non-Friable	Good	Miscellaneous	No	No	150 SF
RM-1	1	AS 5-1	HA-5	Brown Linoleum	Non-Friable	Good	Miscellaneous	No	No	25 SF
RM-1	1	AS 5-2	HA-5	Brown Linoleum	Non-Friable	Good	Miscellaneous	No	No	25 SF

**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		1222 W Ottawa St.								
Survey Date		December 7, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-9	2	AS 6-1	HA-6	White tile	Non-Friable	Good	Miscellaneous	No	No	140 SF
RM-8	2	AS 6-2	HA-6	White tile	Non-Friable	Good	Miscellaneous	No	No	140 SF
RM-8	2	AS 7-1	HA-7	Tan tile	Non-Friable	Good	Miscellaneous	Yes	5% Chrysotile	100 SF
RM-8	2	AS 7-2	HA-7	Tan tile	Non-Friable	Good	Miscellaneous	Yes	NA	100 SF
RM-10	2	AS 8-1	HA-8	Beige Linoleum	Non-Friable	Good	Miscellaneous	No	No	144 SF
RM-10	2	AS 8-2	HA-8	Beige Linoleum	Non-Friable	Good	Miscellaneous	No	No	144 SF
RM-8	2	AS 9-1	HA-9	Multicolored Linoleum	Non-Friable	Good	Miscellaneous	No	No	20 SF
RM-8	2	AS 9-2	HA-9	Multicolored Linoleum	Non-Friable	Good	Miscellaneous	No	No	20 SF
RM-10	2	AS 10-1	HA-10	Vent wrap	Friable	Good	Miscellaneous	Yes	50% Chrysotile	300 SF
RM-3	1	AS 10-2	HA-10	Vent wrap	Friable	Good	Miscellaneous	Yes	NA	300 SF
RM-4	1	AS 10-3	HA-10	Vent wrap	Friable	Good	Miscellaneous	Yes	NA	300 SF
Basement	B	AS 11-1	HA-11	Basement concrete	Non-Friable	Good	Miscellaneous	No	No	400 SF
Basement	B	AS 11-2	HA-11	Basement concrete	Non-Friable	Good	Miscellaneous	No	No	400 SF
Roof	E	AS 12-1	HA-12	Roof Shingle	Non-Friable	Good	Miscellaneous	No	No	400 SF
Roof	E	AS 12-2	HA-12	Roof Shingle	Non-Friable	Good	Miscellaneous	No	No	400 SF

**Table 2**  
**Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory**  
 1222 W. Ottawa St..  
 Lansing, Ingham County, Michigan

<b>Universal Waste Inventory</b>		
Location	Type of Waste	Approximate Quantity
Basement, RM-1, RM-4, RM-7, RM-8, RM-10	Smoke detector	8
RM-1, RM-10	Thermostat	2
<b>Hazardous Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
RM-7	Spray paint	5
Basement	1 Gallon paint can	15
<b>Other Regulated Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
-	-	-

**ATTACHMENT A**

**PHOTO LOG**



Property Photos



1222 West Ottawa St, Front of House



Back of House



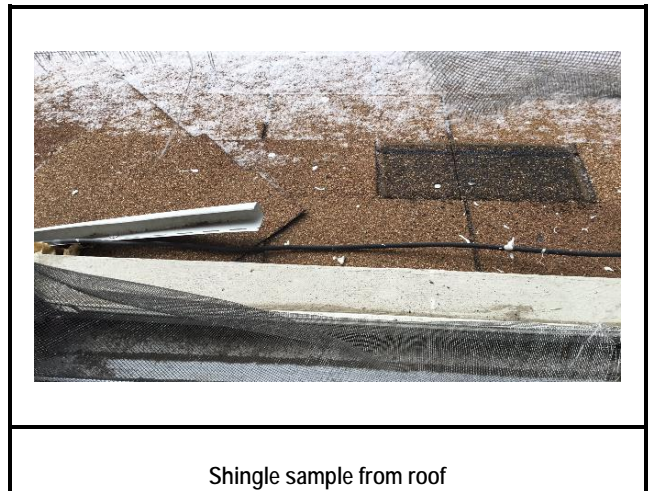
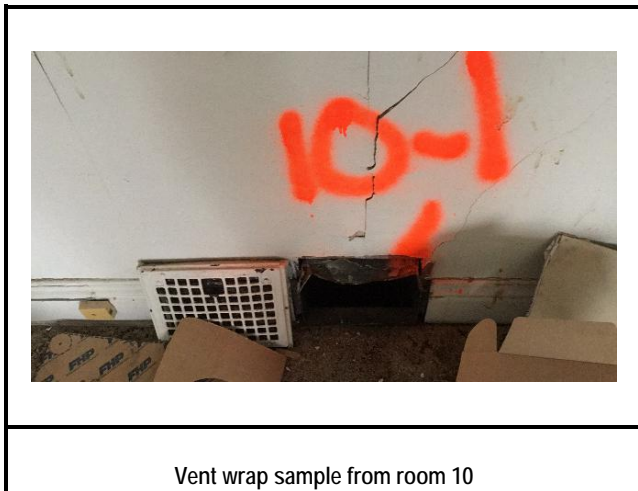
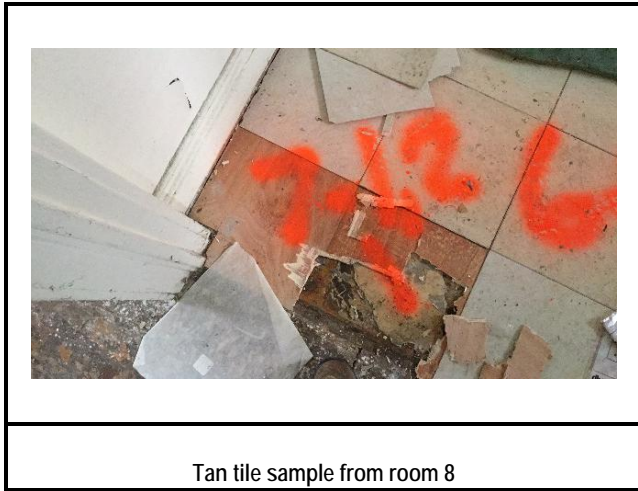
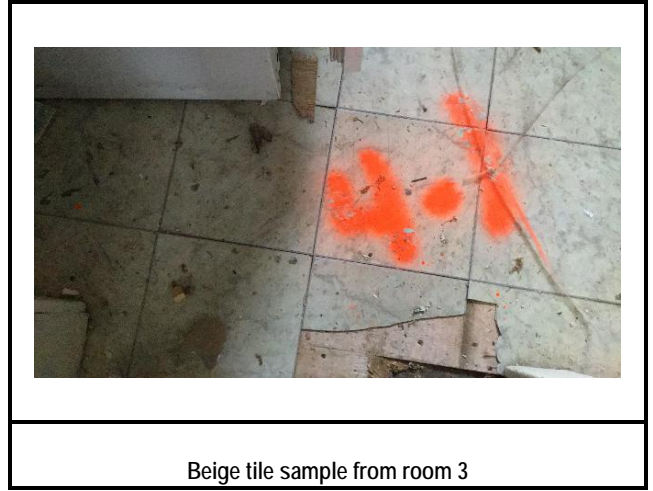
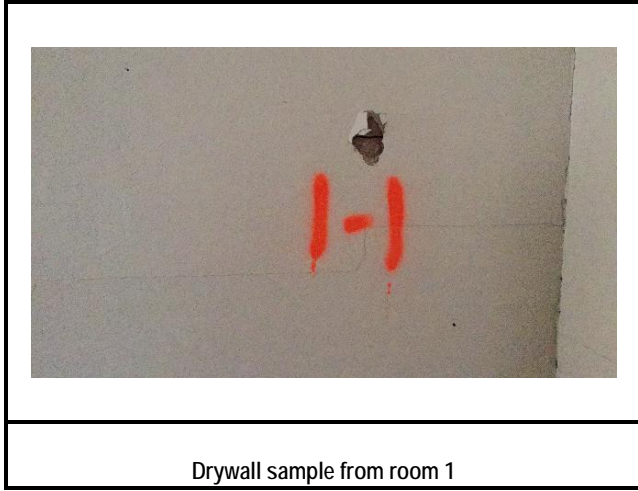
Side of House



Side of House



Sample Photos



# ATTACHMENT B

## LIMITATIONS





## REGULATED MATERIALS SURVEY LIMITATIONS

The Mannik & Smith Group, Inc. (MSG) performed its services associated with this Regulated Materials Survey (RMS) in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763, Occupational Safety and Health Administration (OHSA) 29 CFR 1926.62, and in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. This RMS and related documentation are site-specific, which means they pertain to the conditions of the site surveyed.

Unless otherwise noted, MSG's RMS is limited to accessible areas. Areas determined to be not structurally sound, safely reached, limited by excessive accumulated obstructions, require specialized equipment to access, in operable windows, etc., are not included in this survey. There may be areas where regulated materials, such as suspected asbestos-containing materials (SACM) and lead containing paint cannot be viewed and/or tested. MSG shall not be responsible for identifying all SACM, lead containing paint, or other hazardous materials located in inaccessible locations, including but not limited to, above a plaster ceiling, behind a wall, embedded in concrete, buried, confined spaces, unsafe areas, or otherwise not readily identifiable.

Destructive sampling will only be conducted when permission has been granted by the owner. Destructive survey locations are limited to areas where hidden SACM, lead containing paint, or other hazardous materials is reasonably thought to be present and sampling can be conducted in a safe manner. If regulated materials are found during the course of demolition and/or renovation activities that are not listed in this report, the material should be assumed as asbestos-containing, lead containing, or hazardous until it can be sampled and analyzed at an accredited laboratory and safe work practices should always be used if those areas are to be disturbed.

MSG has prepared a logical assessment program to reduce the client's risk of discovering unknown regulated materials and/or hazardous substances. The presence of subsurface regulated materials and/or hazardous substances is based solely on surface observations and/or information provided by others. Descriptions of subsurface conditions provided in this report are not warranted to be complete or accurate. This risk may be reduced by more extensive exploration on the site, but even with additional exploration, it is not possible to completely eliminate the risk of discovering regulated materials and/or hazardous conditions. It cannot and should not be assumed that samples collected and conditions observed at the time of the RMS are representative of an area that has not been sampled and/or tested.

In preparing this report, MSG may have relied on information obtained from or provided by others. MSG makes no representation or warranty regarding the accuracy or completeness of this information gathered through outside sources or subcontracted services. No warranty, guarantee, or certification of any kind, expressed or implied, at common law or created by statute, is extended, made, or intended by rendering these environmental consulting services or by furnishing this written report. Environmental conditions and regulations are subject to constant change and reinterpretation. One should not assume that any on-site conditions and/or regulatory statutes or rules will remain constant after MSG has completed the scope of work for this project. Furthermore, because the facts stated in this report are subject to professional interpretation, differing conclusions could be reached by other environmental professionals.

The report is intended to offer support to a building owner, construction manager, general contractor, abatement contractor, architect, and/or other parties authorized by the owner in generally locating asbestos-containing materials (ACM), lead containing paint, universal and hazardous wastes, and/or other regulated materials. This report does not have the required components to serve as an Asbestos Project Design document, Asbestos and/or Lead Containing Paint Abatement Work Plan, and/or a Health and Safety Plan. Therefore, this report should not be utilized as a project specification document. The results, findings, conclusions, and recommendations expressed in

this report are based only on conditions that were noted during this survey. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated. Quantities have been conservatively estimated and sampling locations have been described representatively; however, current site conditions should be field-verified by contractors bidding on and/or prior to abatement work.

**ATTACHMENT C**

**ANALYTICAL REPORTS AND CHAINS OF CUSTODY**



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)



Project: 1222 W. Ottawa St  
Project # I1440002

**Report To:**  
Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73613  
Date Collected: 12/07/17  
Date Received: 12/08/17  
Date Analyzed: 12/13/17  
Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73613 - 01 Cust. #: AS1-1 Material: Plaster Base Coat Location: Room 1 Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 73613 - 02 Cust. #: AS1-2 Material: Plaster Base Coat Location: Room 1 Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 73613 - 03 Cust. #: AS1-3 Material: Plaster Base Coat Location: Room 1 Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)



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Date Analyzed: 12/13/17  
Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73613 - 04 Cust. #: AS1-4 Material: Plaster Texture Location: Room 9 Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73613 - 04a Cust. #: AS1-4 Material: Plaster Base Coat Location: Room 9 Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 73613 - 05 Cust. #: AS1-5 Material: Plaster Base Coat Location: Room 8 Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%

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Robert T. Letarte Jr., Laboratory Director

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Date Collected: 12/07/17  
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Date Analyzed: 12/13/17  
Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73613 - 06 Cust. #: AS2-4 Material: Drywall Location: Room 9 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%
Lab ID #: 73613 - 07 Cust. #: AS2-1 Material: Drywall Location: Room 1 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%
Lab ID #: 73613 - 08 Cust. #: AS2-2 Material: Drywall Location: Room 3 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%

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Robert T. Letarte Jr., Laboratory Director

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Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73613 - 09 Cust. #: AS2-3 Material: Drywall Location: Room 1 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Fiberglass - 2% Other - 78%
Lab ID #: 73613 - 10 Cust. #: AS3-1 Material: Window Glaze Location: Room 5 Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73613 - 11 Cust. #: AS3-2 Material: Window Glaze Location: Room 5 Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Date Analyzed: 12/13/17  
Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73613 - 12 Cust. #: AS4-1 Material: Beige Tile Location: Room 3 Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73613 - 12a Cust. #: AS4-1 Material: Mastic Location: Room 3 Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73613 - 13 Cust. #: AS4-2 Material: Beige Tile Location: Room 2 Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Date Analyzed: 12/13/17  
Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73613 - 13a Cust. #: AS4-2 Material: Mastic Location: Room 2 Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73613 - 14 Cust. #: AS5-1 Material: Brown Linoleum Location: Room 1 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 73613 - 15 Cust. #: AS5-2 Material: Brown Linoleum Location: Room 1 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73613 - 16 Cust. #: AS6-1 Material: White Tile Location: Room 9 Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73613 - 16a Cust. #: AS6-1 Material: Mastic Location: Room 9 Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73613 - 17 Cust. #: AS6-2 Material: White Tile Location: Room 8 Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73613 - 17a Cust. #: AS6-2 Material: Mastic Location: Room 8 Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73613 - 18 Cust. #: AS7-1 Material: Tan Tile Location: Room 8 Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%
Lab ID #: 73613 - 18a Cust. #: AS7-1 Material: Mastic Location: Room 8 Appearance: brown, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73613  
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Date Received: 12/08/17  
Date Analyzed: 12/13/17  
Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73613 - 19 Cust. #: AS7-2 Material: Tan Tile Location: Room 8 Appearance: Layer: 1 of 2	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73613 - 19a Cust. #: AS7-2 Material: Mastic Location: Room 8 Appearance: black,nonfibrous,nonhomogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73613 - 20 Cust. #: AS8-1 Material: Beige Linoleum Location: Room 10 Appearance: black,fibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)



Project: 1222 W. Ottawa St  
Project # I1440002

**Report To:**  
Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73613  
Date Collected: 12/07/17  
Date Received: 12/08/17  
Date Analyzed: 12/13/17  
Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73613 - 21 Cust. #: AS8-2 Material: Beige Linoleum Location: Room 10 Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 73613 - 22 Cust. #: AS9-1 Material: Multicolored Linoleum Location: Room 8 Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 73613 - 23 Cust. #: AS9-2 Material: Multicolored Linoleum Location: Room 8 Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 50% Other - 50%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)



Project: 1222 W. Ottawa St  
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**Report To:**  
Mr. Charlie Bush  
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2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73613  
Date Collected: 12/07/17  
Date Received: 12/08/17  
Date Analyzed: 12/13/17  
Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73613 - 24 Cust. #: AS10-1 Material: Vent Wrap Location: Room 10 Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 50%	Cellulose - 25% Other - 25%
Lab ID #: 73613 - 25 Cust. #: AS10-2 Material: Vent Wrap Location: Room 3 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73613 - 26 Cust. #: AS10-3 Material: Vent Wrap Location: Room 4 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)



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ARI Report # 17-73613  
Date Collected: 12/07/17  
Date Received: 12/08/17  
Date Analyzed: 12/13/17  
Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73613 - 27 Cust. #: AS11-1 Material: Basement Concrete Location: Basement Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73613 - 28 Cust. #: AS11-2 Material: Basement Concrete Location: Basement Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73613 - 29 Cust. #: AS12-1 Material: Roof Shingle Location: Roof Appearance: black,fibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0

# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)



Project: 1222 W. Ottawa St  
Project # I1440002

**Report To:**  
Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73613  
Date Collected: 12/07/17  
Date Received: 12/08/17  
Date Analyzed: 12/13/17  
Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73613 - 30 Cust. #: AS12-2 Material: Roof Shingle Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 73613 - 31 Cust. #: AS2-5 Material: Drywall Location: Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 73613 - 31a Cust. #: AS2-5 Material: Plaster Base Coat Location: Appearance: grey, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

## APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: 2193 Association Drive, Suite 200  
 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/7/2017 5:00  
 Project: 1222 W OTTAWA ST  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only

Log-In: \_\_\_\_\_

Report: \_\_\_\_\_

Fax: \_\_\_\_\_

Verbal: \_\_\_\_\_

Email: \_\_\_\_\_

Turn Around Time: (circle one) \*\*\*Terms and conditions on the other side.

Rush \_\_\_\_\_ 24 Hour \_\_\_\_\_  
 48 Hour \_\_\_\_\_ **72 Hour** \_\_\_\_\_  
 Other: \_\_\_\_\_ TTP **yes** / no  
 (Test Till Positive)

Samples received after 3pm  
logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	AS 1-1	RM-1 - Plaster	Bag	HA-1	
2	AS 1-2	RM-1 - Plaster	Bag	HA-1	
3	AS 1-3	RM-1 - Plaster	Bag	HA-1	
4	AS 1-4	RM-9 - Plaster	Bag	HA-1	
5	AS 1-5	RM-8 - Plaster	Bag	HA-1	
6	AS 2-4	RM-9 - Drywall	Bag	HA-2	
7	AS 2-1	RM-1 - Drywall	Bag	HA-2	
8	AS 2-2	RM-3 - Drywall	Bag	HA-2	
9	AS 2-3	RM-1 - Drywall	Bag	HA-2	
10	AS 3-1	RM-5 - Window glaze	Bag	HA-3	
11	AS 3-2	RM-5 - Window glaze	Bag	HA-3	
12	AS 4-1	RM-3 - Beige tile	Bag	HA-4	

Relinquished By: [Signature]Received By: [Signature]Relinquished By: \_\_\_\_\_ Received By: [Signature]Date: 12/7/17Time/Date: 12/7/17Date: \_\_\_\_\_ Time/Date: DEC 08 2017

Revision R4 Date: May/2017

APEX RESEARCH

73613

**APEX Research, Inc.**

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: 2193 Association Drive, Suite 200  
 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/7/2017 5:00  
 Project: 1222 W OTTAWA ST  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) **72 Hour** Terms and conditions on the other side.

Rush  24 Hour  
 48 Hour  **72 Hour**  
 Other: \_\_\_\_\_  
 TTP  yes /  no  
 (Test Till Positive)

Samples received after 3pm  
 logged in next morning

Circle analyses required, indicate type and quantity

Asbestos:  Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
13	AS 4-2	RM-2 - Beige tile	Bag	HA-4	
14	AS 5-1	RM-1 - Brown Linoleum	Bag	HA-5	
15	AS 5-2	RM-1 - Brown Linoleum	Bag	HA-5	
16	AS 6-1	RM-9 - White tile	Bag	HA-6	
17	AS 6-2	RM-8 - White tile	Bag	HA-6	
18	AS 7-1	RM-8 - Tan tile	Bag	HA-7	
19	AS 7-2	RM-8 - Tan tile	Bag	HA-7	
20	AS 8-1	RM-10 - Beige Linoleum	Bag	HA-8	
21	AS 8-2	RM-10 - Beige Linoleum	Bag	HA-8	
22	AS 9-1	RM-8 - Multicolored Linoleum	Bag	HA-9	
23	AS 9-2	RM-8 - Multicolored Linoleum	Bag	HA-9	
24	AS 10-1	RM-10 - Vent wrap	Bag	HA-10	

Relinquished By: [Signature]  
 Date: 12/2/17

Received By: [Signature]  
 Time/Date: 12/7/17

Relinquished By: \_\_\_\_\_ Received By: [Signature]  
 Date: \_\_\_\_\_ Time/Date: DEC 08 2017

Revision R4 Date: May/2017

73613

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
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Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/7/2017 5:00  
Project: 1222 W OTTAWA ST  
Project #: I1440002  
Contact Person: Charlie Bush  
Email: cbush@manniksmithgroup.com

Lab Use Only  
Log-In: \_\_\_\_\_  
Report: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Verbal: \_\_\_\_\_  
Email: \_\_\_\_\_

Turn Around Time: (circle one) ---Terms and conditions on the other side.

Rush 24 Hour  
48 Hour 72 Hour  
Other: TTP yes / no  
(Test Till Positive)

Samples received after 3pm  
logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk X Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
25	AS 10-2	RM-3 - Vent wrap	Bag	HA-10	
26	AS 10-3	RM-4 - Vent wrap	Bag	HA-10	
27	AS 11-1	Basement - Basement concrete	Bag	HA-11	
28	AS 11-2	Basement - Basement concrete	Bag	HA-11	
29	AS 12-1	Roof - Roof Shingle	Bag	HA-12	
30	AS 12-2	Roof - Roof Shingle	Bag	HA-12	
31	AS 2-5	Drywall	"	HA-2	
					MW

Relinquished By: [Signature]  
Date: 12/7/17

Received By: [Signature]  
Time/Date: 12/7/17

Relinquished By: \_\_\_\_\_ Received By: [Signature]  
Date: \_\_\_\_\_ Time/Date: DEC 08 2017

RECEIVED  
DEC 08 2017

**ATTACHMENT D**

**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH**



# NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
(MDEQ) AIR QUALITY DIVISION  
NESHAP, 40 CFR Part 61, Subpart M



MICHIGAN DEPARTMENT OF LICENSING AND  
REGULATORY AFFAIRS (LARA), ASBESTOS PROGRAM,  
P.A. 135 OF 1986, AS AMENDED, Section 220 (1-4) or (8)

### DEQ/LARA USE ONLY

Postmark Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Rec'd Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Emergency Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Valid No. \_\_\_\_\_

OK  Send Def Ltr. Date of Def Ltr. \_\_\_\_/\_\_\_\_/\_\_\_\_

FOLLOW UP \_\_\_\_/\_\_\_\_/\_\_\_\_ Spoke w/ \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Notification No. \_\_\_\_\_ Trans No. \_\_\_\_\_

#### Calculate LARA Asbestos Project Fee: (1% Project Fee)

Total Project Cost: \_\_\_\_\_ x 0.01 = \_\_\_\_\_

Type of Contractor: \_\_\_\_\_ License No.: \_\_\_\_\_

Licensing Authority: \_\_\_\_\_

#### 1. NOTIFICATION:

Date of Notification: \_\_\_\_\_

Date of Revision(s): \_\_\_\_\_

Notification Type:  Original  Revised  Canceled  Annual

#### Mark appropriate boxes: (both DEQ and LARA may apply):

##### DEQ (NESHAP) [260 ln. ft./160 sq. ft. or more is threshold]

Planned Renovation – 10 **working** days notice

Emergency Renovation

Scheduled Demolition – 10 **working** days notice

Intentional Burn – 10 **working** days notice

Ordered Demolition

##### LARA (MIOSHA) [Will not accept annual notifications]

Demo, Reno, Encap. (>10 ln. ft./15 sq. ft.) 10 **calendar** days notice

Emergency Renovation/Encapsulation

#### 2. PROJECT SCHEDULE:

**START DATE**                      **END DATE**

\* Renovation                      \_\_\_\_\_                      \_\_\_\_\_

+Asb. Removal                      \_\_\_\_\_                      \_\_\_\_\_

+Demolition:                      \_\_\_\_\_                      \_\_\_\_\_

Encapsulation:                      \_\_\_\_\_                      \_\_\_\_\_

**Work Schedule:** Please indicate the anticipated days of the week and work hours for the purpose of scheduling a compliance inspection.

**Days of the Week**                      **Work Hours**

Asb. Removal:                      \_\_\_\_\_                      \_\_\_\_\_

Demolition:                      \_\_\_\_\_                      \_\_\_\_\_

Encapsulation:                      \_\_\_\_\_                      \_\_\_\_\_

\* Includes setup, build enclosure, asbestos removal, demobilizing, etc.

+Include **only** those dates you are conducting asbestos removal/demo.

Check here if this is a multi-phased project, attach a schedule showing the start/end date of each phase.

#### 3. ABATEMENT CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

#### 4. DEMOLITION CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

#### 5. FACILITY OWNER: ("Facility" includes Bridges)

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

#### 6. FACILITY DESCRIPTION:

Facility Name: \_\_\_\_\_

Location Address/Description: \_\_\_\_\_

\_\_\_\_\_ If Apt. # of units: \_\_\_\_\_

City/Twp. \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

County: \_\_\_\_\_ Nearest Crossroad: \_\_\_\_\_

Size: (sq. ft.) \_\_\_\_\_ No. of Floors: \_\_\_\_\_ Floor No.: \_\_\_\_\_

Age: \_\_\_\_\_ Present Use: \_\_\_\_\_ Prior Use: \_\_\_\_\_

Specific Location(s) in Facility: \_\_\_\_\_

#### 7. DISPOSAL SITE:

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

Location Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

#### 8. WASTE TRANSPORTER 1:

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

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

#### WASTE TRANSPORTER 2:

#### 9. ORDERED DEMOLITIONS: (See NESHAP regulations for definition of "Ordered Demolition.") A copy of the official Order must accompany this notification.

Gov't Agency Ordering Demo: \_\_\_\_\_

Name/Title of Person Signing Order: \_\_\_\_\_

Date of Order: \_\_\_\_\_ Date Ordered to Begin: \_\_\_\_\_

#### 10. IS ASBESTOS PRESENT? Yes No

To be removed prior to demolition

**Estimate the amount of asbestos:** Include RACM (Regulated Asbestos Containing Material) to be removed, encapsulated, etc. Also include the amount and type (floor tile, roofing, etc.) of non-friable Category I and/or Category II ACM that **will not** be removed prior to demolition. (**NOTE:** In a demolition, cementitious ACM **cannot** remain in a structure, as it is likely to become regulated in the demolition/handling process. It **must** be removed prior to demolition.)

RACM to be Removed

RACM to be Encapsulated

Non-friable ACM **not** removed prior to demo.

Category I

Category II

Units of Measure

				<input type="checkbox"/> Ln. Ft.	<input type="checkbox"/> Ln. M.
				<input type="checkbox"/> Sq. Ft.	<input type="checkbox"/> Sq. M.
				<input type="checkbox"/> Cu. Ft.*	<input type="checkbox"/> Cu. M.*

\*Volume (cubic ft./meters) should be used only if unable to measure by linear/square measure (example: asbestos has fallen off of surface).

(continued on reverse side)

**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH (continued)**

**11. PROJECT DESCRIPTION:** Complete **A) for Renovation** (asbestos removal/encapsulation) and/or **B) for Demolition**:

**A) RENOVATION:** Mark all surfaces/types of RACM to be removed:

- Piping     Fittings     Boiler(s)     Tanks(s)  
 Beam(s)     Duct(s)     Tunnel(s)     Ceiling Tile(s)  
 Mag Block     Other (describe) \_\_\_\_\_

**Encapsulation (for LARA):** Mark surfaces/types to be encapsulated:

- Piping     Fittings     Boiler(s)     Tank(s)  
 Beam(s)     Duct(s)     Tunnel(s)     Ceiling Tile(s)  
 Other (describe) \_\_\_\_\_

**Method of removal:** Describe how the asbestos will be removed from the surface (example: glove bag, scrape with hand tools, cut in sections and carefully lower, etc.): \_\_\_\_\_  
 \_\_\_\_\_

**B) DEMOLITION:** Describe the method of demolition of facility, bridge, etc., and indicate if complete or partial. If partial, describe which part of facility bridge, etc., will be demolished: \_\_\_\_\_  
 \_\_\_\_\_

**12. ENGINEERING CONTROLS:** Describe work practices and engineering controls used to prevent visible emissions before, during, and after removal, and until proper disposal: \_\_\_\_\_  
 \_\_\_\_\_

**13. UNEXPECTED ASBESTOS:** Describe the steps you intend to follow in the event that unexpected RACM is found or previously non-friable asbestos becomes friable (crumbled, pulverized, reduced to powder, etc.) and therefore regulated: \_\_\_\_\_  
 \_\_\_\_\_

**14. PROCEDURE(S) USED TO DETECT THE PRESENCE OF ASBESTOS:** **A)** Indicate how you determined whether or not asbestos is in the facility. If analytical sampling was used, describe method of analysis. (The determination of the presence or absence of asbestos must be made prior to submitting a renovation/demolition notification.): \_\_\_\_\_  
 \_\_\_\_\_

**B)** Name, address, and phone number of company performing asbestos survey: \_\_\_\_\_

**C)** Name, accreditation number of inspector, and date of inspection: \_\_\_\_\_

**15. EMERGENCY RENOVATIONS:** Date/time of emergency: \_\_\_\_\_ Describe the sudden, unexpected event: \_\_\_\_\_  
 \_\_\_\_\_

Explain how the event caused unsafe conditions, and/or would cause equipment damage and/or an unreasonable financial burden: \_\_\_\_\_  
 \_\_\_\_\_

**16.** I certify that an individual trained in the provisions of 40 CFR Part 61, Subpart M, will be on-site during the renovation and during demolition involving RACM above the threshold and/or during an ordered demolition. Evidence that this person has completed the required training will be available for inspection at the renovation or demolition site.

\_\_\_\_\_  
*Signature of Owner or Abatement Contractor      Date*

\_\_\_\_\_  
*Signature of Owner or Demolition Contractor      Date*

**17. Signature Requirements for Projects with Negative Pressure Enclosures: (required by LARA)**  
**Per Section 221(1)(2) of P.A. 135 of 1986, as amended, clearance air monitoring is required for any asbestos abatement project involving 10 linear feet/15 square feet or more of friable material which is performed within a negative pressure enclosure. I (the building owner or lessee) have been advised by the contractor of my responsibility under Act 135 to have clearance air monitoring performed on this project.**

\_\_\_\_\_  
*Signature of Building Owner or Lessee      Date*

\_\_\_\_\_  
*Signature of Asbestos Abatement Contractor Representative      Date*

**NOTE:** It is not mandatory that a signed copy be sent to LARA unless requested. For affected projects, this section of the notification form must be completed, signed, and made part of your records before the project begins.

**18. I certify that the above information is correct:**

\_\_\_\_\_  
*Printed Name of Owner/Operator      Date*

\_\_\_\_\_  
*Signature of Owner/Operator      Date*

**MAILING ADDRESSES/PHONE NUMBERS:** (See Item 1 to determine which agency requirements/regulations are applicable to your project.)

For **Public Act 135 of 1986, as amended, Section 220 (1-4) or (8)**, mail to address below. For more info visit:  
<http://www.michigan.gov/asbestos>

MIOSHA Asbestos Program  
 LARA, CSHD  
 P.O. Box 30671  
 Lansing, MI 48909-8171

517.636.4551 (office), 517.322.1713 (fax)

For **NESHAP Demolitions/Renovations, 40 CFR, Part 61, Subpart M**, please use the e-submittal process. For more information visit <http://www.michigan.gov/air>, under Air Links click on Asbestos NESHAP Program.

NESHAP Asbestos Program  
 DEQ, AQD  
 P.O. Box 30260  
 Lansing, MI 48909-7760

517.284.6777 (Office)





December 29, 2017

Ms. Roxanne Case  
 Grant Manager  
 Ingham County Land Bank  
 3024 Turner Street  
 Lansing, Ingham County, Michigan 48906

Re: Pre-Demolition Regulated Materials Survey  
 1220 W Ottawa, Lansing, Ingham County, Michigan

Dear Ms. Case:

The Mannik & Smith Group, Inc. (MSG) is pleased to present Ingham County with the results of the limited pre-demolition regulated materials survey (RMS) performed at 1220 W Ottawa, Lansing, Ingham County, Michigan (hereinafter referred to as the "Site") by Kory McKay (Accreditation Number A47903).

**SUMMARY**

Building Information	
Property Address	1220 W Ottawa, Lansing, MI
Parcel #	33-01-01-17-258-091
No. Stories	2
Square Footage (approx.)	1,500 SF
Siding	Vinyl
Basement	Yes
Garage	Yes



Asbestos Containing Material				
Location	Material Group	Friable/Non Friable	Asbestos	Quantity
RM-9	Green linoleum	Non friable	20% Chrysotile	70 SF
RM-7	Yellow linoleum	Non friable	20% Chrysotile	100 SF
RM-7, RM-10, Basement	Vent wrap	Friable	30% Chrysotile	300 SF

Universal Waste Inventory		
Location	Material Description	Quantity
RM-1, Basement	Tire	4
RM-2, RM-10	Thermostat	3
RM-10, Basement	Smoke detector	4

TECHNICAL SKILL.  
 CREATIVE SPIRIT.

<b>Hazardous Materials</b>		
<b>Location</b>	<b>Material Description</b>	<b>Quantity</b>
RM-10, RM-7	1 Gallon paint can	3
Garage	Car	1

## **PURPOSE AND SCOPE OF WORK**

The purpose of the RMS was to identify, quantify and document the location of regulated materials that may be encountered during demolition of the on-site structure. To accomplish this purpose, MSG performed the following scope of work:

- 1) Pre-demolition asbestos-containing material (ACM) survey.
- 2) Universal wastes, hazardous materials, and other regulated wastes survey.

## **METHODOLOGIES**

The RMS was conducted on December 7, 2017. Methodologies employed during the completion of each task of the RMS are detailed below.

### **ACM Survey Procedures**

The ACM survey was performed in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763. The National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations govern demolition and renovation activities in which asbestos is present. The NESHAP rule distinguishes between Regulated Asbestos-Containing Materials (RACM) that would readily release asbestos fibers when damaged or disturbed and those materials that are unlikely to result in significant fiber release during demolition activities. The purpose of this survey is to determine if ACM within the Site building are RACM and thus, subject to the NESHAP, and to comply with the Michigan Occupational Safety and Health Administration (MIOSHA) and guidelines set forth in the Occupational Safety and Health Administration (OSHA) Regulations Standards 29 CFR 1910.1101.

RACM, as defined by NESHAP, is classified into four parts, (1) friable asbestos material, (2) Category I non-friable ACM (packing, gaskets, floor tile and roofing products) that has become friable, (3) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (4) Category II non-friable ACM (all other ACM products) 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.

The suspect ACM identified during this survey was grouped into homogeneous materials (i.e. similar materials which are uniform in color and texture) and:

- Described and quantified it in linear feet (LF) or square feet (SF);
- Identified and classified as friable or non-friable;
- Assessed as being in good, fair or poor condition;
- Assigned an EPA classification type (surfacing material, thermal system insulation or miscellaneous);
- Classified as RACM or non-RACM; and
- Sampled, or identified as presumed ACM (PACM).

MSG performed services associated with the ACM survey in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. The ACM survey included a systematic visual inspection of readily accessible areas of the Site building. Destructive sampling methods were used and suspect ACM samples were collected by State of Michigan Accredited Asbestos Inspector, Kory McKay (Accreditation Number

A47903). Based on the quantity of each classification of material, MSG collected samples of each suspect ACM in accordance with EPA guidelines.

### **Universal Wastes and Hazardous Material Survey Procedures**

MSG identified and inventoried universal wastes and hazardous materials by a visual reconnaissance of the Site. Materials were identified, described, and quantified to the extent possible; however, no equipment or containers were opened and/or sampled as part of this survey.

A hazardous material, as defined in OSHA 29 CFR 1910.1200, is any item or chemical which is a "health hazard" or "physical hazard", including the following:

- Chemicals that are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, hepatotoxins, nephrotoxins, neurotoxins, agents that act on the hematopoietic system, and agents that damage the lungs, skin, eyes, or mucous membranes;
- Chemicals that are combustible liquids, compressed gases, explosives, flammable liquids, flammable solids, organic peroxides, oxidizers, pyrophorics, unstable (reactive) or water-reactive;
- Chemicals that, in the course of normal handling, use or storage, may produce or release dusts, gases, fumes, vapors, mists or smoke which have any of the above characteristics; and
- Any item or chemical which, when being transported or moved, is a risk to public safety or an environmental hazard, and is regulated as such by one or more of the following:
  - DOT - Department of Transportation; Hazardous Materials Regulations (49 CFR 100-180);
  - IMO - International Maritime Organization; International Maritime Dangerous Goods (IMDG) Code;
  - IATA - International Air Transport Association; Dangerous Goods Regulations;
  - ICAO - International Civil Aviation Organization; Technical Instructions; and
  - AF - Air Force "INTERSERVICE" Manual, Preparing Hazmat for Military Air Shipments (AFMAN 24-204).

Hazardous materials may also include:

- Any item or chemical listed in the United States Environmental Protection Agency (USEPA) *List of Hazardous Substances and Reportable Quantities*, dated September 1992.
- Noticeable as inventory under the reporting requirements of the Hazardous Chemical Reporting (40 CFR Part 302).
- An environmental release under the reporting requirements of the Toxic Chemical Release Reporting: Community Right To Know (40 CFR Part 372) or under Part 201, Environmental Remediation of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 201) and Part 213, Leaking Underground Storage Tanks (Part 213).

These would include chemicals with special characteristics which, in the opinion of the manufacturer, can cause harm to people, plants, or animals when released by spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other receptacles).

Universal wastes are waste that comes primarily from consumer products containing mercury, lead, cadmium or other substances that are hazardous to human health and the environment. These items cannot be discarded in household trash nor disposed of in landfills but have less stringent handling and disposal requirements than hazardous waste streams. In Michigan, universal wastes are regulated by the MDEQ Office of Waste Management and Radiological Protection under Part 111 of Act 451 and the federal Resource Conservation and Recovery Act (RCRA) of 1976 under 40 CFR Part 273. Universal waste is also regulated by the US Department of Transportation (US DOT) under 49 CFR Parts 171 through 180. Most of the universal waste requirements overseen by the DEQ are addressed by R 299.9228 of Part 111 of 1994 P.A. 451, as amended and 40 CFR Part 273. These regulations are designed to encourage proper collection, recycling, treatment, or disposal of these wastes.

Examples of universal waste are mercury-containing equipment (e.g. thermostats, barometers, manometers, temperature and pressure gauges, and mercury switches), nickel-cadmium and spent lead-acid batteries, lamps (e.g. incandescent, fluorescent, high intensity discharge, neon, mercury vapor, and high pressure sodium and metal halide), pesticides, polychlorinated biphenyl (PCB) containing transformers and light ballasts, stored chemical and/or petroleum products, etc. In Michigan, Part 111 also includes pharmaceutical and consumer electronics as additional types of universal wastes.

### **Other Regulated Materials**

This RMS also included identifying and inventorying other regulated materials which may pose physical or chemical concerns during demolition of the Site building(s) including chlorofluorocarbon (CFC) containing devices, tanks, vessels, equipment, and building materials that may contain or become contaminated with hazardous materials.

Specifically, CFC containing devices are regulated Under Title VI of the Clean Air Act (CAA). The Stratospheric Protection Division of the EPA manages programs protecting the stratospheric ozone layer. Title 40, Part 82 of the Code of Federal Regulations contains the EPA regulations protecting the ozone layer. The RMS survey of the premises identified and quantified any CFC containers and CFC containing equipment, which could include the following:

- Drinking fountains, air conditioners, refrigerators
- Air conditioners in control panels and other process equipment
- Water and air chillers
- Roof top and stand-alone air conditioners
- Cafeteria equipment: freezers, walk-in coolers/freezers
- CFC canisters and cylinders

In Michigan, underground storage tanks are regulated under the authority of Part 211, Underground Storage Tank Regulations, of Act 451 of 1994, as amended, and the Michigan Underground Storage Tank Rules (MUSTR). Therefore, this survey included whether any evidence of underground storage tanks and related piping and dispensers were present at the Site.

MSG also surveyed for the presence of equipment, other storage tanks, and materials that may contain or be contaminated by regulated chemicals. These include, but may not be comprehensive of:

- Above ground storage tanks
- Oil-containing equipment (hydraulic equipment, blowers, fans, motors, elevators, compressors, etc.)
- Fire brick
- Contaminated building materials (concrete, block walls, wood, plaster, etc.) with staining, odor or other signs of a hazardous chemical release

## **SURVEY RESULTS**

The following subsections include a discussion of the RMS results. Photographs of the residence are located in the *Attachment A, Photo Log*. The results of this report are valid as of the report date, subject to the limitations presented in *Attachment B, Limitations*.

### **ACM Survey Results**

MSG identified eighteen (18) homogenous materials that were suspect as asbestos containing during the ACM survey. Forty-four (44) bulk samples were collected from these suspect homogeneous materials and were submitted to APEX Research, Inc. (APEX) for laboratory analysis of Bulk Materials by Polarized Light Microscopy using USEPA Method 600/R-93/116. APEX is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) to analyzed bulk samples for asbestos content. Of the aforementioned suspect homogenous materials identified during this ACM survey, laboratory analysis found three (3)

materials to contain greater than 1% asbestos (samples 8-1, 9-1, and 15-1). The EPA defines ACM as materials containing greater than 1% asbestos.

A point-count quantification procedure (PCQM) allows for lower detection limits than calibrated visual estimation (CVES), which is the quantification method widely used in asbestos analysis via Polarized Light Microscopy (PLM). If the asbestos content is found to contain less than 10% asbestos as determined by a method other than point counting by PLM, it can only be treated as non-ACM if verified to contain less than 1% by the PCQM. If not point-counted, the sample must be assumed to be greater than 1% and thus considered and treated as ACM. No samples were point counted.

Suspect ACM sample locations are depicted on the attached figure. See *Table 1, Asbestos Sampling Results* for a listing of homogeneous materials identified by MSG during this survey. A copy of the analytical reports including chains of custody is attached in *Attachment C, Analytical Reports and Chains of Custody*.

### **Universal Wastes, Hazardous Materials, and Other Regulated Materials Survey Results**

Universal wastes, hazardous materials, and/or other regulated materials wastes were identified within the Site building. Quantities identified are provided in *Table 2, Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory*.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Asbestos Containing Materials**

Of the eighteen (18) homogenous materials collected as part of the ACM survey, three (3) materials contained asbestos greater than 1% (samples 8-1, 9-1, and 15-1) with these three (3) materials (samples 8-1, 9-1, and 15-1) being classified as RACM. All materials containing ACM must be disposed of in a licensed landfill.

Prior to demolition, a notification of intent to demolish shall be made to the Michigan Department of Environmental Quality Air Quality Division (MDEQ-AQD) and Licensing and Regulatory Affairs (LARA), Asbestos Program. Notification, according to the procedure described by the NESHAP, Title 40 of the Code of Federal Regulations, Part 61, Subpart M, Notification, for renovation and demolition projects should be followed. A copy of this notification form is provided in *Attachment D, Notification of Intent to Renovate/Demolish*. This form shall be completed by the contractor who completes the demolition.

If additional suspect ACMs are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, shall be surveyed, tested, and abated if warranted. If suspect ACMs are determined to be RACM that would be disturbed during demolition activities, the RACM must be properly removed by a licensed asbestos abatement contractor.

Category I and Category II Non-Friable ACM may often be left in place during demolition activities if the ACM is not subjected to sanding, grinding, cutting, or abrading or has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material during the course of demolition.

### **Universal Wastes, Hazardous Materials, and Other Regulated Materials**

The universal waste, hazardous materials, and other regulated materials (see Table 2) must be properly characterized (as necessary) and properly removed from the Site building for recycling and/or disposed of in accordance with Parts 111, 115, or 147 of Michigan Public Act 451 of 1994, as amended. If additional universal wastes, hazardous materials, and other regulated materials are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, these materials shall be characterized (as necessary) and properly removed in accordance with the above-mentioned regulations.

If you have any questions or concerns regarding the above information please contact us at 734-397-3100.

Sincerely,



Kory McKay  
Environmental Scientist  
Accreditation Number A47903



Charlie Bush  
Senior Project Manager  
Accreditation Number A34293

Attachments

FIGURE

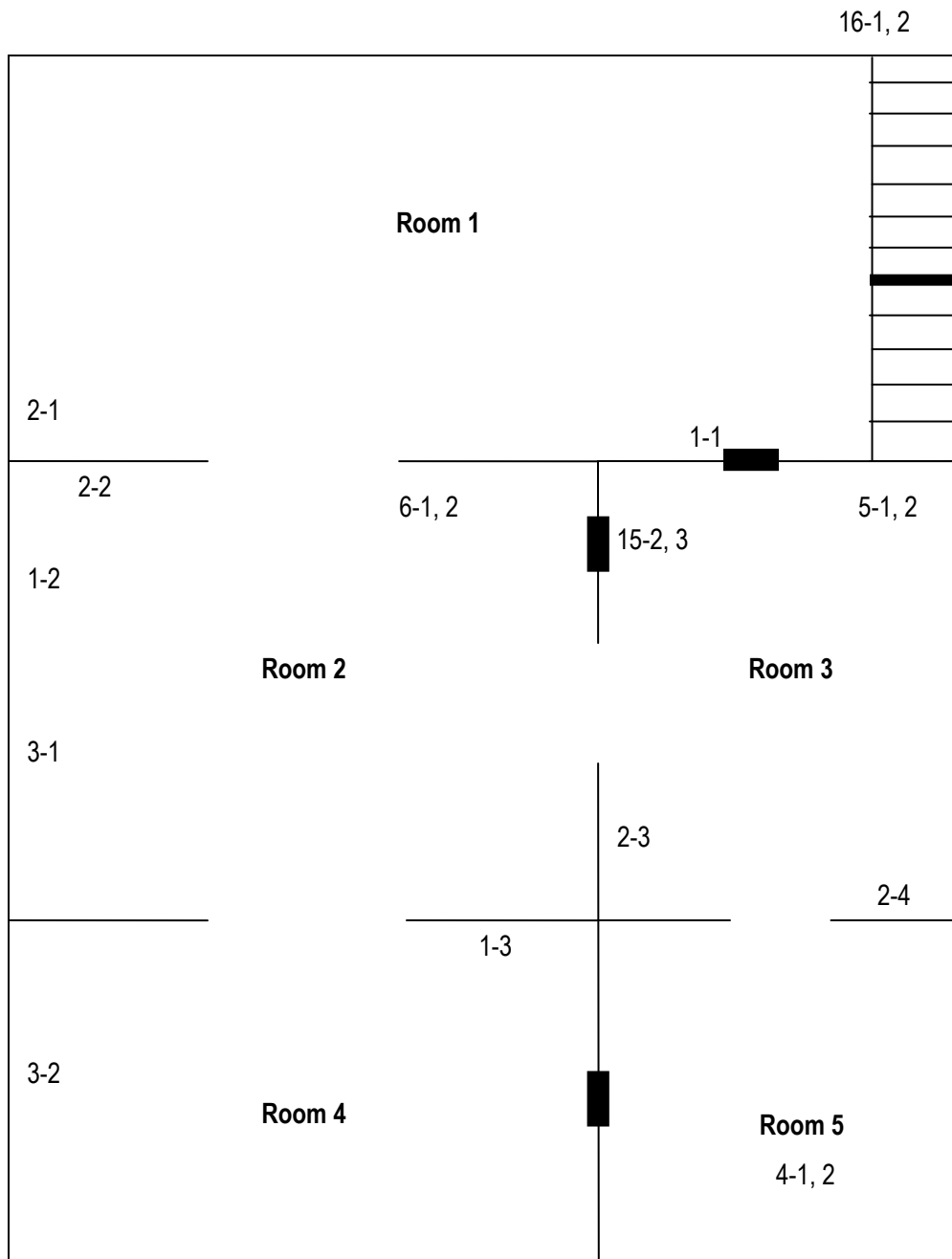


Address: 1220 W Ottawa

Date: December 12, 2017

Drawing not to scale

1<sup>st</sup> Floor



■ = Vent with wrap

#-# = Asbestos Sample

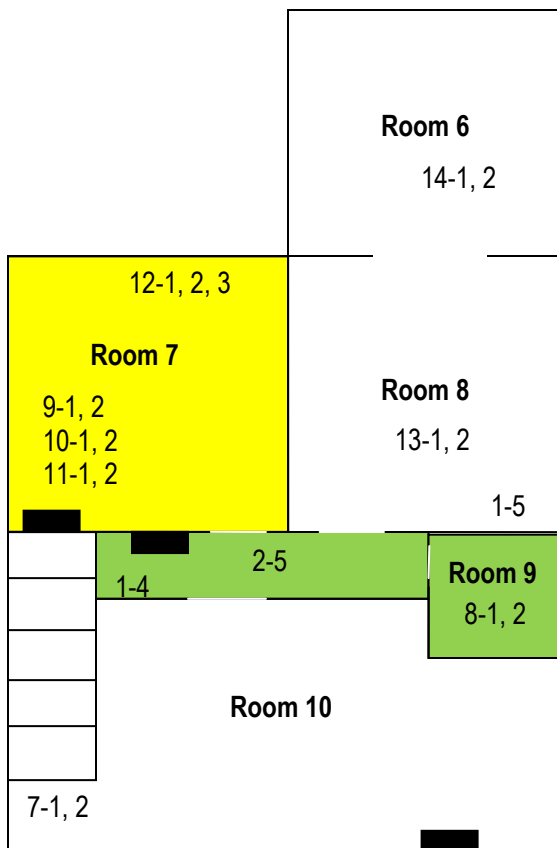


Address: 1220 W Ottawa

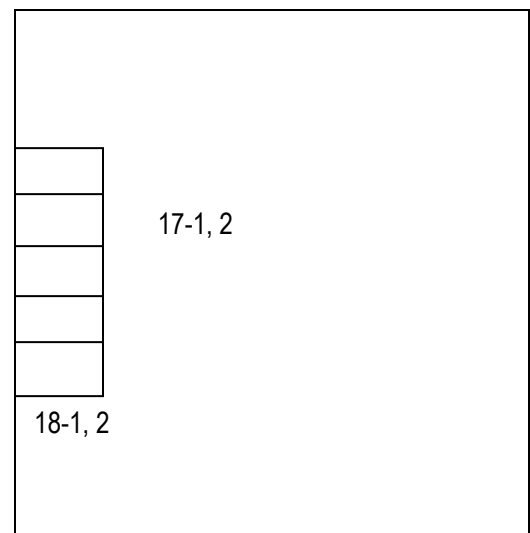
Date: December 12, 2017


Drawing not to scale

2<sup>nd</sup> Floor




Basement




 = Green Linoleum (70 SF)

 = Yellow Linoleum (100 SF)

 = Vent with wrap

#-# = Asbestos Sample

 = Vent with wrap

TABLES



**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		1220 W Ottawa St.								
Survey Date		December 7, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-1	1	AS 1-1	HA-1	Plaster	Non-Friable	Good	Miscellaneous	No	No	1700 SF
RM-2	1	AS 1-2	HA-1	Plaster	Non-Friable	Good	Miscellaneous	No	No	1700 SF
RM-4	1	AS 1-3	HA-1	Plaster	Non-Friable	Good	Miscellaneous	No	No	1700 SF
RM-10	2	AS 1-4	HA-1	Plaster	Non-Friable	Good	Miscellaneous	No	No	1700 SF
RM-8	2	AS 1-5	HA-1	Plaster	Non-Friable	Good	Miscellaneous	No	No	1700 SF
RM-1	1	AS 2-1	HA-2	Drywall	Non-Friable	Good	Miscellaneous	No	No	1700 SF
RM-2	1	AS 2-2	HA-2	Drywall	Non-Friable	Good	Miscellaneous	No	No	1700 SF
RM-3	1	AS 2-3	HA-2	Drywall	Non-Friable	Good	Miscellaneous	No	No	1700 SF
RM-3	1	AS 2-4	HA-2	Drywall	Non-Friable	Good	Miscellaneous	No	No	1700 SF
RM-10	2	AS 2-5	HA-2	Drywall	Non-Friable	Good	Miscellaneous	No	No	1700 SF
RM-2	1	AS 3-1	HA-3	Window glaze	Non-Friable	Good	Miscellaneous	No	No	165 SF
RM-4	1	AS 3-2	HA-3	Window glaze	Non-Friable	Good	Miscellaneous	No	No	165 SF
RM-5	1	AS 4-1	HA-4	Brown Linoleum	Non-Friable	Good	Miscellaneous	No	No	75 SF
RM-5	1	AS 4-2	HA-4	Brown Linoleum	Non-Friable	Good	Miscellaneous	No	No	75 SF
RM-3	1	AS 5-1	HA-5	Beige tile	Non-Friable	Good	Miscellaneous	No	No	90 SF

**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		1220 W Ottawa St.								
Survey Date		December 7, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-3	1	AS 5-2	HA-5	Beige tile	Non-Friable	Good	Miscellaneous	No	No	90 SF
RM-2	1	AS 6-1	HA-6	Ceiling tile	Non-Friable	Good	Miscellaneous	No	No	450 SF
RM-2	1	AS 6-2	HA-6	Ceiling tile	Non-Friable	Good	Miscellaneous	No	No	450 SF
RM-1	1	AS 7-1	HA-7	White linoleum on stairs	Non-Friable	Good	Miscellaneous	No	No	30 SF
RM-1	1	AS 7-2	HA-7	White linoleum on stairs	Non-Friable	Good	Miscellaneous	No	No	30 SF
RM-9	2	AS 8-1	HA-8	Green linoleum	Non-Friable	Good	Miscellaneous	Yes	20% Chrysotile	70 SF
RM-9	2	AS 8-2	HA-8	Green linoleum	Non-Friable	Good	Miscellaneous	Yes	NA	70 SF
RM-7	2	AS 9-1	HA-9	Yellow Linoleum	Non-Friable	Good	Miscellaneous	Yes	20% Chrysotile	100 SF
RM-7	2	AS 9-2	HA-9	Yellow Linoleum	Non-Friable	Good	Miscellaneous	Yes	NA	100 SF
RM-7	2	AS 10-1	HA-10	Brown flooring	Non-Friable	Good	Miscellaneous	No	No	100 SF
RM-7	2	AS 10-2	HA-10	Brown flooring	Non-Friable	Good	Miscellaneous	No	No	100 SF
RM-7	2	AS 11-1	HA-11	Flooring paper	Non-Friable	Good	Miscellaneous	No	No	100 SF
RM-7	2	AS 11-2	HA-11	Flooring paper	Non-Friable	Good	Miscellaneous	No	No	100 SF
RM-7	2	AS 12-1	HA-12	Textured ceiling	Friable	Good	Miscellaneous	No	No	550 SF
RM-7	2	AS 12-2	HA-12	Textured ceiling	Friable	Good	Miscellaneous	No	No	550 SF
RM-7	2	AS 12-3	HA-12	Textured ceiling	Friable	Good	Miscellaneous	No	No	550 SF
RM-8	2	AS 13-1	HA-13	Tan linoleum	Non-Friable	Good	Miscellaneous	No	No	100 SF
RM-8	2	AS 13-2	HA-13	Tan linoleum	Non-Friable	Good	Miscellaneous	No	No	100 SF

**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		1220 W Ottawa St.								
Survey Date		December 7, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-6	2	AS 14-1	HA-14	Faux wood Linoleum	Non-Friable	Good	Miscellaneous	No	No	100 SF
RM-6	2	AS 14-2	HA-14	Faux wood Linoleum	Non-Friable	Good	Miscellaneous	No	No	100 SF
RM-10	2	AS 15-1	HA-15	Vent wrap	Friable	Good	Miscellaneous	Yes	30% Chrysotile	300 SF
RM-3	1	AS 15-2	HA-15	Vent wrap	Friable	Good	Miscellaneous	Yes	30% Chrysotile	300 SF
RM-3	1	AS 15-3	HA-15	Vent wrap	Friable	Good	Miscellaneous	Yes	30% Chrysotile	300 SF
Roof	E	AS 16-1	HA-16	Shingles	Non-Friable	Good	Miscellaneous	No	No	620 SF
Roof	E	AS 16-2	HA-16	Shingles	Non-Friable	Good	Miscellaneous	No	No	620 SF
Basement	B	AS 17-1	HA-17	Basement cement	Non-Friable	Good	Miscellaneous	No	No	400 SF
Basement	B	AS 17-2	HA-17	Basement cement	Non-Friable	Good	Miscellaneous	No	No	400 SF
Basement	B	AS 18-1	HA-18	Faux brick Linoleum	Non-Friable	Good	Miscellaneous	No	No	20 SF
Basement	B	AS 18-2	HA-18	Faux brick Linoleum	Non-Friable	Good	Miscellaneous	No	No	20 SF

**Table 2**  
**Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory**  
 1220 W Ottawa  
 Lansing, Ingham County, Michigan

<b>Universal Waste Inventory</b>		
Location	Type of Waste	Approximate Quantity
RM-1,Basement	Tires	4
RM-2,RM-10	Thermostat	3
RM-10,Basement	Smoke detector	4
<b>Hazardous Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
RM-10, RM-7	1 Gallon paint can	3
Garage	Car	1
<b>Other Regulated Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
-	-	-

**ATTACHMENT A**

**PHOTO LOG**



Property Photos



1220 West Ottawa St, Front of House



Back of House



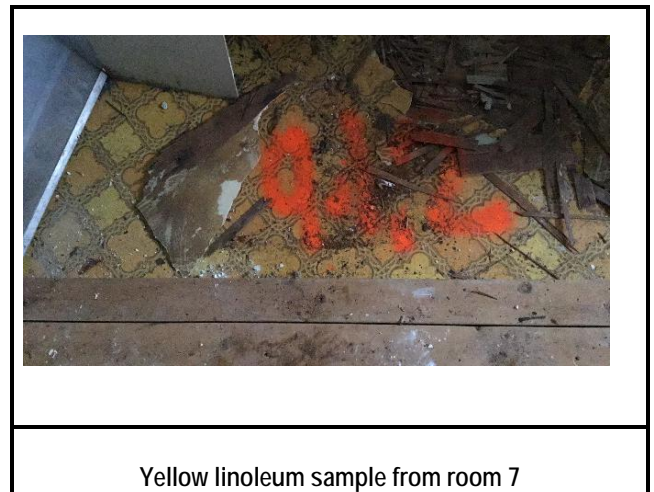
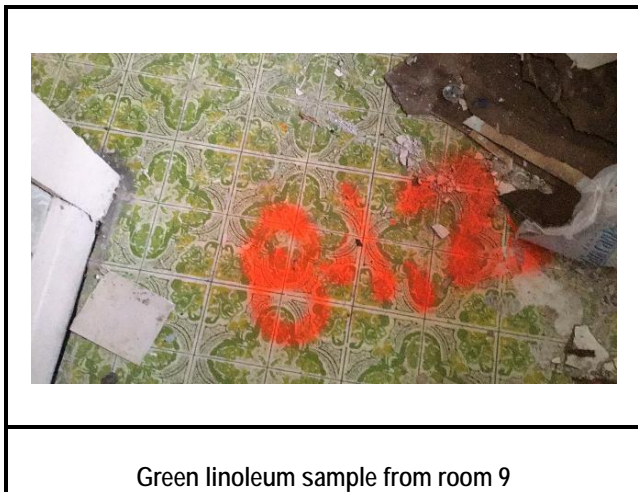
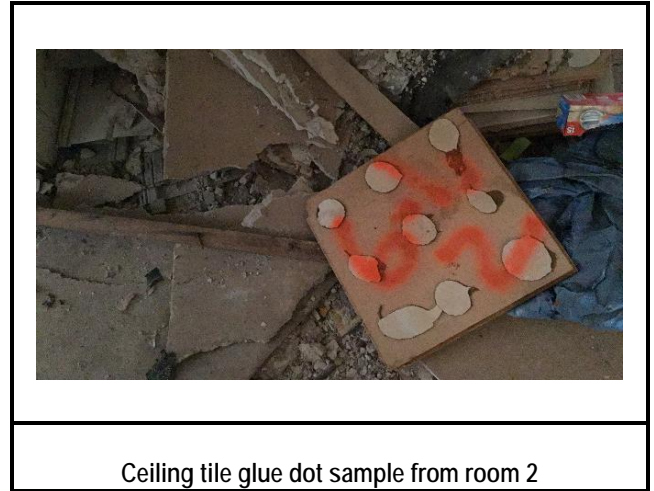
Side of House



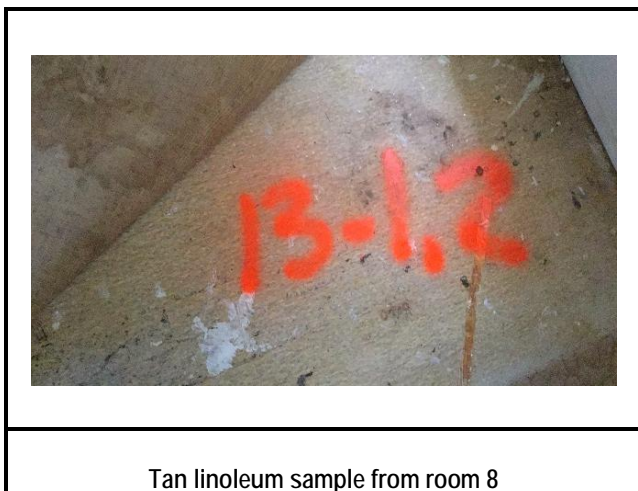
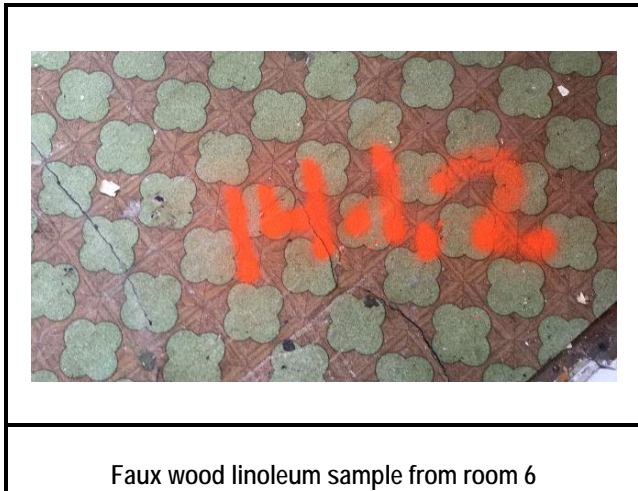
Side of House



Sample Photos



Sample Photos



# ATTACHMENT B

## LIMITATIONS





## REGULATED MATERIALS SURVEY LIMITATIONS

The Mannik & Smith Group, Inc. (MSG) performed its services associated with this Regulated Materials Survey (RMS) in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763, Occupational Safety and Health Administration (OHSA) 29 CFR 1926.62, and in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. This RMS and related documentation are site-specific, which means they pertain to the conditions of the site surveyed.

Unless otherwise noted, MSG's RMS is limited to accessible areas. Areas determined to be not structurally sound, safely reached, limited by excessive accumulated obstructions, require specialized equipment to access, in operable windows, etc., are not included in this survey. There may be areas where regulated materials, such as suspected asbestos-containing materials (SACM) and lead containing paint cannot be viewed and/or tested. MSG shall not be responsible for identifying all SACM, lead containing paint, or other hazardous materials located in inaccessible locations, including but not limited to, above a plaster ceiling, behind a wall, embedded in concrete, buried, confined spaces, unsafe areas, or otherwise not readily identifiable.

Destructive sampling will only be conducted when permission has been granted by the owner. Destructive survey locations are limited to areas where hidden SACM, lead containing paint, or other hazardous materials is reasonably thought to be present and sampling can be conducted in a safe manner. If regulated materials are found during the course of demolition and/or renovation activities that are not listed in this report, the material should be assumed as asbestos-containing, lead containing, or hazardous until it can be sampled and analyzed at an accredited laboratory and safe work practices should always be used if those areas are to be disturbed.

MSG has prepared a logical assessment program to reduce the client's risk of discovering unknown regulated materials and/or hazardous substances. The presence of subsurface regulated materials and/or hazardous substances is based solely on surface observations and/or information provided by others. Descriptions of subsurface conditions provided in this report are not warranted to be complete or accurate. This risk may be reduced by more extensive exploration on the site, but even with additional exploration, it is not possible to completely eliminate the risk of discovering regulated materials and/or hazardous conditions. It cannot and should not be assumed that samples collected and conditions observed at the time of the RMS are representative of an area that has not been sampled and/or tested.

In preparing this report, MSG may have relied on information obtained from or provided by others. MSG makes no representation or warranty regarding the accuracy or completeness of this information gathered through outside sources or subcontracted services. No warranty, guarantee, or certification of any kind, expressed or implied, at common law or created by statute, is extended, made, or intended by rendering these environmental consulting services or by furnishing this written report. Environmental conditions and regulations are subject to constant change and reinterpretation. One should not assume that any on-site conditions and/or regulatory statutes or rules will remain constant after MSG has completed the scope of work for this project. Furthermore, because the facts stated in this report are subject to professional interpretation, differing conclusions could be reached by other environmental professionals.

The report is intended to offer support to a building owner, construction manager, general contractor, abatement contractor, architect, and/or other parties authorized by the owner in generally locating asbestos-containing materials (ACM), lead containing paint, universal and hazardous wastes, and/or other regulated materials. This report does not have the required components to serve as an Asbestos Project Design document, Asbestos and/or Lead Containing Paint Abatement Work Plan, and/or a Health and Safety Plan. Therefore, this report should not be utilized as a project specification document. The results, findings, conclusions, and recommendations expressed in

this report are based only on conditions that were noted during this survey. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated. Quantities have been conservatively estimated and sampling locations have been described representatively; however, current site conditions should be field-verified by contractors bidding on and/or prior to abatement work.



**ATTACHMENT C**

**ANALYTICAL REPORTS AND CHAINS OF CUSTODY**



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)



Project: 1220 W. Ottawa St  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73612  
Date Collected: 12/07/17  
Date Received: 12/08/17  
Date Analyzed: 12/13/17  
Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73612 - 01 Cust. #: AS1-1 Material: Plaster Texture Location: Room 1 Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 2% Other - 98%
Lab ID #: 73612 - 01a Cust. #: AS1-1 Material: Plaster Base Coat Location: Room 1 Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 73612 - 02 Cust. #: AS1-2 Material: Plaster Base Coat Location: Room 2 Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0

# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)



Project: 1220 W. Ottawa St  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73612  
Date Collected: 12/07/17  
Date Received: 12/08/17  
Date Analyzed: 12/13/17  
Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73612 - 03 Cust. #: AS1-3 Material: Plaster Base Coat Location: Room 4 Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 73612 - 04 Cust. #: AS1-4 Material: Plaster Texture Location: Room 10 Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 2% Other - 98%
Lab ID #: 73612 - 04a Cust. #: AS1-4 Material: Plaster Base Coat Location: Room 10 Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73612 - 05 Cust. #: AS1-5 Material: Plaster Texture Location: Room 8 Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 2% Other - 98%
Lab ID #: 73612 - 05a Cust. #: AS1-5 Material: Plaster Base Coat Location: Room 8 Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 73612 - 06 Cust. #: AS2-5 Material: Drywall Location: Room 10 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73612 - 07 Cust. #: AS2-1 Material: Drywall Location: Room 1 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 73612 - 08 Cust. #: AS2-2 Material: Drywall Location: Room 2 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 83%
Lab ID #: 73612 - 09 Cust. #: AS2-3 Material: Drywall Location: Room 3 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Fiberglass - 2% Other - 83%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73612 - 10 Cust. #: AS2-4 Material: Drywall Location: Room 3 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 73612 - 10a Cust. #: AS2-4 Material: Plaster Base Coat Location: Room 3 Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 73612 - 11 Cust. #: AS3-1 Material: Window Glaze Location: Room 2 Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73612 - 12 Cust. #: AS3-2 Material: Window Glaze Location: Room 4 Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73612 - 13 Cust. #: AS4-1 Material: Brown Linoleum Location: Room 5 Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Other - 85%
Lab ID #: 73612 - 14 Cust. #: AS4-2 Material: Brown Linoleum Location: Room 5 Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Other - 90%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73612 - 15 Cust. #: AS5-1 Material: Beige Tile Location: Room 3 Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73612 - 15a Cust. #: AS5-1 Material: Glue Location: Room 3 Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73612 - 16 Cust. #: AS5-2 Material: Beige Tile Location: Room 3 Appearance: beige, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73612 - 16a Cust. #: AS5-2 Material: Glue Location: Room 3 Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73612 - 17 Cust. #: AS6-1 Material: Ceiling Tile/Glue Pod Location: Room 2 Appearance: brown, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73612 - 18 Cust. #: AS6-2 Material: Ceiling Tile/Glue Pod Location: Room 2 Appearance: brown, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73612 - 19 Cust. #: AS7-1 Material: White Linoleum on Stairs Location: Room 1 Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Other - 85%
Lab ID #: 73612 - 20 Cust. #: AS7-2 Material: White Linoleum on Stairs Location: Room 1 Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Other - 85%
Lab ID #: 73612 - 21 Cust. #: AS8-1 Material: Green Linoleum Location: Room 9 Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 20%	Other - 80%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73612 - 22 Cust. #: AS8-2 Material: Green Linoleum Location: Room 9 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73612 - 23 Cust. #: AS9-1 Material: Yellow Linoleum Location: Room 7 Appearance: yellow, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 20%	Other - 80%
Lab ID #: 73612 - 24 Cust. #: AS9-2 Material: Yellow Linoleum Location: Room 7 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73612 - 25 Cust. #: AS10-1 Material: Brown Flooring Location: Room 7 Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Other - 90%
Lab ID #: 73612 - 26 Cust. #: AS10-2 Material: Brown Flooring Location: Room 7 Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Other - 90%
Lab ID #: 73612 - 27 Cust. #: AS11-1 Material: Flooring Paper Location: Room 7 Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73612 - 28 Cust. #: AS11-2 Material: Flooring Paper Location: Room 7 Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 73612 - 29 Cust. #: AS12-1 Material: Textured Ceiling Location: Room 7 Appearance: beige, nonfibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73612 - 30 Cust. #: AS12-2 Material: Textured Ceiling Location: Room 7 Appearance: beige, nonfibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73612 - 31 Cust. #: AS12-3 Material: Textured Ceiling Location: Room 7 Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73612 - 32 Cust. #: AS13-1 Material: Tan Linoleum Location: Room 8 Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 73612 - 33 Cust. #: AS13-2 Material: Tan Linoleum Location: Room 8 Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73612 - 34 Cust. #: AS14-1 Material: Faux Wood Linoleum Location: Room 6 Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 73612 - 35 Cust. #: AS14-2 Material: Faux Wood Linoleum Location: Room 6 Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 73612 - 36 Cust. #: AS15-1 Material: Vent Wrap Location: Room 10 Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 30%	Other - 70%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73612 - 37 Cust. #: AS16-1 Material: Shingles Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 73612 - 38 Cust. #: AS16-2 Material: Shingles Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 73612 - 39 Cust. #: AS15-2 Material: Vent Wrap Location: Room 3 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73612 - 40 Cust. #: AS15-3 Material: Vent Wrap Location: Room 3 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73612 - 41 Cust. #: AS17-1 Material: Basement Cement Location: Basement Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73612 - 42 Cust. #: AS17-2 Material: Basement Cement Location: Basement Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)



Project: 1220 W. Ottawa St  
Project # I1440002

**Report To:**  
Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73612  
Date Collected: 12/07/17  
Date Received: 12/08/17  
Date Analyzed: 12/13/17  
Date Reported: 12/13/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73612 - 43 Cust. #: AS18-1 Material: Faux Brick Linoleum Location: Basement Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Synthetic - 10% Other - 80%
Lab ID #: 73612 - 44 Cust. #: AS18-2 Material: Faux Brick Linoleum Location: Basement Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Synthetic - 10% Other - 80%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

## APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: 2193 Association Drive, Suite 200  
 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/7/2017 5:00  
 Project: 1220 W OTTAWA ST  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) \*\*\*Terms and conditions on the other side.

Rush 24 Hour  
 48 Hour **72 Hour**  
 Other: TTP **yes** / no  
 (Test Till Positive)

Samples received after 3pm  
 logged in next morning

Circle analyses required, indicate type and quantity

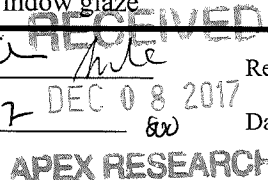
Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	AS 1-1	RM-1 - Plaster	Bag	HA-1	
2	AS 1-2	RM-2 - Plaster	Bag	HA-1	
3	AS 1-3	RM-4 - Plaster	Bag	HA-1	
4	AS 1-4	RM-10 - Plaster	Bag	HA-1	
5	AS 1-5	RM-8 - Plaster	Bag	HA-1	
6	AS 2-5	RM-10 - Drywall	Bag	HA-2	
7	AS 2-1	RM-1 - Drywall	Bag	HA-2	
8	AS 2-2	RM-2 - Drywall	Bag	HA-2	
9	AS 2-3	RM-3 - Drywall	Bag	HA-2	
10	AS 2-4	RM-3 - Drywall	Bag	HA-2	
11	AS 3-1	RM-2 - Window glaze	Bag	HA-3	
12	AS 3-2	RM-4 - Window glaze	Bag	HA-3	

Relinquished By: [Signature]  
 Date: 12/7/17

Received By: [Signature]  
 Time/Date: 12/7/17

Relinquished By: \_\_\_\_\_ Received By: \_\_\_\_\_  
 Date: \_\_\_\_\_ Time/Date: \_\_\_\_\_





73612

**APEX Research, Inc.**

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: 2193 Association Drive, Suite 200  
 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/7/2017 5:00  
 Project: 1220 W OTTAWA ST  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) \*\*\*Terms and conditions on the other side.

Rush \_\_\_\_\_ 24 Hour \_\_\_\_\_  
 48 Hour \_\_\_\_\_ 72 Hour \_\_\_\_\_  
 Other: \_\_\_\_\_ TTP yes / no  
 (Test Till Positive)

Samples received after 3pm  
 logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk X Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
13	AS 4-1	RM-5 - Brown Linoleum	Bag	HA-4	
14	AS 4-2	RM-5 - Brown Linoleum	Bag	HA-4	
15	AS 5-1	RM-3 - Beige tile	Bag	HA-5	
16	AS 5-2	RM-3 - Beige tile	Bag	HA-5	
17	AS 6-1	RM-2 - Ceiling tile	Bag	HA-6	
18	AS 6-2	RM-2 - Ceiling tile	Bag	HA-6	
19	AS 7-1	RM-1 - White linoleum on stairs	Bag	HA-7	
20	AS 7-2	RM-1 - White linoleum on stairs	Bag	HA-7	
21	AS 8-1	RM-9 - Green linoleum	Bag	HA-8	
22	AS 8-2	RM-9 - Green linoleum	Bag	HA-8	
23	AS 9-1	RM-7 - Yellow Linoleum	Bag	HA-9	
24	AS 9-2	RM-7 - Yellow Linoleum	Bag	HA-9	

Relinquished By: [Signature]  
 Date: 12/7/17

Received By: [Signature]  
 Time/Date: 12/7/17

Relinquished By: \_\_\_\_\_ Received By: [Signature]  
 Date: \_\_\_\_\_ Time/Date: DEC 08 2017

Revision R4 Date: May/2017

73612

**APEX Research, Inc.**

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: 2193 Association Drive, Suite 200  
 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/7/2017 5:00  
 Project: 1220 W OTTAWA ST  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) Terms and conditions on the other side.

Rush 24 Hour  
 48 Hour **72 Hour**  
 Other: TTP **yes** / no  
 (Test Till Positive)

Samples received after 3pm  
 logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk X Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
25	AS 10-1	RM-7 - Brown flooring	Bag	HA-10	
26	AS 10-2	RM-7 - Brown flooring	Bag	HA-10	
27	AS 11-1	RM-7 - Flooring paper	Bag	HA-11	
28	AS 11-2	RM-7 - Flooring paper	Bag	HA-11	
29	AS 12-1	RM-7 - Textured ceiling	Bag	HA-12	
30	AS 12-2	RM-7 - Textured ceiling	Bag	HA-12	
31	AS 12-3	RM-7 - Textured ceiling	Bag	HA-12	
32	AS 13-1	RM-8 - Tan linoleum	Bag	HA-13	
33	AS 13-2	RM-8 - Tan linoleum	Bag	HA-13	
34	AS 14-1	RM-6 - Faux wood Linoleum	Bag	HA-14	
35	AS 14-2	RM-6 - Faux wood Linoleum	Bag	HA-14	
36	AS 15-1	RM-10 - Vent wrap	Bag	HA-15	

RECEIVED

Relinquished By: [Signature]  
 Date: 12/7/17

Received By: [Signature]  
 Time/Date: 12/7/17

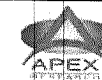
Relinquished By: \_\_\_\_\_ Received By: [Signature]  
 Date: \_\_\_\_\_ Time/Date: DEC 08 2017

Revision R4 Date: May/2017

73612

### APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: **2193 Association Drive, Suite 200**  
 City, St., Zip: **Okemos, MI, 48864**  
 Phone: **(517) 316-9232** Fax: **(517) 316-9233**

Date of Survey: **12/7/2017 5:00**  
 Project: **1220 W OTTAWA ST**  
 Project #: **11440002**  
 Contact Person: **Charlie Bush**  
 Email: **cbush@manniksmithgroup.com**

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) \*\*\*Terms and conditions on the other side.

Rush  24 Hour  
 48 Hour  **72 Hour**  
 Other:  TTP  yes /  no  
 (Test Till Positive)

Samples received after 3pm logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
37	AS 16-1	Roof - Shingles	Bag	HA-16	
38	AS 16-2	Roof - Shingles	Bag	HA-16	
39	AS 15-2	RM-3 - Vent wrap	Bag	HA-15	
40	AS 15-3	RM-3 - Vent wrap	Bag	HA-15	
41	AS 17-1	Basement - Basement cement	Bag	HA-17	
42	AS 17-2	Basement - Basement cement	Bag	HA-17	
43	AS 18-1	Basement - Faux brick Linoleum	Bag	HA-18	
44	AS 18-2	Basement - Faux brick Linoleum	Bag	HA-18	

Relinquished By: [Signature]  
 Date: 12/7/17

Received By: [Signature]  
 Time/Date: 12/7/17

Relinquished By: \_\_\_\_\_ Received By: [Signature]  
 Date: \_\_\_\_\_ Time/Date: DEC 08 2017

Revision R4 Date: May/2017

RECEIVED  
 APEX RESEARCH

**ATTACHMENT D**

**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH**



# NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
(MDEQ) AIR QUALITY DIVISION  
NESHAP, 40 CFR Part 61, Subpart M



MICHIGAN DEPARTMENT OF LICENSING AND  
REGULATORY AFFAIRS (LARA), ASBESTOS PROGRAM,  
P.A. 135 OF 1986, AS AMENDED, Section 220 (1-4) or (8)

### DEQ/LARA USE ONLY

Postmark Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Rec'd Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Emergency Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Valid No. \_\_\_\_\_

OK  Send Def Ltr. Date of Def Ltr. \_\_\_\_/\_\_\_\_/\_\_\_\_

FOLLOW UP \_\_\_\_/\_\_\_\_/\_\_\_\_ Spoke w/ \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Notification No. \_\_\_\_\_ Trans No. \_\_\_\_\_

### Calculate LARA Asbestos Project Fee: (1% Project Fee)

Total Project Cost: \_\_\_\_\_ x 0.01 = \_\_\_\_\_

Type of Contractor: \_\_\_\_\_ License No.: \_\_\_\_\_

Licensing Authority: \_\_\_\_\_

### 1. NOTIFICATION:

Date of Notification: \_\_\_\_\_

Date of Revision(s): \_\_\_\_\_

Notification Type:  Original  Revised  Canceled  Annual

#### Mark appropriate boxes: (both DEQ and LARA may apply):

#### DEQ (NESHAP) [260 ln. ft./160 sq. ft. or more is threshold]

Planned Renovation – 10 **working** days notice

Emergency Renovation

Scheduled Demolition – 10 **working** days notice

Intentional Burn – 10 **working** days notice

Ordered Demolition

#### LARA (MIOSHA) [Will not accept annual notifications]

Demo, Reno, Encap. (>10 ln. ft./15 sq. ft.) 10 **calendar** days notice

Emergency Renovation/Encapsulation

### 2. PROJECT SCHEDULE:

**START DATE** **END DATE**

\* Renovation \_\_\_\_\_

+Asb. Removal \_\_\_\_\_

+Demolition: \_\_\_\_\_

Encapsulation: \_\_\_\_\_

**Work Schedule:** Please indicate the anticipated days of the week and work hours for the purpose of scheduling a compliance inspection.

**Days of the Week** **Work Hours**

Asb. Removal: \_\_\_\_\_

Demolition: \_\_\_\_\_

Encapsulation: \_\_\_\_\_

\* Includes setup, build enclosure, asbestos removal, demobilizing, etc.

+Include **only** those dates you are conducting asbestos removal/demo.

Check here if this is a multi-phased project, attach a schedule showing the start/end date of each phase.

### 3. ABATEMENT CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 4. DEMOLITION CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 5. FACILITY OWNER: ("Facility" includes Bridges)

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 6. FACILITY DESCRIPTION:

Facility Name: \_\_\_\_\_

Location Address/Description: \_\_\_\_\_

\_\_\_\_\_ If Apt. # of units: \_\_\_\_\_

City/Twp. \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

County: \_\_\_\_\_ Nearest Crossroad: \_\_\_\_\_

Size: (sq. ft.) \_\_\_\_\_ No. of Floors: \_\_\_\_\_ Floor No.: \_\_\_\_\_

Age: \_\_\_\_\_ Present Use: \_\_\_\_\_ Prior Use: \_\_\_\_\_

Specific Location(s) in Facility: \_\_\_\_\_

### 7. DISPOSAL SITE:

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

Location Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

### 8. WASTE TRANSPORTER 1:

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

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

### WASTE TRANSPORTER 2:

### 9. ORDERED DEMOLITIONS: (See NESHAP regulations for definition of "Ordered Demolition.") A copy of the official Order must accompany this notification.

Gov't Agency Ordering Demo: \_\_\_\_\_

Name/Title of Person Signing Order: \_\_\_\_\_

Date of Order: \_\_\_\_\_ Date Ordered to Begin: \_\_\_\_\_

### 10. IS ASBESTOS PRESENT? Yes No

To be removed prior to demolition

**Estimate the amount of asbestos:** Include RACM (Regulated Asbestos Containing Material) to be removed, encapsulated, etc. Also include the amount and type (floor tile, roofing, etc.) of non-friable Category I and/or Category II ACM that **will not** be removed prior to demolition. (**NOTE:** In a demolition, cementitious ACM **cannot** remain in a structure, as it is likely to become regulated in the demolition/handling process. It **must** be removed prior to demolition.)

RACM to be Removed

RACM to be Encapsulated

Non-friable ACM **not** removed prior to demo.

Category I

Category II

Units of Measure

				<input type="checkbox"/> Ln. Ft.	<input type="checkbox"/> Ln. M.
				<input type="checkbox"/> Sq. Ft.	<input type="checkbox"/> Sq. M.
				<input type="checkbox"/> Cu. Ft.*	<input type="checkbox"/> Cu. M.*

\*Volume (cubic ft./meters) should be used only if unable to measure by linear/square measure (example: asbestos has fallen off of surface).

(continued on reverse side)

**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH (continued)**

**11. PROJECT DESCRIPTION:** Complete **A) for Renovation** (asbestos removal/encapsulation) and/or **B) for Demolition**:

**A) RENOVATION:** Mark all surfaces/types of RACM to be removed:

- Piping     Fittings     Boiler(s)     Tanks(s)  
 Beam(s)     Duct(s)     Tunnel(s)     Ceiling Tile(s)  
 Mag Block     Other (describe) \_\_\_\_\_

**Encapsulation (for LARA):** Mark surfaces/types to be encapsulated:

- Piping     Fittings     Boiler(s)     Tank(s)  
 Beam(s)     Duct(s)     Tunnel(s)     Ceiling Tile(s)  
 Other (describe) \_\_\_\_\_

**Method of removal:** Describe how the asbestos will be removed from the surface (example: glove bag, scrape with hand tools, cut in sections and carefully lower, etc.): \_\_\_\_\_  
 \_\_\_\_\_

**B) DEMOLITION:** Describe the method of demolition of facility, bridge, etc., and indicate if complete or partial. If partial, describe which part of facility bridge, etc., will be demolished: \_\_\_\_\_  
 \_\_\_\_\_

**12. ENGINEERING CONTROLS:** Describe work practices and engineering controls used to prevent visible emissions before, during, and after removal, and until proper disposal: \_\_\_\_\_  
 \_\_\_\_\_

**13. UNEXPECTED ASBESTOS:** Describe the steps you intend to follow in the event that unexpected RACM is found or previously non-friable asbestos becomes friable (crumbled, pulverized, reduced to powder, etc.) and therefore regulated: \_\_\_\_\_  
 \_\_\_\_\_

**14. PROCEDURE(S) USED TO DETECT THE PRESENCE OF ASBESTOS:** **A)** Indicate how you determined whether or not asbestos is in the facility. If analytical sampling was used, describe method of analysis. (The determination of the presence or absence of asbestos must be made prior to submitting a renovation/demolition notification.): \_\_\_\_\_  
 \_\_\_\_\_

**B)** Name, address, and phone number of company performing asbestos survey: \_\_\_\_\_

**C)** Name, accreditation number of inspector, and date of inspection: \_\_\_\_\_

**15. EMERGENCY RENOVATIONS:** Date/time of emergency: \_\_\_\_\_ Describe the sudden, unexpected event: \_\_\_\_\_  
 \_\_\_\_\_

Explain how the event caused unsafe conditions, and/or would cause equipment damage and/or an unreasonable financial burden: \_\_\_\_\_  
 \_\_\_\_\_

**16.** I certify that an individual trained in the provisions of 40 CFR Part 61, Subpart M, will be on-site during the renovation and during demolition involving RACM above the threshold and/or during an ordered demolition. Evidence that this person has completed the required training will be available for inspection at the renovation or demolition site.

\_\_\_\_\_  
*Signature of Owner or Abatement Contractor      Date*

\_\_\_\_\_  
*Signature of Owner or Demolition Contractor      Date*

**17. Signature Requirements for Projects with Negative Pressure Enclosures: (required by LARA)**  
**Per Section 221(1)(2) of P.A. 135 of 1986, as amended, clearance air monitoring is required for any asbestos abatement project involving 10 linear feet/15 square feet or more of friable material which is performed within a negative pressure enclosure. I (the building owner or lessee) have been advised by the contractor of my responsibility under Act 135 to have clearance air monitoring performed on this project.**

\_\_\_\_\_  
*Signature of Building Owner or Lessee      Date*

\_\_\_\_\_  
*Signature of Asbestos Abatement Contractor Representative      Date*

**NOTE:** It is not mandatory that a signed copy be sent to LARA unless requested. For affected projects, this section of the notification form must be completed, signed, and made part of your records before the project begins.

**18. I certify that the above information is correct:**

\_\_\_\_\_  
*Printed Name of Owner/Operator      Date*

\_\_\_\_\_  
*Signature of Owner/Operator      Date*

**MAILING ADDRESSES/PHONE NUMBERS:** (See Item 1 to determine which agency requirements/regulations are applicable to your project.)

For **Public Act 135 of 1986, as amended, Section 220 (1-4) or (8)**, mail to address below. For more info visit:  
<http://www.michigan.gov/asbestos>

MIOSHA Asbestos Program  
 LARA, CSHD  
 P.O. Box 30671  
 Lansing, MI 48909-8171

517.636.4551 (office), 517.322.1713 (fax)

For **NESHAP Demolitions/Renovations, 40 CFR, Part 61, Subpart M**, please use the e-submittal process. For more information visit <http://www.michigan.gov/air>, under Air Links click on Asbestos NESHAP Program.

NESHAP Asbestos Program  
 DEQ, AQD  
 P.O. Box 30260  
 Lansing, MI 48909-7760

517.284.6777 (Office)



January 2, 2018

Ms. Roxanne Case  
 Grant Manager  
 Ingham County Land Bank  
 3024 Turner Street  
 Lansing, Ingham County, Michigan 48906

Re: Pre-Demolition Regulated Materials Survey  
 403 Beaver St, Lansing, Ingham County, Michigan

Dear Ms. Case:

The Mannik & Smith Group, Inc. (MSG) is pleased to present Ingham County with the results of the limited pre-demolition regulated materials survey (RMS) performed at 403 Beaver St, Lansing, Ingham County, Michigan (hereinafter referred to as the "Site") by Kory McKay (Accreditation Number A47903).

**SUMMARY**

Building Information	
Property Address	403 Beaver St, Lansing, MI
Parcel #	33-01-01-09-276-043
No. Stories	2
Square Footage (approx.)	1,200 SF
Siding	Wood
Basement	Yes
Garage	No



Asbestos Containing Material				
Location	Material Group	Friable/Non Friable	Asbestos	Quantity
RM-1, RM-2, RM-3	Vent wrap	Friable	45% Chrysotile	180 SF
RM-1, RM-2, RM-3, RM-6, RM-7, RM-9 (including ceilings)	Plaster	Non friable	2% Chrysotile	2,000 SF
RM-3	Sink under coating	Non friable	2% Chrysotile	4 SF
Basement	Stack cement	Non friable	2% Chrysotile	4 SF

Hazardous Materials		
Location	Material Description	Quantity
Basement	1 Gallon paint can	5

TECHNICAL SKILL.  
 CREATIVE SPIRIT.

Universal Waste Inventory		
Location	Material Description	Quantity
RM-1, RM-2	Smoke detector	2
RM-1, RM-4, RM-7	Television	3
RM-2, RM-4	CFL bulb	2
RM-6	Computer	1

Other Regulated Materials Inventory		
Location	Material Description	Quantity
RM-2, RM-7	Air-conditioning unit	2

## PURPOSE AND SCOPE OF WORK

The purpose of the RMS was to identify, quantify and document the location of regulated materials that may be encountered during demolition of the on-site structure. To accomplish this purpose, MSG performed the following scope of work:

- 1) Pre-demolition asbestos-containing material (ACM) survey.
- 2) Universal wastes, hazardous materials, and other regulated wastes survey.

## METHODOLOGIES

The RMS was conducted on December 13, 2017. Methodologies employed during the completion of each task of the RMS are detailed below.

### ACM Survey Procedures

The ACM survey was performed in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763. The National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations govern demolition and renovation activities in which asbestos is present. The NESHAP rule distinguishes between Regulated Asbestos-Containing Materials (RACM) that would readily release asbestos fibers when damaged or disturbed and those materials that are unlikely to result in significant fiber release during demolition activities. The purpose of this survey is to determine if ACM within the Site building are RACM and thus, subject to the NESHAP, and to comply with the Michigan Occupational Safety and Health Administration (MIOSHA) and guidelines set forth in the Occupational Safety and Health Administration (OSHA) Regulations Standards 29 CFR 1910.1101.

RACM, as defined by NESHAP, is classified into four parts, (1) friable asbestos material, (2) Category I non-friable ACM (packing, gaskets, floor tile and roofing products) that has become friable, (3) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (4) Category II non-friable ACM (all other ACM products) 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.

The suspect ACM identified during this survey was grouped into homogeneous materials (i.e. similar materials which are uniform in color and texture) and:

- Described and quantified it in linear feet (LF) or square feet (SF);
- Identified and classified as friable or non-friable;



- Assessed as being in good, fair or poor condition;
- Assigned an EPA classification type (surfacing material, thermal system insulation or miscellaneous);
- Classified as RACM or non-RACM; and
- Sampled, or identified as presumed ACM (PACM).

MSG performed services associated with the ACM survey in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. The ACM survey included a systematic visual inspection of readily accessible areas of the Site building. Destructive sampling methods were used and suspect ACM samples were collected by State of Michigan Accredited Asbestos Inspector, Kory McKay (Accreditation Number A47903). Based on the quantity of each classification of material, MSG collected samples of each suspect ACM in accordance with EPA guidelines.

### **Universal Wastes and Hazardous Material Survey Procedures**

MSG identified and inventoried universal wastes and hazardous materials by a visual reconnaissance of the Site. Materials were identified, described, and quantified to the extent possible; however, no equipment or containers were opened and/or sampled as part of this survey.

A hazardous material, as defined in OSHA 29 CFR 1910.1200, is any item or chemical which is a "health hazard" or "physical hazard", including the following:

- Chemicals that are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, hepatotoxins, nephrotoxins, neurotoxins, agents that act on the hematopoietic system, and agents that damage the lungs, skin, eyes, or mucous membranes;
- Chemicals that are combustible liquids, compressed gases, explosives, flammable liquids, flammable solids, organic peroxides, oxidizers, pyrophorics, unstable (reactive) or water-reactive;
- Chemicals that, in the course of normal handling, use or storage, may produce or release dusts, gases, fumes, vapors, mists or smoke which have any of the above characteristics; and
- Any item or chemical which, when being transported or moved, is a risk to public safety or an environmental hazard, and is regulated as such by one or more of the following:
  - DOT - Department of Transportation; Hazardous Materials Regulations (49 CFR 100-180);
  - IMO - International Maritime Organization; International Maritime Dangerous Goods (IMDG) Code;
  - IATA - International Air Transport Association; Dangerous Goods Regulations;
  - ICAO - International Civil Aviation Organization; Technical Instructions; and
  - AF - Air Force "INTERSERVICE" Manual, Preparing Hazmat for Military Air Shipments (AFMAN 24-204).

Hazardous materials may also include:

- Any item or chemical listed in the United States Environmental Protection Agency (USEPA) *List of Hazardous Substances and Reportable Quantities*, dated September 1992.
- Noticeable as inventory under the reporting requirements of the Hazardous Chemical Reporting (40 CFR Part 302).
- An environmental release under the reporting requirements of the Toxic Chemical Release Reporting: Community Right To Know (40 CFR Part 372) or under Part 201, Environmental Remediation of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 201) and Part 213, Leaking Underground Storage Tanks (Part 213).

These would include chemicals with special characteristics which, in the opinion of the manufacturer, can cause harm to people, plants, or animals when released by spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other receptacles).

Universal wastes are waste that comes primarily from consumer products containing mercury, lead, cadmium or other substances that are hazardous to human health and the environment. These items cannot be discarded in household trash nor disposed of in landfills but have less stringent handling and disposal requirements than hazardous waste streams. In Michigan, universal wastes are regulated by the MDEQ Office of Waste Management and Radiological Protection under Part 111 of Act 451 and the federal Resource Conservation and Recovery Act (RCRA) of 1976 under 40 CFR Part 273. Universal waste is also regulated by the US Department of Transportation (US DOT) under 49 CFR Parts 171 through 180. Most of the universal waste requirements overseen by the DEQ are addressed by R 299.9228 of Part 111 of 1994 P.A. 451, as amended and 40 CFR Part 273. These regulations are designed to encourage proper collection, recycling, treatment, or disposal of these wastes.

Examples of universal waste are mercury-containing equipment (e.g. thermostats, barometers, manometers, temperature and pressure gauges, and mercury switches), nickel-cadmium and spent lead-acid batteries, lamps (e.g. incandescent, fluorescent, high intensity discharge, neon, mercury vapor, and high pressure sodium and metal halide), pesticides, polychlorinated biphenyl (PCB) containing transformers and light ballasts, stored chemical and/or petroleum products, etc. In Michigan, Part 111 also includes pharmaceutical and consumer electronics as additional types of universal wastes.

### **Other Regulated Materials**

This RMS also included identifying and inventorying other regulated materials which may pose physical or chemical concerns during demolition of the Site building(s) including chlorofluorocarbon (CFC) containing devices, tanks, vessels, equipment, and building materials that may contain or become contaminated with hazardous materials.

Specifically, CFC containing devices are regulated Under Title VI of the Clean Air Act (CAA). The Stratospheric Protection Division of the EPA manages programs protecting the stratospheric ozone layer. Title 40, Part 82 of the Code of Federal Regulations contains the EPA regulations protecting the ozone layer. The RMS survey of the premises identified and quantified any CFC containers and CFC containing equipment, which could include the following:

- Drinking fountains, air conditioners, refrigerators
- Air conditioners in control panels and other process equipment
- Water and air chillers
- Roof top and stand-alone air conditioners
- Cafeteria equipment: freezers, walk-in coolers/freezers
- CFC canisters and cylinders

In Michigan, underground storage tanks are regulated under the authority of Part 211, Underground Storage Tank Regulations, of Act 451 of 1994, as amended, and the Michigan Underground Storage Tank Rules (MUSTR). Therefore, this survey included whether any evidence of underground storage tanks and related piping and dispensers were present at the Site.

MSG also surveyed for the presence of equipment, other storage tanks, and materials that may contain or be contaminated by regulated chemicals. These include, but may not be comprehensive of:

- Above ground storage tanks
- Oil-containing equipment (hydraulic equipment, blowers, fans, motors, elevators, compressors, etc.)
- Fire brick
- Contaminated building materials (concrete, block walls, wood, plaster, etc.) with staining, odor or other signs of a hazardous chemical release

## **SURVEY RESULTS**

The following subsections include a discussion of the RMS results. Photographs of the residence are located in the *Attachment A, Photo Log*. The results of this report are valid as of the report date, subject to the limitations presented in *Attachment B, Limitations*.

### **ACM Survey Results**

MSG identified twenty-two (22) homogenous materials that were suspect as asbestos containing during the ACM survey. Forty-eight (48) bulk samples were collected from these suspect homogeneous materials and were submitted to APEX Research, Inc. (APEX) for laboratory analysis of Bulk Materials by Polarized Light Microscopy using USEPA Method 600/R-93/116. APEX is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) to analyzed bulk samples for asbestos content. Of the aforementioned suspect homogenous materials identified during this ACM survey, laboratory analysis found four (4) homogenous materials to contain greater than 1% asbestos (samples 2-1, 5-1, 19-1 and 22-1). The EPA defines ACM as materials containing greater than 1% asbestos.

A point-count quantification procedure (PCQM) allows for lower detection limits than calibrated visual estimation (CVES), which is the quantification method widely used in asbestos analysis via Polarized Light Microscopy (PLM). If the asbestos content is found to contain less than 10% asbestos as determined by a method other than point counting by PLM, it can only be treated as non-ACM if verified to contain less than 1% by the PCQM. If not point-counted, the sample must be assumed to be greater than 1% and thus considered and treated as ACM. No samples were point counted.

Suspect ACM sample locations are depicted on the attached figure. See *Table 1, Asbestos Sampling Results* for a listing of homogeneous materials identified by MSG during this survey. A copy of the analytical reports including chains of custody is attached in *Attachment C, Analytical Reports and Chains of Custody*.

### **Universal Wastes, Hazardous Materials, and Other Regulated Materials Survey Results**

Universal wastes, hazardous materials, and/or other regulated materials wastes were identified within the Site building. Quantities identified are provided in *Table 2, Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory*.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Asbestos Containing Materials**

Of the twenty-two (22) homogenous materials collected as part of the ACM survey, four (4) homogenous materials (plaster, vent wrap, stack cement and sink under coating) contained asbestos greater than 1% (samples 2-1, 5-1, 19-1 and 22-1) with these four (4) materials (samples 2-1,5-1, 19-1, and 22-1) being classified as RACM. All materials containing ACM must be disposed of in a licensed landfill.

Prior to demolition, a notification of intent to demolish shall be made to the Michigan Department of Environmental Quality Air Quality Division (MDEQ-AQD) and Licensing and Regulatory Affairs (LARA), Asbestos Program. Notification, according to the procedure described by the NESHAP, Title 40 of the Code of Federal Regulations, Part 61, Subpart M, Notification, for renovation and demolition projects should be followed. A copy of this notification form is provided in *Attachment D, Notification of Intent to Renovate/Demolish*. This form shall be completed by the contractor who completes the demolition.

If additional suspect ACMs are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, shall be surveyed, tested, and abated if warranted. If suspect ACMs are determined to be RACM that would be disturbed during demolition activities, the RACM must be properly removed by a licensed asbestos abatement contractor.

Category I and Category II Non-Friable ACM may often be left in place during demolition activities if the ACM is not subjected to sanding, grinding, cutting, or abrading or has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material during the course of demolition.

**Universal Wastes, Hazardous Materials, and Other Regulated Materials**

The universal waste, hazardous materials, and other regulated materials (see Table 2) must be properly characterized (as necessary) and properly removed from the Site building for recycling and/or disposed of in accordance with Parts 111, 115, or 147 of Michigan Public Act 451 of 1994, as amended. If additional universal wastes, hazardous materials, and other regulated materials are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, these materials shall be characterized (as necessary) and properly removed in accordance with the above-mentioned regulations.

If you have any questions or concerns regarding the above information please contact us at 734-397-3100.

Sincerely,



Kory McKay  
Environmental Scientist  
Accreditation Number A47903



Charlie Bush  
Senior Project Manager  
Accreditation Number A34293

Attachments

FIGURE

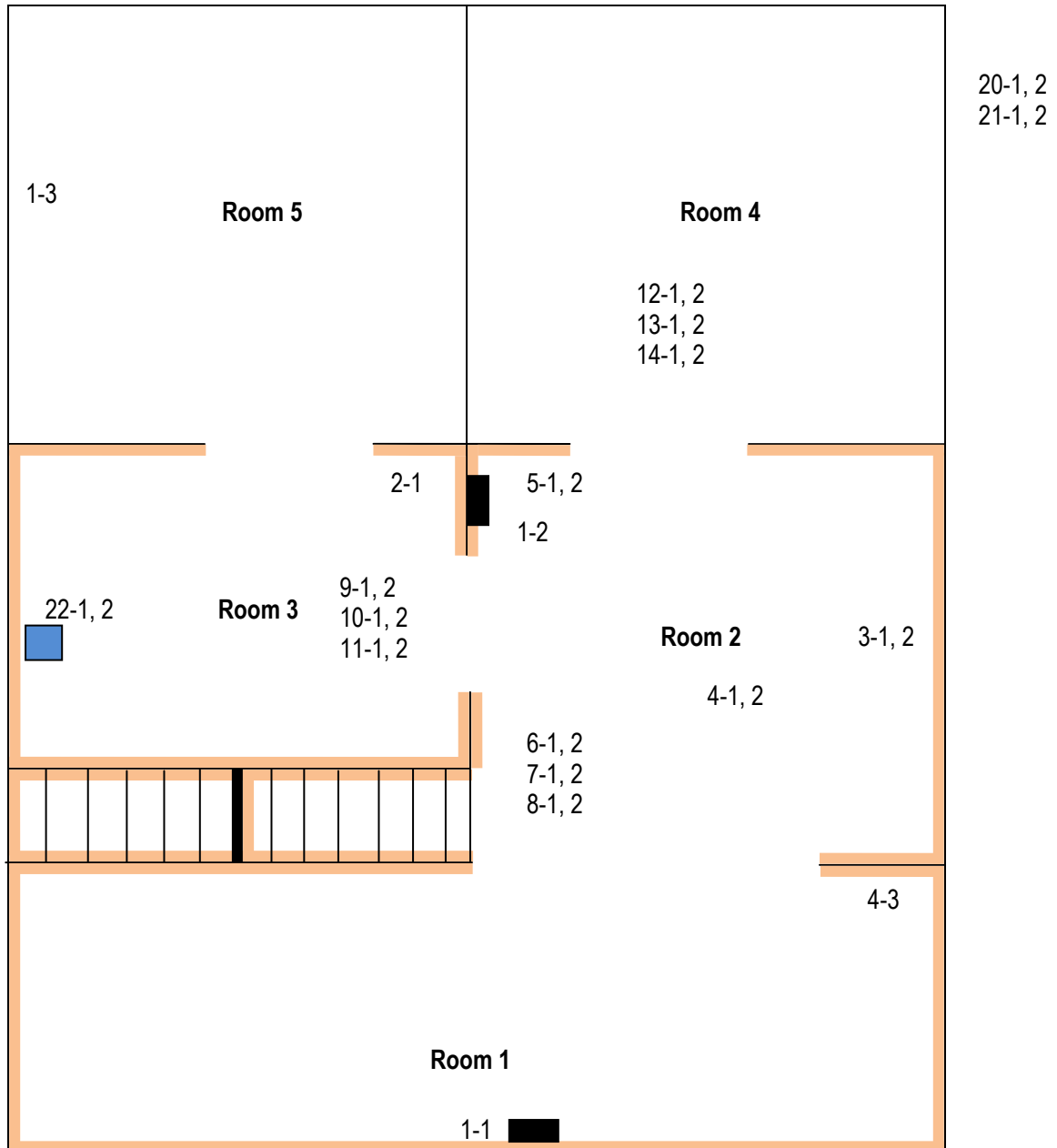


Address: 403 Beaver St

Date: December 15, 2017

Drawing not to scale

1<sup>st</sup> Floor



Plaster Walls and  
Ceilings (2,000 SF)

Sink Under Coating (4 SF)

Vent with Wrap (180 SF)

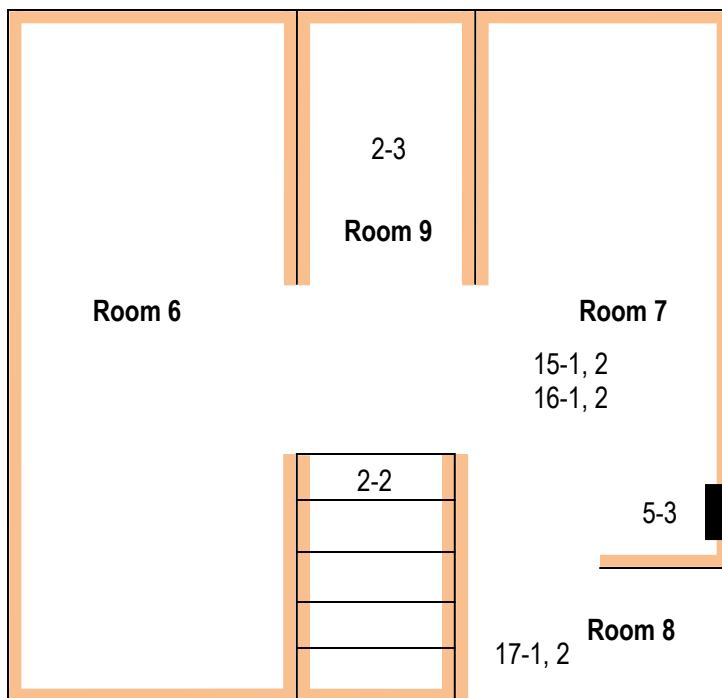
#-# = Asbestos Sample

Address: 403 Beaver St

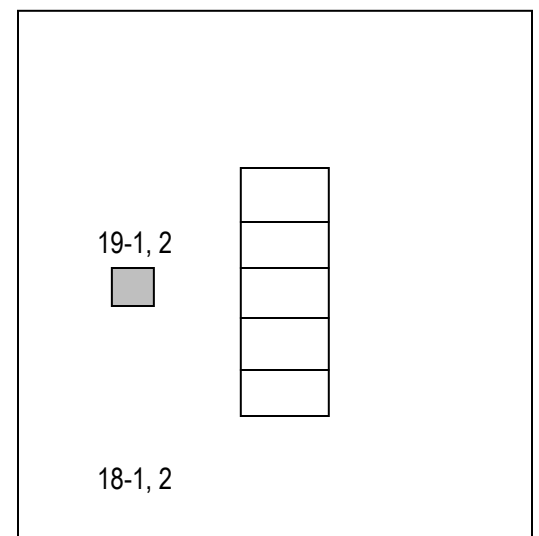
Date: December 15, 2017


Drawing not to scale

**2<sup>nd</sup> Floor**



**Basement**



 Plaster Walls and Ceilings (2,000 SF)

 Stack Cement (4 SF)

 Vent with Wrap (180 SF)

#-# = Asbestos Sample

TABLES





**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		403 Beaver St.								
Survey Date		December 13, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-1	1	AS 1-1	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	1500 SF
RM-2	1	AS 1-2	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	1500 SF
RM-5	1	AS 1-3	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	1500 SF
RM-3	1	AS 2-1	HA-2	Plaster	Non-Friable	Good	Miscellaneous	Yes	2% Chrysotile	2000 SF
RM-9	2	AS 2-2	HA-2	Plaster	Non-Friable	Good	Miscellaneous	Yes	NA	2000 SF
RM-9	2	AS 2-3	HA-2	Plaster	Non-Friable	Good	Miscellaneous	Yes	NA	2000 SF
RM-2	1	AS 3-1	HA-3	Window glaze	Non-Friable	Good	Miscellaneous	No	No	160 SF
RM-2	1	AS 3-2	HA-3	Window glaze	Non-Friable	Good	Miscellaneous	No	No	160 SF
RM-2	1	AS 4-1	HA-4	Textured ceiling	Friable	Good	Miscellaneous	No	No	400 SF
RM-2	1	AS 4-2	HA-4	Textured ceiling	Friable	Good	Miscellaneous	No	No	400 SF
RM-1	1	AS 4-3	HA-4	Textured ceiling	Friable	Good	Miscellaneous	No	No	400 SF
RM-2	1	AS 5-1	HA-5	Vent wrap	Friable	Good	Miscellaneous	Yes	45% Chrysotile	180 SF
RM-2	1	AS 5-2	HA-5	Vent wrap	Friable	Good	Miscellaneous	Yes	NA	180 SF
RM-7	2	AS 5-3	HA-5	Vent wrap	Friable	Good	Miscellaneous	Yes	NA	180 SF
RM-2	1	AS 6-1	HA-6	Diamond Linoleum	Non-Friable	Good	Miscellaneous	No	No	120 SF
RM-2	1	AS 6-2	HA-6	Diamond Linoleum	Non-Friable	Good	Miscellaneous	No	No	120 SF

**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		403 Beaver St.								
Survey Date		December 13, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-2	1	AS 7-1	HA-7	Red and white linoleum	Non-Friable	Good	Miscellaneous	No	No	120 SF
RM-2	1	AS 7-2	HA-7	Red and white linoleum	Non-Friable	Good	Miscellaneous	No	No	120 SF
RM-2	1	AS 8-1	HA-8	Multi colored Linoleum	Non-Friable	Good	Miscellaneous	No	No	120 SF
RM-2	1	AS 8-2	HA-8	Multi colored Linoleum	Non-Friable	Good	Miscellaneous	No	No	120 SF
RM-3	1	AS 9-1	HA-9	Faux wood Linoleum	Non-Friable	Good	Miscellaneous	No	No	300 SF
RM-3	1	AS 9-2	HA-9	Faux wood Linoleum	Non-Friable	Good	Miscellaneous	No	No	300 SF
RM-3	1	AS 10-1	HA-10	Tan linoleum	Non-Friable	Good	Miscellaneous	No	No	180 SF
RM-3	1	AS 10-2	HA-10	Tan linoleum	Non-Friable	Good	Miscellaneous	No	No	180 SF
RM-3	1	AS 11-1	HA-11	Spotted linoleum	Non-Friable	Good	Miscellaneous	No	No	180 SF
RM-3	1	AS 11-2	HA-11	Spotted linoleum	Non-Friable	Good	Miscellaneous	No	No	180 SF
RM-4	1	AS 12-1	HA-12	Green and brown Linoleum	Non-Friable	Good	Miscellaneous	No	No	150 SF
RM-4	1	AS 12-2	HA-12	Green and brown Linoleum	Non-Friable	Good	Miscellaneous	No	No	150 SF
RM-4	1	AS 13-1	HA-13	Gray Linoleum	Non-Friable	Good	Miscellaneous	No	No	150 SF
RM-4	1	AS 13-2	HA-13	Gray Linoleum	Non-Friable	Good	Miscellaneous	No	No	150 SF
RM-4	1	AS 14-1	HA-14	Brown Linoleum	Non-Friable	Good	Miscellaneous	No	No	150 SF
RM-4	1	AS 14-2	HA-14	Brown Linoleum	Non-Friable	Good	Miscellaneous	No	No	150 SF

**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		403 Beaver St.								
Survey Date		December 13, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-7	2	AS 15-1	HA-15	White spotted Linoleum	Non-Friable	Good	Miscellaneous	No	No	80 SF
RM-7	2	AS 15-2	HA-15	White spotted Linoleum	Non-Friable	Good	Miscellaneous	No	No	80 SF
RM-7	2	AS 16-1	HA-16	Beige Linoleum	Non-Friable	Good	Miscellaneous	No	No	80 SF
RM-7	2	AS 16-2	HA-16	Beige Linoleum	Non-Friable	Good	Miscellaneous	No	No	80 SF
RM-8	2	AS 17-1	HA-17	White tile	Non-Friable	Good	Miscellaneous	No	No	40 SF
RM-8	2	AS 17-2	HA-17	White tile	Non-Friable	Good	Miscellaneous	No	No	40 SF
Basement	B	AS 18-1	HA-18	Basement cement floor	Non-Friable	Good	Miscellaneous	No	No	400 SF
Basement	B	AS 18-2	HA-18	Basement cement floor	Non-Friable	Good	Miscellaneous	No	No	400 SF
Basement	B	AS 19-1	HA-19	Stack Cement	Non-Friable	Good	Miscellaneous	Yes	2% Chrysotile	4 SF
Basement	B	AS 19-2	HA-19	Stack Cement	Non-Friable	Good	Miscellaneous	Yes	NA	4 SF
Roof	E	AS 20-1	HA-20	Shingles	Non-Friable	Good	Miscellaneous	No	No	420 SF
Roof	E	AS 20-2	HA-20	Shingles	Non-Friable	Good	Miscellaneous	No	No	420 SF
Exterior	E	AS 21-1	HA-21	Siding paper	Non-Friable	Good	Miscellaneous	No	No	2000 SF
Exterior	E	AS 21-2	HA-21	Siding paper	Non-Friable	Good	Miscellaneous	No	No	2000 SF
RM-3	1	AS 22-1	HA-22	Sink under coating	Non-Friable	Good	Miscellaneous	Yes	2% Chrysotile	4 SF
RM-3	1	AS 22-2	HA-22	Sink under coating	Non-Friable	Good	Miscellaneous	Yes	NA	4 SF

Table 2  
 Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory  
 403 Beaver St.  
 Lansing, Ingham County, Michigan

<b>Universal Waste Inventory</b>		
Location	Type of Waste	Approximate Quantity
RM-1, RM-2	Smoke detector	2
RM-1, RM-7, RM-4	Television	3
RM-2, RM-4	CFL bulb	2
RM-6	Computer	1
<b>Hazardous Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
Basement	1 Gallon paint can	5
<b>Other Regulated Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
RM-2, RM-7	Air-conditioning unit	2

**ATTACHMENT A**

**PHOTO LOG**



Property Photos



403 Beaver St, Front of House



Back of House



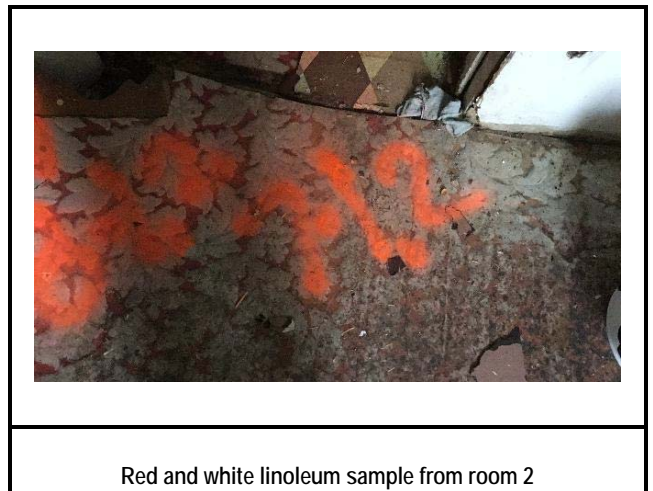
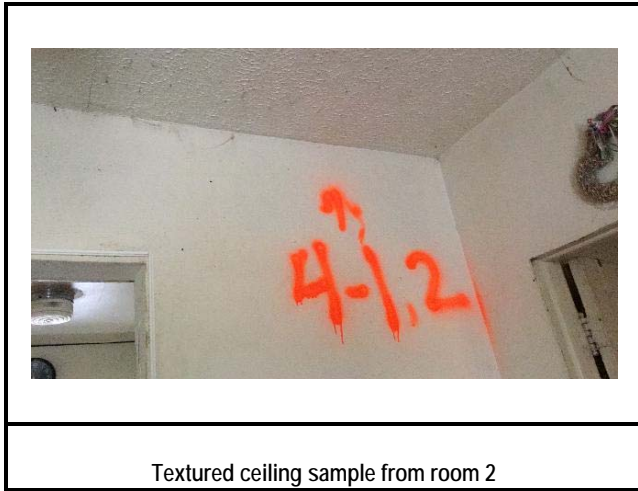
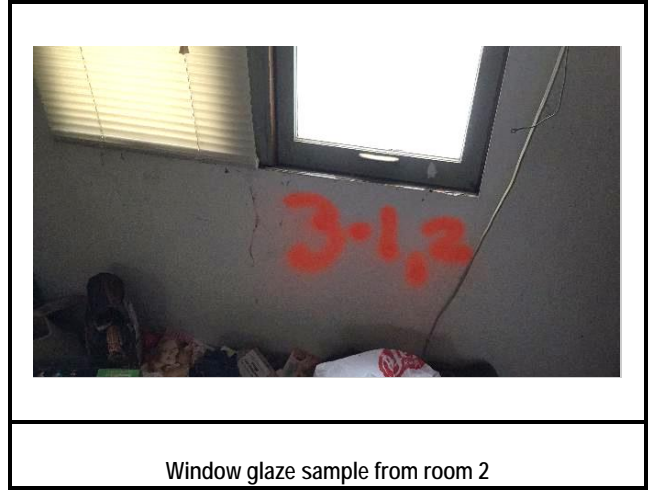
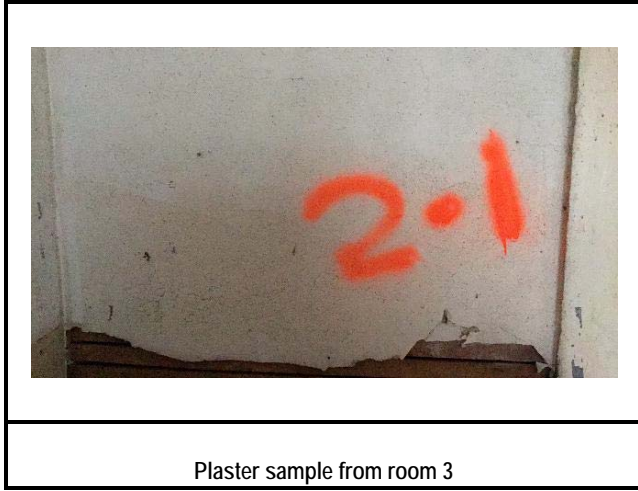
Side of House



Side of House



Sample Photos



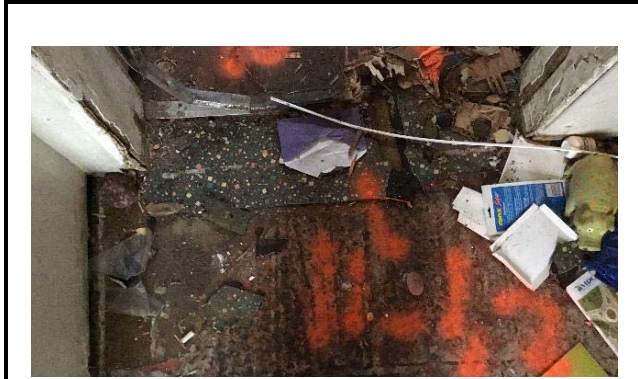
Sample Photos



Faux wood linoleum sample from room 3



Tan linoleum sample from room 3



Spotted linoleum sample from room 3



White tile sample from room 8



Stack cement sample from basement



Sink undercoating sample from room 3



# ATTACHMENT B

## LIMITATIONS





## REGULATED MATERIALS SURVEY LIMITATIONS

The Mannik & Smith Group, Inc. (MSG) performed its services associated with this Regulated Materials Survey (RMS) in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763, Occupational Safety and Health Administration (OHSA) 29 CFR 1926.62, and in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. This RMS and related documentation are site-specific, which means they pertain to the conditions of the site surveyed.

Unless otherwise noted, MSG's RMS is limited to accessible areas. Areas determined to be not structurally sound, safely reached, limited by excessive accumulated obstructions, require specialized equipment to access, in operable windows, etc., are not included in this survey. There may be areas where regulated materials, such as suspected asbestos-containing materials (SACM) and lead containing paint cannot be viewed and/or tested. MSG shall not be responsible for identifying all SACM, lead containing paint, or other hazardous materials located in inaccessible locations, including but not limited to, above a plaster ceiling, behind a wall, embedded in concrete, buried, confined spaces, unsafe areas, or otherwise not readily identifiable.

Destructive sampling will only be conducted when permission has been granted by the owner. Destructive survey locations are limited to areas where hidden SACM, lead containing paint, or other hazardous materials is reasonably thought to be present and sampling can be conducted in a safe manner. If regulated materials are found during the course of demolition and/or renovation activities that are not listed in this report, the material should be assumed as asbestos-containing, lead containing, or hazardous until it can be sampled and analyzed at an accredited laboratory and safe work practices should always be used if those areas are to be disturbed.

MSG has prepared a logical assessment program to reduce the client's risk of discovering unknown regulated materials and/or hazardous substances. The presence of subsurface regulated materials and/or hazardous substances is based solely on surface observations and/or information provided by others. Descriptions of subsurface conditions provided in this report are not warranted to be complete or accurate. This risk may be reduced by more extensive exploration on the site, but even with additional exploration, it is not possible to completely eliminate the risk of discovering regulated materials and/or hazardous conditions. It cannot and should not be assumed that samples collected and conditions observed at the time of the RMS are representative of an area that has not been sampled and/or tested.

In preparing this report, MSG may have relied on information obtained from or provided by others. MSG makes no representation or warranty regarding the accuracy or completeness of this information gathered through outside sources or subcontracted services. No warranty, guarantee, or certification of any kind, expressed or implied, at common law or created by statute, is extended, made, or intended by rendering these environmental consulting services or by furnishing this written report. Environmental conditions and regulations are subject to constant change and reinterpretation. One should not assume that any on-site conditions and/or regulatory statutes or rules will remain constant after MSG has completed the scope of work for this project. Furthermore, because the facts stated in this report are subject to professional interpretation, differing conclusions could be reached by other environmental professionals.

The report is intended to offer support to a building owner, construction manager, general contractor, abatement contractor, architect, and/or other parties authorized by the owner in generally locating asbestos-containing materials (ACM), lead containing paint, universal and hazardous wastes, and/or other regulated materials. This report does not have the required components to serve as an Asbestos Project Design document, Asbestos and/or Lead Containing Paint Abatement Work Plan, and/or a Health and Safety Plan. Therefore, this report should not be utilized as a project specification document. The results, findings, conclusions, and recommendations expressed in

this report are based only on conditions that were noted during this survey. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated. Quantities have been conservatively estimated and sampling locations have been described representatively; however, current site conditions should be field-verified by contractors bidding on and/or prior to abatement work.

**ATTACHMENT C**

**ANALYTICAL REPORTS AND CHAINS OF CUSTODY**





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 403 Beaver St  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73779  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73779 - 01 Cust. #: AS1-1 Material: Drywall Location: Room 1 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Other - 85%
Lab ID #: 73779 - 02 Cust. #: AS4-3 Material: Textured Ceiling Location: Room 1 Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73779 - 03 Cust. #: AS3-1 Material: Window Glaze Location: Room 2 Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 2% Other - 98%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 403 Beaver St  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73779  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73779 - 04 Cust. #: AS3-2 Material: Window Glaze Location: Room 2 Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 1% Other - 99%
Lab ID #: 73779 - 05 Cust. #: AS6-1 Material: Diamond Linoleum Location: Room 2 Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 73779 - 06 Cust. #: AS6-2 Material: Diamond Linoleum Location: Room 2 Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%

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Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 403 Beaver St  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73779  
Date Collected: 12/13/17  
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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73779 - 07 Cust. #: AS7-1 Material: Red/White Linoleum Location: Room 2 Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 25% Other - 75%
Lab ID #: 73779 - 08 Cust. #: AS7-2 Material: Red/White Linoleum Location: Room 2 Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 25% Other - 75%
Lab ID #: 73779 - 09 Cust. #: AS8-1 Material: Multi Colored Linoleum Location: Room 2 Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 25% Other - 75%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73779 - 10 Cust. #: AS8-2 Material: Multi Colored Linoleum Location: Room 2 Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 25% Other - 75%
Lab ID #: 73779 - 11 Cust. #: AS5-1 Material: Vent Wrap Location: Room 2 Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 45%	Other - 55%
Lab ID #: 73779 - 12 Cust. #: AS5-2 Material: Vent Wrap Location: Room 2 Appearance: Layer: of	Asbestos Present:  <b>NOT ANALYZED</b>	

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73779 - 13 Cust. #: AS1-2 Material: Drywall Location: Room 2 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Other - 85%
Lab ID #: 73779 - 14 Cust. #: AS4-1 Material: Textured Ceiling Location: Room 2 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 2% Other - 98%
Lab ID #: 73779 - 15 Cust. #: AS4-2 Material: Textured Ceiling Location: Room 2 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Wollastonite - 2% Other - 98%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73779 - 16 Cust. #: AS12-1 Material: Green/Brown Linoleum Location: Room 4 Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73779 - 17 Cust. #: AS12-2 Material: Green/Brown Linoleum Location: Room 4 Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73779 - 18 Cust. #: AS13-1 Material: Grey Linoleum Location: Room 4 Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73779 - 19 Cust. #: AS13-2 Material: Grey Linoleum Location: Room 4 Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 73779 - 20 Cust. #: AS14-1 Material: Brown Linoleum Location: Room 4 Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 73779 - 21 Cust. #: AS14-2 Material: Brown Linoleum Location: Room 4 Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73779 - 22 Cust. #: AS9-1 Material: Faux Wood Linoleum Location: Room 3 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 73779 - 23 Cust. #: AS9-2 Material: Faux Wood Linoleum Location: Room 3 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 73779 - 24 Cust. #: AS10-1 Material: Tan Linoleum Location: Room 3 Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73779 - 25 Cust. #: AS10-2 Material: Tan Linoleum Location: Room 3 Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73779 - 26 Cust. #: AS11-1 Material: Spotted Linoleum Location: Room 3 Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 73779 - 27 Cust. #: AS11-2 Material: Spotted Linoleum Location: Room 3 Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73779 - 28 Cust. #: AS2-1 Material: Plaster Finish Coat Location: Room 3 Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73779 - 28a Cust. #: AS2-1 Material: Plaster Base Coat Location: Room 3 Appearance: grey, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: <b>YES</b> Chrysotile - 2%	Cellulose - 2% Hair - 1% Other - 95%
Lab ID #: 73779 - 29 Cust. #: AS1-3 Material: Drywall Location: Room 5 Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 15% Other - 85%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73779 - 30 Cust. #: AS22-1 Material: Sink Undercoating Location: Room 3 Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 2%	Other - 98%
Lab ID #: 73779 - 31 Cust. #: AS22-2 Material: Sink Undercoating Location: Room 3 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73779 - 32 Cust. #: AS20-1 Material: Shingles Location: Roof Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 10% Other - 90%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73779 - 33 Cust. #: AS20-2 Material: Shingles Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 10% Other - 90%
Lab ID #: 73779 - 34 Cust. #: AS21-1 Material: Siding Paper Location: Exterior Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 75% Other - 25%
Lab ID #: 73779 - 35 Cust. #: AS21-2 Material: Siding Paper Location: Exterior Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 75% Other - 25%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73779 - 36 Cust. #: AS18-1 Material: Basement Cement Floor Location: Basement Appearance: grey,nonfibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73779 - 37 Cust. #: AS18-2 Material: Basement Cement Floor Location: Basement Appearance: grey,nonfibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73779 - 38 Cust. #: AS19-1 Material: Stack Cement Location: Basement Appearance: grey,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 2%	Cellulose - 2% Other - 96%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73779 - 39 Cust. #: AS19-2 Material: Stack Cement Location: Basement Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73779 - 40 Cust. #: AS2-2 Material: Plaster Base Coat Location: Room 9 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73779 - 41 Cust. #: AS15-1 Material: White Spotted Linoleum Location: Room 7 Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73779 - 42 Cust. #: AS15-2 Material: White Spotted Linoleum Location: Room 7 Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 73779 - 43 Cust. #: AS16-1 Material: Beige Linoleum Location: Room 7 Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: 73779 - 44 Cust. #: AS16-2 Material: Beige Linoleum Location: Room 7 Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 35% Other - 65%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73779 - 45 Cust. #: AS17-1 Material: White Tile/Flooring Location: Room 8 Appearance: black,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73779 - 45a Cust. #: AS17-1 Material: Glue Location: Room 8 Appearance: clear,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73779 - 45b Cust. #: AS17-1 Material: Flooring Location: Room 8 Appearance: black,nonfibrous,homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73779 - 45c Cust. #: AS17-1 Material: Glue Location: Room 8 Appearance: clear,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73779 - 46 Cust. #: AS17-2 Material: White Tile/Flooring Location: Room 8 Appearance: black,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73779 - 46a Cust. #: AS17-2 Material: Glue Location: Room 8 Appearance: clear,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 403 Beaver St  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73779  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73779 - 46b Cust. #: AS17-2 Material: Flooring Location: Room 8 Appearance: black,nonfibrous,homogenous Layer: 3 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73779 - 46c Cust. #: AS17-2 Material: Glue Location: Room 8 Appearance: clear,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73779 - 47 Cust. #: AS2-3 Material: Plaster Finish Coat Location: Room 9 Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 403 Beaver St  
Project # I1440002

**Report To:**  
Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73779  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/19/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73779 - 47a Cust. #: AS2-3 Material: Plaster Base Coat Location: Room 9 Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 73779 - 48 Cust. #: AS5-3 Material: Vent Wrap Location: Room 7 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

## APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: **2193 Association Drive, Suite 200**  
 City, St., Zip: **Okemos, MI, 48864**  
 Phone: **(517) 316-9232** Fax: **(517) 316-9233**

Date of Survey: **12/13/2017 5:00**  
 Project: **403 BEAVER ST**  
 Project #: **11440002**  
 Contact Person: **Charlie Bush**  
 Email: **cbush@manniksmithgroup.com**

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) Terms and conditions on the other side.

Rush 24 Hour  
 48 Hour 72 Hour  
 Other: TTP yes / no  
 (Test Till Positive)

Samples received after 3pm  
 logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk X Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	AS 1-1	RM-1 - Drywall	Bag	HA-1	
2	AS 4-3	RM-1 - Textured ceiling	Bag	HA-4	
3	AS 3-1	RM-2 - Window glaze	Bag	HA-3	
4	AS 3-2	RM-2 - Window glaze	Bag	HA-3	
5	AS 6-1	RM-2 - Diamond Linoleum	Bag	HA-6	
6	AS 6-2	RM-2 - Diamond Linoleum	Bag	HA-6	
7	AS 7-1	RM-2 - Red and white linoleum	Bag	HA-7	
8	AS 7-2	RM-2 - Red and white linoleum	Bag	HA-7	
9	AS 8-1	RM-2 - Multi colored Linoleum	Bag	HA-8	
10	AS 8-2	RM-2 - Multi colored Linoleum	Bag	HA-8	
11	AS 5-1	RM-2 - Vent wrap	Bag	HA-5	
12	AS 5-2	RM-2 - Vent wrap	Bag	HA-5	

Relinquished By: [Signature]

Received By: [Signature]

Relinquished By: \_\_\_\_\_ Received By: [Signature] 8:03

Date: 12/15/17

Time/Date: 12/15/17

Date: \_\_\_\_\_ Time/Date: DEC 15 2017

Revision R4 Date: May/2017

APEX RESEARCH



73779

### APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**

Address: 2193 Association Drive, Suite 200

City, St., Zip: Okemos, MI, 48864

Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/13/2017 5:00

Project: 403 BEAVER ST

Project #: I1440002

Contact Person: Charlie Bush

Email: cbush@manniksmithgroup.com

Lab Use Only

Log-In: \_\_\_\_\_

Report: \_\_\_\_\_

Fax: \_\_\_\_\_

Verbal: \_\_\_\_\_

Email: \_\_\_\_\_

Turn Around Time: (circle one) Terms and conditions on the other side.

Rush  24 Hour

48 Hour  **72 Hour**

Other: \_\_\_\_\_ TTP  yes /  no  
(Test Till Positive)

Samples received after 3pm logged in next morning

Circle analyses required, indicate type and quantity

Asbestos:  Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_

Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_

Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_

TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
13	AS 1-2	RM-2 - Drywall	Bag	HA-1	
14	AS 4-1	RM-2 - Textured ceiling	Bag	HA-4	
15	AS 4-2	RM-2 - Textured ceiling	Bag	HA-4	
16	AS 12-1	RM-4 - Green and brown Linoleum	Bag	HA-12	
17	AS 12-2	RM-4 - Green and brown Linoleum	Bag	HA-12	
18	AS 13-1	RM-4 - Gray Linoleum	Bag	HA-13	
19	AS 13-2	RM-4 - Gray Linoleum	Bag	HA-13	
20	AS 14-1	RM-4 - Brown Linoleum	Bag	HA-14	
21	AS 14-2	RM-4 - Brown Linoleum	Bag	HA-14	
22	AS 9-1	RM-3 - Faux wood Linoleum	Bag	HA-9	
23	AS 9-2	RM-3 - Faux wood Linoleum	Bag	HA-9	
24	AS 10-1	RM-3 - Tan linoleum	Bag	HA-10	

Relinquished By: [Signature]

Received By: [Signature]

Date: 12/15/17

Time/Date: 12/15/12

Revision R4 Date: May/2017

Relinquished By: \_\_\_\_\_ Received By: [Signature]

Date: \_\_\_\_\_ Time/Date: \_\_\_\_\_

RECEIVED

DEC 15 2017

APEX RESEARCH

73779

**APEX Research, Inc.**

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: 2193 Association Drive, Suite 200  
 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/13/2017 5:00  
 Project: 403 BEAVER ST  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) \*\*\*Terms and conditions on the other side.

Rush 24 Hour  
 48 Hour 72 Hour  
 Other: \_\_\_\_\_ TTP yes / no  
 (Test Till Positive)

Samples received after 3pm  
 logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
25	AS 10-2	RM-3 - Tan linoleum	Bag	HA-10	
26	AS 11-1	RM-3 - Spotted linoleum	Bag	HA-11	
27	AS 11-2	RM-3 - Spotted linoleum	Bag	HA-11	
28	AS 2-1	RM-3 - Plaster	Bag	HA-2	
29	AS 1-3	RM-5 - Drywall	Bag	HA-1	
30	AS 22-1	RM-3 - Sink under coating	Bag	HA-22	
31	AS 22-2	RM-3 - Sink under coating	Bag	HA-22	
32	AS 20-1	Roof - Shingles	Bag	HA-20	
33	AS 20-2	Roof - Shingles	Bag	HA-20	
34	AS 21-1	Exterior - Siding paper	Bag	HA-21	
35	AS 21-2	Exterior - Siding paper	Bag	HA-21	
36	AS 18-1	Basement - Basement cement floor	Bag	HA-18	

Relinquished By: [Signature]

Received By: [Signature]

Relinquished By: \_\_\_\_\_ Received By: \_\_\_\_\_

Date: 12/15/17

Time/Date: 12/15/17

Date: \_\_\_\_\_ Time/Date: \_\_\_\_\_

Revision R4 Date: May/2017

RECEIVED

DEC 15 2017

APEX RESEARCH

73779

# APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: 2193 Association Drive, Suite 200  
 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/13/2017 5:00  
 Project: 403 BEAVER ST  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) Terms and conditions on the other side.

Rush  24 Hour  
 48 Hour  **72 Hour**  
 Other: \_\_\_\_\_ TTP  yes /  no  
 (Test Till Positive)

Samples received after 3pm logged in next morning

Circle analyses required, indicate type and quantity

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
37	AS 18-2	Basement - Basement cement floor	Bag	HA-18	
38	AS 19-1	Basement - Stack Cement	Bag	HA-19	
39	AS 19-2	Basement - Stack Cement	Bag	HA-19	
40	AS 2-2	RM-9 - Plaster	Bag	HA-2	
41	AS 15-1	RM-7 - White spotted Linoleum	Bag	HA-15	
42	AS 15-2	RM-7 - White spotted Linoleum	Bag	HA-15	
43	AS 16-1	RM-7 - Beige Linoleum	Bag	HA-16	
44	AS 16-2	RM-7 - Beige Linoleum	Bag	HA-16	
45	AS 17-1	RM-8 - White tile	Bag	HA-17	
46	AS 17-2	RM-8 - White tile	Bag	HA-17	
47	AS 2-3	RM-9 - Plaster	Bag	HA-2	
48	AS 5-3	RM-7 - Vent wrap	Bag	HA-5	

Relinquished By: [Signature]

Received By: [Signature]

Relinquished By: \_\_\_\_\_ Received By: [Signature]

Date: 12/15/17

Time/Date: 12/15/17

Date: \_\_\_\_\_ Time/Date: DEC 15 2017

Revision R4 Date: May/2017

**ATTACHMENT D**

**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH**



# NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
(MDEQ) AIR QUALITY DIVISION  
NESHAP, 40 CFR Part 61, Subpart M



MICHIGAN DEPARTMENT OF LICENSING AND  
REGULATORY AFFAIRS (LARA), ASBESTOS PROGRAM,  
P.A. 135 OF 1986, AS AMENDED, Section 220 (1-4) or (8)

### DEQ/LARA USE ONLY

Postmark Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Rec'd Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Emergency Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Valid No. \_\_\_\_\_

OK  Send Def Ltr. Date of Def Ltr. \_\_\_\_/\_\_\_\_/\_\_\_\_

FOLLOW UP \_\_\_\_/\_\_\_\_/\_\_\_\_ Spoke w/ \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Notification No. \_\_\_\_\_ Trans No. \_\_\_\_\_

### Calculate LARA Asbestos Project Fee: (1% Project Fee)

Total Project Cost: \_\_\_\_\_ x 0.01 = \_\_\_\_\_

Type of Contractor: \_\_\_\_\_ License No.: \_\_\_\_\_

Licensing Authority: \_\_\_\_\_

### 1. NOTIFICATION:

Date of Notification: \_\_\_\_\_

Date of Revision(s): \_\_\_\_\_

Notification Type:  Original  Revised  Canceled  Annual

#### Mark appropriate boxes: (both DEQ and LARA may apply):

#### DEQ (NESHAP) [260 ln. ft./160 sq. ft. or more is threshold]

Planned Renovation – 10 **working** days notice

Emergency Renovation

Scheduled Demolition – 10 **working** days notice

Intentional Burn – 10 **working** days notice

Ordered Demolition

#### LARA (MIOSHA) [Will not accept annual notifications]

Demo, Reno, Encap. (>10 ln. ft./15 sq. ft.) 10 **calendar** days notice

Emergency Renovation/Encapsulation

### 2. PROJECT SCHEDULE:

**START DATE**                      **END DATE**

\* Renovation                      \_\_\_\_\_                      \_\_\_\_\_

+Asb. Removal                      \_\_\_\_\_                      \_\_\_\_\_

+Demolition:                      \_\_\_\_\_                      \_\_\_\_\_

Encapsulation:                      \_\_\_\_\_                      \_\_\_\_\_

**Work Schedule:** Please indicate the anticipated days of the week and work hours for the purpose of scheduling a compliance inspection.

**Days of the Week**                      **Work Hours**

Asb. Removal:                      \_\_\_\_\_                      \_\_\_\_\_

Demolition:                      \_\_\_\_\_                      \_\_\_\_\_

Encapsulation:                      \_\_\_\_\_                      \_\_\_\_\_

\* Includes setup, build enclosure, asbestos removal, demobilizing, etc.

+Include **only** those dates you are conducting asbestos removal/demo.

Check here if this is a multi-phased project, attach a schedule showing the start/end date of each phase.

### 3. ABATEMENT CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 4. DEMOLITION CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 5. FACILITY OWNER: ("Facility" includes Bridges)

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 6. FACILITY DESCRIPTION:

Facility Name: \_\_\_\_\_

Location Address/Description: \_\_\_\_\_

\_\_\_\_\_ If Apt. # of units: \_\_\_\_\_

City/Twp. \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

County: \_\_\_\_\_ Nearest Crossroad: \_\_\_\_\_

Size: (sq. ft.) \_\_\_\_\_ No. of Floors: \_\_\_\_\_ Floor No.: \_\_\_\_\_

Age: \_\_\_\_\_ Present Use: \_\_\_\_\_ Prior Use: \_\_\_\_\_

Specific Location(s) in Facility: \_\_\_\_\_

### 7. DISPOSAL SITE:

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

Location Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

### 8. WASTE TRANSPORTER 1:

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

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

### WASTE TRANSPORTER 2:

### 9. ORDERED DEMOLITIONS: (See NESHAP regulations for definition of "Ordered Demolition.") A copy of the official Order must accompany this notification.

Gov't Agency Ordering Demo: \_\_\_\_\_

Name/Title of Person Signing Order: \_\_\_\_\_

Date of Order: \_\_\_\_\_ Date Ordered to Begin: \_\_\_\_\_

### 10. IS ASBESTOS PRESENT? Yes No

To be removed prior to demolition

**Estimate the amount of asbestos:** Include RACM (Regulated Asbestos Containing Material) to be removed, encapsulated, etc. Also include the amount and type (floor tile, roofing, etc.) of non-friable Category I and/or Category II ACM that **will not** be removed prior to demolition. (**NOTE:** In a demolition, cementitious ACM **cannot** remain in a structure, as it is likely to become regulated in the demolition/handling process. It **must** be removed prior to demolition.)

RACM to be Removed

RACM to be Encapsulated

Non-friable ACM **not** removed prior to demo.

Category I

Category II

Units of Measure

				<input type="checkbox"/> Ln. Ft.	<input type="checkbox"/> Ln. M.
				<input type="checkbox"/> Sq. Ft.	<input type="checkbox"/> Sq. M.
				<input type="checkbox"/> Cu. Ft.*	<input type="checkbox"/> Cu. M.*

\*Volume (cubic ft./meters) should be used only if unable to measure by linear/square measure (example: asbestos has fallen off of surface).

(continued on reverse side)

**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH (continued)**

**11. PROJECT DESCRIPTION:** Complete **A) for Renovation** (asbestos removal/encapsulation) and/or **B) for Demolition**:

**A) RENOVATION:** Mark all surfaces/types of RACM to be removed:

- Piping     Fittings     Boiler(s)     Tanks(s)  
 Beam(s)     Duct(s)     Tunnel(s)     Ceiling Tile(s)  
 Mag Block     Other (describe) \_\_\_\_\_

**Encapsulation (for LARA):** Mark surfaces/types to be encapsulated:

- Piping     Fittings     Boiler(s)     Tank(s)  
 Beam(s)     Duct(s)     Tunnel(s)     Ceiling Tile(s)  
 Other (describe) \_\_\_\_\_

**Method of removal:** Describe how the asbestos will be removed from the surface (example: glove bag, scrape with hand tools, cut in sections and carefully lower, etc.): \_\_\_\_\_  
 \_\_\_\_\_

**B) DEMOLITION:** Describe the method of demolition of facility, bridge, etc., and indicate if complete or partial. If partial, describe which part of facility bridge, etc., will be demolished: \_\_\_\_\_  
 \_\_\_\_\_

**12. ENGINEERING CONTROLS:** Describe work practices and engineering controls used to prevent visible emissions before, during, and after removal, and until proper disposal: \_\_\_\_\_  
 \_\_\_\_\_

**13. UNEXPECTED ASBESTOS:** Describe the steps you intend to follow in the event that unexpected RACM is found or previously non-friable asbestos becomes friable (crumbled, pulverized, reduced to powder, etc.) and therefore regulated: \_\_\_\_\_  
 \_\_\_\_\_

**14. PROCEDURE(S) USED TO DETECT THE PRESENCE OF ASBESTOS:** **A)** Indicate how you determined whether or not asbestos is in the facility. If analytical sampling was used, describe method of analysis. (The determination of the presence or absence of asbestos must be made prior to submitting a renovation/demolition notification.): \_\_\_\_\_  
 \_\_\_\_\_

**B)** Name, address, and phone number of company performing asbestos survey: \_\_\_\_\_

**C)** Name, accreditation number of inspector, and date of inspection: \_\_\_\_\_

**15. EMERGENCY RENOVATIONS:** Date/time of emergency: \_\_\_\_\_ Describe the sudden, unexpected event: \_\_\_\_\_  
 \_\_\_\_\_

Explain how the event caused unsafe conditions, and/or would cause equipment damage and/or an unreasonable financial burden: \_\_\_\_\_  
 \_\_\_\_\_

**16.** I certify that an individual trained in the provisions of 40 CFR Part 61, Subpart M, will be on-site during the renovation and during demolition involving RACM above the threshold and/or during an ordered demolition. Evidence that this person has completed the required training will be available for inspection at the renovation or demolition site.

\_\_\_\_\_  
*Signature of Owner or Abatement Contractor      Date*

\_\_\_\_\_  
*Signature of Owner or Demolition Contractor      Date*

**17. Signature Requirements for Projects with Negative Pressure Enclosures: (required by LARA)**  
**Per Section 221(1)(2) of P.A. 135 of 1986, as amended, clearance air monitoring is required for any asbestos abatement project involving 10 linear feet/15 square feet or more of friable material which is performed within a negative pressure enclosure. I (the building owner or lessee) have been advised by the contractor of my responsibility under Act 135 to have clearance air monitoring performed on this project.**

\_\_\_\_\_  
*Signature of Building Owner or Lessee      Date*

\_\_\_\_\_  
*Signature of Asbestos Abatement Contractor Representative      Date*

**NOTE:** It is not mandatory that a signed copy be sent to LARA unless requested. For affected projects, this section of the notification form must be completed, signed, and made part of your records before the project begins.

**18. I certify that the above information is correct:**

\_\_\_\_\_  
*Printed Name of Owner/Operator      Date*

\_\_\_\_\_  
*Signature of Owner/Operator      Date*

**MAILING ADDRESSES/PHONE NUMBERS:** (See Item 1 to determine which agency requirements/regulations are applicable to your project.)

For **Public Act 135 of 1986, as amended, Section 220 (1-4) or (8)**, mail to address below. For more info visit:  
<http://www.michigan.gov/asbestos>

MIOSHA Asbestos Program  
 LARA, CSHD  
 P.O. Box 30671  
 Lansing, MI 48909-8171

517.636.4551 (office), 517.322.1713 (fax)

For **NESHAP Demolitions/Renovations, 40 CFR, Part 61, Subpart M**, please use the e-submittal process. For more information visit <http://www.michigan.gov/air>, under Air Links click on Asbestos NESHAP Program.

NESHAP Asbestos Program  
 DEQ, AQD  
 P.O. Box 30260  
 Lansing, MI 48909-7760

517.284.6777 (Office)



December 29, 2017

Ms. Roxanne Case  
 Grant Manager  
 Ingham County Land Bank  
 3024 Turner Street  
 Lansing, Ingham County, Michigan 48906

Re: Pre-Demolition Regulated Materials Survey  
 1031 N Larch St, Lansing, Ingham County, MI

Dear Ms. Case:

The Mannik & Smith Group, Inc. (MSG) is pleased to present Ingham County with the results of the limited pre-demolition regulated materials survey (RMS) performed at 1031 N Larch St, Lansing, Ingham County, Michigan (hereinafter referred to as the "Site") by Kory McKay (Accreditation Number A47903).

**SUMMARY**

Building Information	
Property Address	1031 N Larch St, Lansing, MI
Parcel #	33-01-01-09-430-311
No. Stories	2
Square Footage (approx.)	1,000 SF
Siding	Vinyl
Basement	Yes
Garage	Yes



Asbestos Containing Material				
Location	Material Group	Friable/Non Friable	Asbestos	Quantity
RM-1, RM-2, RM-3	Vent wrap	Friable	40% Chrysotile	140 SF
RM-3	Sink coating	Non friable	5% Chrysotile	3 SF
Basement	Stack cement	Non friable	5% Chrysotile	4 SF

Hazardous Materials		
Location	Material Description	Quantity
RM-3, RM-6	5 Gallon paint can	3
Basement	1 Gallon paint can	5
RM-3	1 Gallon bleach	4
Garage	Spray paint can	5
Garage	1 Quart oil container	4

TECHNICAL SKILL.  
 CREATIVE SPIRIT.

Universal Waste Inventory		
Location	Material Description	Quantity
RM-5, RM-6	Television	3
RM-1	CFL bulb	1
Basement	Smoke detector	1

Other Regulated Materials Inventory		
Location	Material Description	Quantity
RM-5	Air-conditioning unit	1

## PURPOSE AND SCOPE OF WORK

The purpose of the RMS was to identify, quantify and document the location of regulated materials that may be encountered during demolition of the on-site structure. To accomplish this purpose, MSG performed the following scope of work:

- 1) Pre-demolition asbestos-containing material (ACM) survey.
- 2) Universal wastes, hazardous materials, and other regulated wastes survey.

## METHODOLOGIES

The RMS was conducted on December 13, 2017. Methodologies employed during the completion of each task of the RMS are detailed below.

### ACM Survey Procedures

The ACM survey was performed in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763. The National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations govern demolition and renovation activities in which asbestos is present. The NESHAP rule distinguishes between Regulated Asbestos-Containing Materials (RACM) that would readily release asbestos fibers when damaged or disturbed and those materials that are unlikely to result in significant fiber release during demolition activities. The purpose of this survey is to determine if ACM within the Site building are RACM and thus, subject to the NESHAP, and to comply with the Michigan Occupational Safety and Health Administration (MIOSHA) and guidelines set forth in the Occupational Safety and Health Administration (OSHA) Regulations Standards 29 CFR 1910.1101.

RACM, as defined by NESHAP, is classified into four parts, (1) friable asbestos material, (2) Category I non-friable ACM (packing, gaskets, floor tile and roofing products) that has become friable, (3) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (4) Category II non-friable ACM (all other ACM products) 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.

The suspect ACM identified during this survey was grouped into homogeneous materials (i.e. similar materials which are uniform in color and texture) and:

- Described and quantified it in linear feet (LF) or square feet (SF);
- Identified and classified as friable or non-friable;
- Assessed as being in good, fair or poor condition;
- Assigned an EPA classification type (surfacing material, thermal system insulation or miscellaneous);
- Classified as RACM or non-RACM; and
- Sampled, or identified as presumed ACM (PACM).



MSG performed services associated with the ACM survey in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. The ACM survey included a systematic visual inspection of readily accessible areas of the Site building. Destructive sampling methods were used and suspect ACM samples were collected by State of Michigan Accredited Asbestos Inspector, Kory McKay (Accreditation Number A47903). Based on the quantity of each classification of material, MSG collected samples of each suspect ACM in accordance with EPA guidelines.

### **Universal Wastes and Hazardous Material Survey Procedures**

MSG identified and inventoried universal wastes and hazardous materials by a visual reconnaissance of the Site. Materials were identified, described, and quantified to the extent possible; however, no equipment or containers were opened and/or sampled as part of this survey.

A hazardous material, as defined in OSHA 29 CFR 1910.1200, is any item or chemical which is a "health hazard" or "physical hazard", including the following:

- Chemicals that are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, hepatotoxins, nephrotoxins, neurotoxins, agents that act on the hematopoietic system, and agents that damage the lungs, skin, eyes, or mucous membranes;
- Chemicals that are combustible liquids, compressed gases, explosives, flammable liquids, flammable solids, organic peroxides, oxidizers, pyrophorics, unstable (reactive) or water-reactive;
- Chemicals that, in the course of normal handling, use or storage, may produce or release dusts, gases, fumes, vapors, mists or smoke which have any of the above characteristics; and
- Any item or chemical which, when being transported or moved, is a risk to public safety or an environmental hazard, and is regulated as such by one or more of the following:
  - DOT - Department of Transportation; Hazardous Materials Regulations (49 CFR 100-180);
  - IMO - International Maritime Organization; International Maritime Dangerous Goods (IMDG) Code;
  - IATA - International Air Transport Association; Dangerous Goods Regulations;
  - ICAO - International Civil Aviation Organization; Technical Instructions; and
  - AF - Air Force "INTERSERVICE" Manual, Preparing Hazmat for Military Air Shipments (AFMAN 24-204).

Hazardous materials may also include:

- Any item or chemical listed in the United States Environmental Protection Agency (USEPA) *List of Hazardous Substances and Reportable Quantities*, dated September 1992.
- Noticeable as inventory under the reporting requirements of the Hazardous Chemical Reporting (40 CFR Part 302).
- An environmental release under the reporting requirements of the Toxic Chemical Release Reporting: Community Right To Know (40 CFR Part 372) or under Part 201, Environmental Remediation of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 201) and Part 213, Leaking Underground Storage Tanks (Part 213).

These would include chemicals with special characteristics which, in the opinion of the manufacturer, can cause harm to people, plants, or animals when released by spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other receptacles).

Universal wastes are waste that comes primarily from consumer products containing mercury, lead, cadmium or other substances that are hazardous to human health and the environment. These items cannot be discarded in household trash nor disposed of in landfills but have less stringent handling and disposal requirements than hazardous waste streams. In Michigan, universal wastes are regulated by the MDEQ Office of Waste Management and Radiological Protection under Part 111 of Act 451 and the federal

Resource Conservation and Recovery Act (RCRA) of 1976 under 40 CFR Part 273. Universal waste is also regulated by the US Department of Transportation (US DOT) under 49 CFR Parts 171 through 180. Most of the universal waste requirements overseen by the DEQ are addressed by R 299.9228 of Part 111 of 1994 P.A. 451, as amended and 40 CFR Part 273. These regulations are designed to encourage proper collection, recycling, treatment, or disposal of these wastes.

Examples of universal waste are mercury-containing equipment (e.g. thermostats, barometers, manometers, temperature and pressure gauges, and mercury switches), nickel-cadmium and spent lead-acid batteries, lamps (e.g. incandescent, fluorescent, high intensity discharge, neon, mercury vapor, and high pressure sodium and metal halide), pesticides, polychlorinated biphenyl (PCB) containing transformers and light ballasts, stored chemical and/or petroleum products, etc. In Michigan, Part 111 also includes pharmaceutical and consumer electronics as additional types of universal wastes.

### **Other Regulated Materials**

This RMS also included identifying and inventorying other regulated materials which may pose physical or chemical concerns during demolition of the Site building(s) including chlorofluorocarbon (CFC) containing devices, tanks, vessels, equipment, and building materials that may contain or become contaminated with hazardous materials.

Specifically, CFC containing devices are regulated Under Title VI of the Clean Air Act (CAA). The Stratospheric Protection Division of the EPA manages programs protecting the stratospheric ozone layer. Title 40, Part 82 of the Code of Federal Regulations contains the EPA regulations protecting the ozone layer. The RMS survey of the premises identified and quantified any CFC containers and CFC containing equipment, which could include the following:

- Drinking fountains, air conditioners, refrigerators
- Air conditioners in control panels and other process equipment
- Water and air chillers
- Roof top and stand-alone air conditioners
- Cafeteria equipment: freezers, walk-in coolers/freezers
- CFC canisters and cylinders

In Michigan, underground storage tanks are regulated under the authority of Part 211, Underground Storage Tank Regulations, of Act 451 of 1994, as amended, and the Michigan Underground Storage Tank Rules (MUSTR). Therefore, this survey included whether any evidence of underground storage tanks and related piping and dispensers were present at the Site.

MSG also surveyed for the presence of equipment, other storage tanks, and materials that may contain or be contaminated by regulated chemicals. These include, but may not be comprehensive of:

- Above ground storage tanks
- Oil-containing equipment (hydraulic equipment, blowers, fans, motors, elevators, compressors, etc.)
- Fire brick
- Contaminated building materials (concrete, block walls, wood, plaster, etc.) with staining, odor or other signs of a hazardous chemical release

## **SURVEY RESULTS**

The following subsections include a discussion of the RMS results. Photographs of the residence are located in the *Attachment A, Photo Log*. The results of this report are valid as of the report date, subject to the limitations presented in *Attachment B, Limitations*.

### **ACM Survey Results**

MSG identified nine (9) homogenous materials that were suspect as asbestos containing during the ACM survey. Twenty-one (21) bulk samples were collected from these suspect homogeneous materials and were submitted to Apex Research, Inc. for laboratory analysis of Bulk Materials by Polarized Light Microscopy using USEPA Method 600/R-93/116. Apex is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) to analyze bulk samples for asbestos content. Of the aforementioned suspect homogenous materials identified during this ACM survey, laboratory analysis found three (3) homogenous materials (samples 3-1, 7-1, and 9-1) contained greater than 1% asbestos. The EPA defines ACM as materials containing greater than 1% asbestos.

A point-count quantification procedure (PCQM) allows for lower detection limits than calibrated visual estimation (CVES), which is the quantification method widely used in asbestos analysis via Polarized Light Microscopy (PLM). If the asbestos content is found to contain less than 10% asbestos as determined by a method other than point counting by PLM, it can only be treated as non-ACM if verified to contain less than 1% by the PCQM. If not point-counted, the sample must be assumed to be greater than 1% and thus considered and treated as ACM. It is MSG's experience that point counting samples with an estimated PLM asbestos content of more than 3% does not yield significantly different analytical results. No samples were point counted.

Suspect ACM sample locations are depicted on the attached figure. See *Table 1, Asbestos Sampling Results* for a listing of homogeneous materials identified by MSG during this survey. A copy of the analytical reports including chains of custody is attached in *Attachment C, Analytical Reports and Chains of Custody*.

### **Universal Wastes, Hazardous Materials, and Other Regulated Materials Survey Results**

Universal wastes, hazardous materials, and/or other regulated materials wastes were identified within the Site building. Quantities identified are provided in *Table 2, Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory*.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Asbestos Containing Materials**

Of the nine (9) homogenous materials collected as part of the ACM survey, three (3) homogenous materials contained asbestos greater than 1% (samples 3-1, 7-1, and 9-1) with these three (3) homogenous materials being classified as RACM. All materials containing ACM must be disposed of in a licensed landfill.

Prior to demolition, a notification of intent to demolish shall be made to the Michigan Department of Environmental Quality Air Quality Division (MDEQ-AQD) and Licensing and Regulatory Affairs (LARA), Asbestos Program. Notification, according to the procedure described by the NESHAP, Title 40 of the Code of Federal Regulations, Part 61, Subpart M, Notification, for renovation and demolition projects should be followed. A copy of this notification form is provided in *Attachment D, Notification of Intent to Renovate/Demolish*. This form shall be completed by the contractor who completes the demolition.

If additional suspect ACMs are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, shall be surveyed, tested, and abated if warranted. If suspect ACMs are determined to be RACM that would be disturbed during demolition activities, the RACM must be properly removed by a licensed asbestos abatement contractor.

Category I and Category II Non-Friable ACM may often be left in place during demolition activities if the ACM is not subjected to sanding, grinding, cutting, or abrading or has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material during the course of demolition.

**Universal Wastes, Hazardous Materials, and Other Regulated Materials**

The universal waste, hazardous materials, and other regulated materials (see Table 2) must be properly characterized (as necessary) and properly removed from the Site building for recycling and/or disposed of in accordance with Parts 111, 115, or 147 of Michigan Public Act 451 of 1994, as amended. If additional universal wastes, hazardous materials, and other regulated materials are discovered during demolition activities in areas that were determined during this survey to be structurally unsound and unsafe, inaccessible, concealed and/or in buried areas, these materials shall be characterized (as necessary) and properly removed in accordance with the above-mentioned regulations.

If you have any questions or concerns regarding the above information please contact us at 517-316-9232.

Sincerely,



Kory McKay  
Environmental Scientist  
Accreditation Number A47903



Charlie Bush  
Senior Project Manager  
Accreditation Number A34293

Attachments

FIGURE

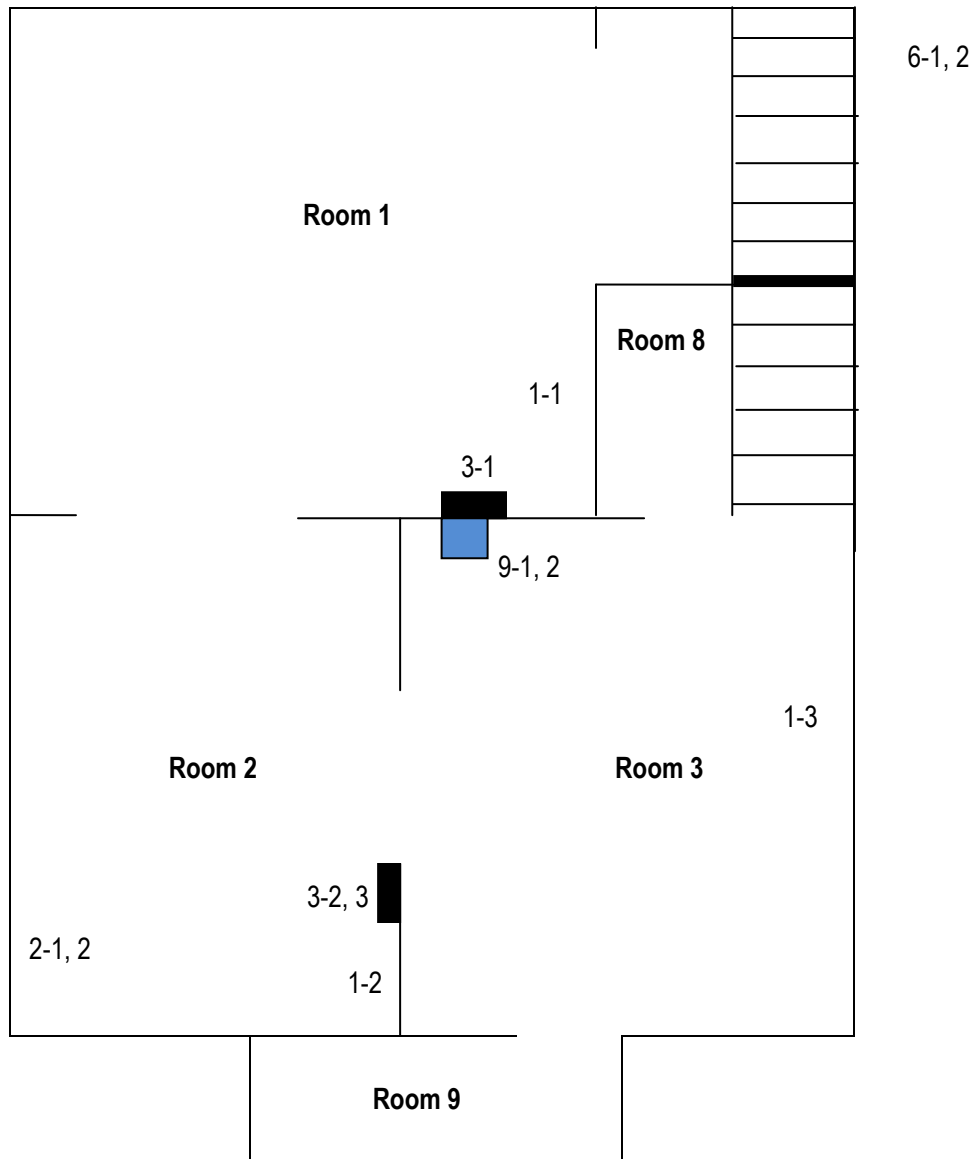


Address: 1031 N Larch St


Date: December 15, 2017

Drawing not to scale

1<sup>st</sup> Floor



 Sink Coating (3 SF)

 Vent with wrap (140 SF)

#-# = Asbestos Sample



TECHNICAL SKILL.  
CREATIVE SPIRIT.

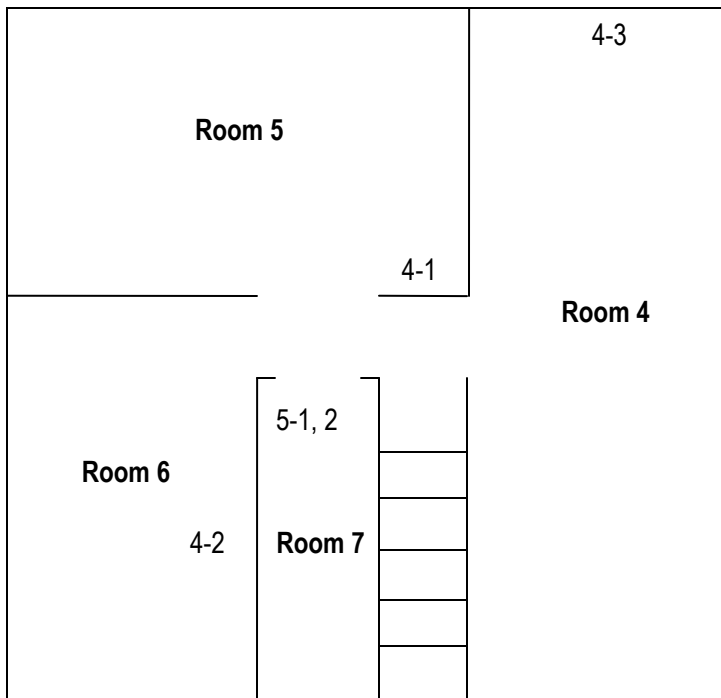
721 N. Capitol Avenue, Suite 2, Lansing, Michigan 48906 Tel: 517.316.9232 Fax: 517.316.9233 www.MannikSmithGroup.com

Address: 1031 N Larch St

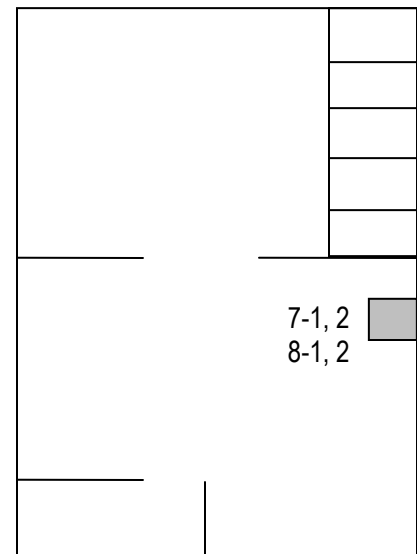
Date: December 15, 2017

Drawing not to scale

### 2<sup>nd</sup> Floor



### Basement



 Stack Cement (4 SF)

# # = Asbestos Sample

TABLES





**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		1031 N Larch St								
Survey Date		December 13, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
RM-1	1	AS 1-1	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	1300 SF
RM-2	1	AS 1-2	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	1300 SF
RM-3	1	AS 1-3	HA-1	Drywall	Non-Friable	Good	Miscellaneous	No	No	1300 SF
RM-2	1	AS 2-1	HA-2	Window glaze	Non-Friable	Good	Miscellaneous	No	No	150 SF
RM-2	1	AS 2-2	HA-2	Window glaze	Non-Friable	Good	Miscellaneous	No	No	150 SF
RM-1	1	AS 3-1	HA-3	Vent wrap	Friable	Good	Miscellaneous	Yes	40% Chrysotile	140 SF
RM-2	1	AS 3-2	HA-3	Vent wrap	Friable	Good	Miscellaneous	Yes	NA	140 SF
RM-2	1	AS 3-3	HA-3	Vent wrap	Friable	Good	Miscellaneous	Yes	NA	140 SF
RM-5	2	AS 4-1	HA-4	Plaster	Non-Friable	Good	Miscellaneous	No	No	1100 SF
RM-6	2	AS 4-2	HA-4	Plaster	Non-Friable	Good	Miscellaneous	No	No	1100 SF
RM-4	2	AS 4-3	HA-4	Plaster	Non-Friable	Good	Miscellaneous	No	No	1100 SF
RM-7	2	AS 5-1	HA-5	Tan tile	Non-Friable	Good	Miscellaneous	No	No	50 SF
RM-7	2	AS 5-2	HA-5	Tan tile	Non-Friable	Good	Miscellaneous	No	No	50 SF
Roof	E	AS 6-1	HA-6	Shingles	Non-Friable	Good	Miscellaneous	No	No	375 SF
Roof	E	AS 6-2	HA-6	Shingles	Non-Friable	Good	Miscellaneous	No	No	375 SF

**TABLE 1  
Asbestos Sampling Results**

Client		Ingham County Land Bank Authority								
Survey Location		1031 N Larch St								
Survey Date		December 13, 2017								
Functional Area	Floor	Sample ID	HM #	Homogeneous Material Group	Friable/Non Friable	Condition	EPA Classification	RACM	Asbestos	Quantity
Basement	B	AS 7-1	HA-7	Stack Cement	Non-Friable	Good	Miscellaneous	Yes	5% Chrysotile	4 SF
Basement	B	AS 7-2	HA-7	Stack Cement	Non-Friable	Good	Miscellaneous	Yes	NA	4 SF
Basement	B	AS 8-1	HA-8	Basement floor cement	Non-Friable	Good	Miscellaneous	No	No	400 SF
Basement	B	AS 8-2	HA-8	Basement floor cement	Non-Friable	Good	Miscellaneous	No	No	400 SF
RM-3	1	AS 9-1	HA-9	Sink coating	Non-Friable	Good	Miscellaneous	Yes	5% Chrysotile	3 SF
RM-3	1	AS 9-2	HA-9	Sink coating	Non-Friable	Good	Miscellaneous	Yes	NA	3 SF

Table 2  
 Universal Waste, Hazardous Materials, and Other Regulated Materials Inventory  
 1031 N Larch St  
 Lansing, Ingham County, Michigan

<b>Universal Waste Inventory</b>		
Location	Type of Waste	Approximate Quantity
RM-5, RM-6	Television	3
RM-1	CFL bulb	1
Basement	Smoke detector	1
<b>Hazardous Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
RM-3, RM-6	5 Gallon paint can	3
Basement	1 Gallon paint can	5
RM-3	1 Gallon bleach	4
Garage	Spray paint can	5
Garage	1 Quart oil container	4
<b>Other Regulated Materials Inventory</b>		
Location	Type of Waste	Approximate Quantity
RM-5	Air-conditioning unit	1

**ATTACHMENT A**

**PHOTO LOG**



Property Photos



1031 N Larch St, Front of House



Back of House

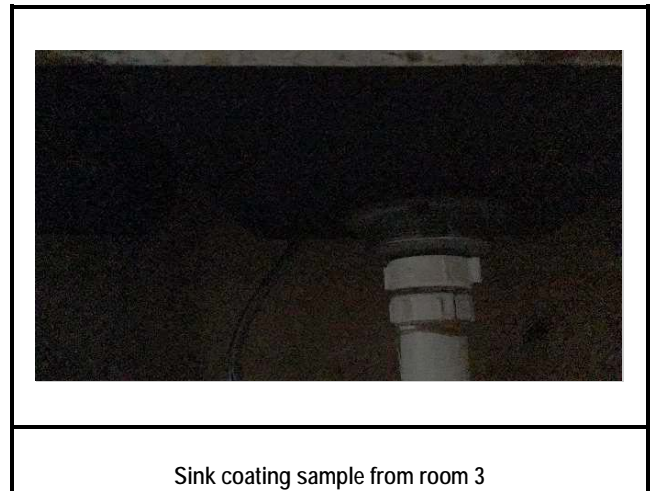
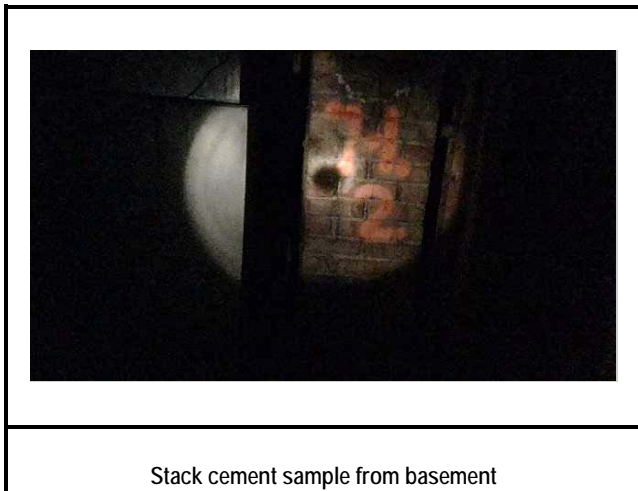
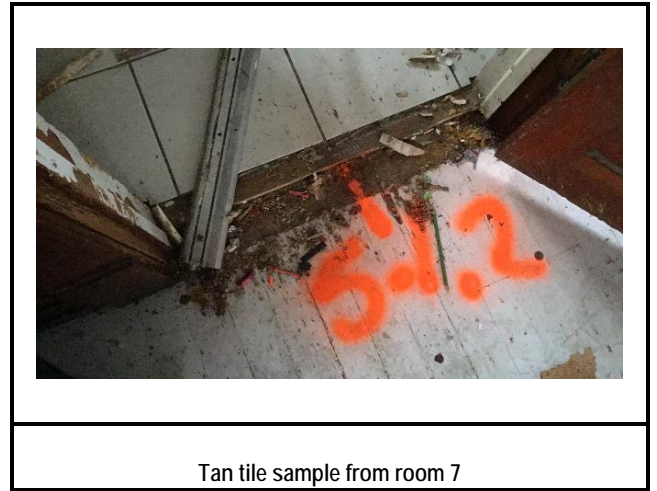
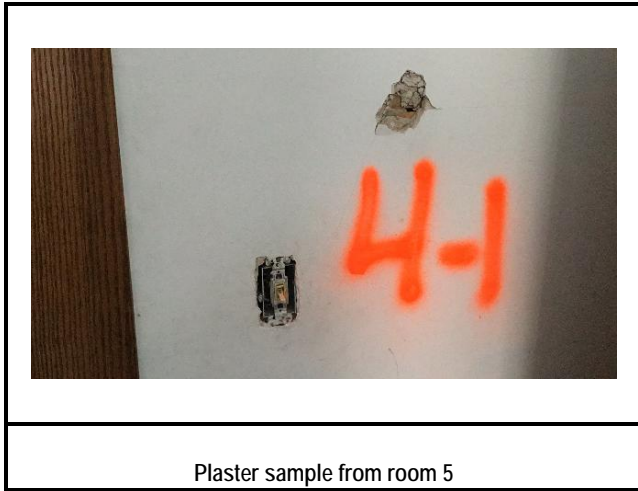
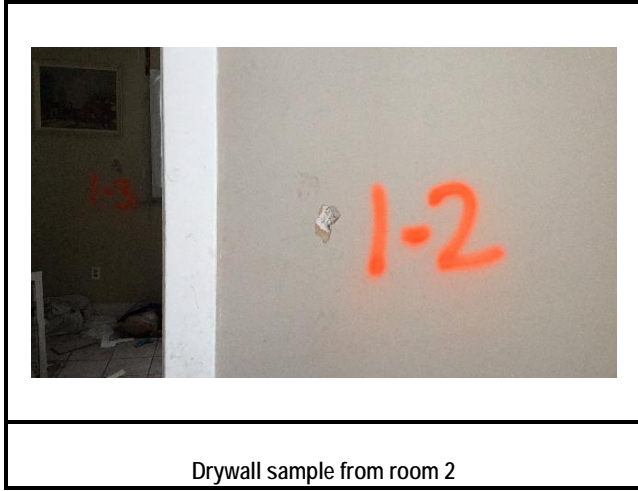


Side of House



Side of House

Sample Photos



# ATTACHMENT B

## LIMITATIONS







## REGULATED MATERIALS SURVEY LIMITATIONS

The Mannik & Smith Group, Inc. (MSG) performed its services associated with this Regulated Materials Survey (RMS) in general accordance with guidelines set forth in the Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763, Occupational Safety and Health Administration (OHSA) 29 CFR 1926.62, and in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. This RMS and related documentation are site-specific, which means they pertain to the conditions of the site surveyed.

Unless otherwise noted, MSG's RMS is limited to accessible areas. Areas determined to be not structurally sound, safely reached, limited by excessive accumulated obstructions, require specialized equipment to access, in operable windows, etc., are not included in this survey. There may be areas where regulated materials, such as suspected asbestos-containing materials (SACM) and lead containing paint cannot be viewed and/or tested. MSG shall not be responsible for identifying all SACM, lead containing paint, or other hazardous materials located in inaccessible locations, including but not limited to, above a plaster ceiling, behind a wall, embedded in concrete, buried, confined spaces, unsafe areas, or otherwise not readily identifiable.

Destructive sampling will only be conducted when permission has been granted by the owner. Destructive survey locations are limited to areas where hidden SACM, lead containing paint, or other hazardous materials is reasonably thought to be present and sampling can be conducted in a safe manner. If regulated materials are found during the course of demolition and/or renovation activities that are not listed in this report, the material should be assumed as asbestos-containing, lead containing, or hazardous until it can be sampled and analyzed at an accredited laboratory and safe work practices should always be used if those areas are to be disturbed.

MSG has prepared a logical assessment program to reduce the client's risk of discovering unknown regulated materials and/or hazardous substances. The presence of subsurface regulated materials and/or hazardous substances is based solely on surface observations and/or information provided by others. Descriptions of subsurface conditions provided in this report are not warranted to be complete or accurate. This risk may be reduced by more extensive exploration on the site, but even with additional exploration, it is not possible to completely eliminate the risk of discovering regulated materials and/or hazardous conditions. It cannot and should not be assumed that samples collected and conditions observed at the time of the RMS are representative of an area that has not been sampled and/or tested.

In preparing this report, MSG may have relied on information obtained from or provided by others. MSG makes no representation or warranty regarding the accuracy or completeness of this information gathered through outside sources or subcontracted services. No warranty, guarantee, or certification of any kind, expressed or implied, at common law or created by statute, is extended, made, or intended by rendering these environmental consulting services or by furnishing this written report. Environmental conditions and regulations are subject to constant change and reinterpretation. One should not assume that any on-site conditions and/or regulatory statutes or rules will remain constant after MSG has completed the scope of work for this project. Furthermore, because the facts stated in this report are subject to professional interpretation, differing conclusions could be reached by other environmental professionals.

The report is intended to offer support to a building owner, construction manager, general contractor, abatement contractor, architect, and/or other parties authorized by the owner in generally locating asbestos-containing materials (ACM), lead containing paint, universal and hazardous wastes, and/or other regulated materials. This report does not have the required components to serve as an Asbestos Project Design document, Asbestos and/or Lead Containing Paint Abatement Work Plan, and/or a Health and Safety Plan. Therefore, this report should not be utilized as a project specification document. The results, findings, conclusions, and recommendations expressed in



this report are based only on conditions that were noted during this survey. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated. Quantities have been conservatively estimated and sampling locations have been described representatively; however, current site conditions should be field-verified by contractors bidding on and/or prior to abatement work.

**ATTACHMENT C**

**ANALYTICAL REPORTS AND CHAINS OF CUSTODY**





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1031 N Larch St  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73782  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/20/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73782 - 01 Cust. #: AS4-3 Material: Plaster Base Coat Location: Room 4 Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 73782 - 02 Cust. #: AS5-1 Material: Tan Tile Location: Room 7 Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73782 - 02a Cust. #: AS5-1 Material: Glue Location: Room 7 Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1031 N Larch St  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73782  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/20/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73782 - 03 Cust. #: AS5-2 Material: Tan Tile Location: Room 7 Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73782 - 03a Cust. #: AS5-2 Material: Glue Location: Room 7 Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73782 - 04 Cust. #: AS4-1 Material: Plaster Base Coat Location: Room 5 Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1031 N Larch St  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73782  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/20/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73782 - 05 Cust. #: AS4-2 Material: Plaster Base Coat Location: Room 6 Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 73782 - 06 Cust. #: AS6-1 Material: Shingles Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%
Lab ID #: 73782 - 07 Cust. #: AS6-2 Material: Shingles Location: Roof Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Fiberglass - 15% Other - 85%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1031 N Larch St  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73782  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/20/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73782 - 08 Cust. #: AS1-1 Material: Drywall Location: Room 1 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 73782 - 09 Cust. #: AS3-1 Material: Vent Wrap Location: Room 1 Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 40%	Other - 60%
Lab ID #: 73782 - 10 Cust. #: AS1-2 Material: Drywall Location: Room 2 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



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## Test Method, Polarized Light Microscopy (PLM)

Project: 1031 N Larch St  
Project # I1440002

**Report To:**  
Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73782  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/20/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73782 - 11 Cust. #: AS3-2 Material: Vent Wrap Location: Room 2 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73782 - 12 Cust. #: AS3-3 Material: Vent Wrap Location: Room 2 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73782 - 13 Cust. #: AS2-1 Material: Window Glaze Location: Room 2 Appearance: beige, nonfibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1031 N Larch St  
Project # I1440002

**Report To:**

Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73782  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/20/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73782 - 14 Cust. #: AS2-2 Material: Window Glaze Location: Room 2 Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73782 - 15 Cust. #: AS1-3 Material: Drywall Location: Room 3 Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 73782 - 16 Cust. #: AS9-1 Material: Sink Coating Location: Room 3 Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0





# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1031 N Larch St  
Project # I1440002

**Report To:**  
Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73782  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/20/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73782 - 17 Cust. #: AS9-2 Material: Sink Coating Location: Room 3 Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	
Lab ID #: 73782 - 18 Cust. #: AS7-1 Material: Stack Cement Location: Basement Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>YES</b> Chrysotile - 5%	Other - 95%
Lab ID #: 73782 - 19 Cust. #: AS7-2 Material: Stack Cement Location: Basement Appearance: Layer: of	Asbestos Present:  NOT ANALYZED	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



# Certificate of Laboratory Analysis

## Test Method, Polarized Light Microscopy (PLM)

Project: 1031 N Larch St  
Project # I1440002

**Report To:**  
Mr. Charlie Bush  
Mannik & Smith Group  
2193 Association Drive, Suite 200  
Okemos, MI, 48864

ARI Report # 17-73782  
Date Collected: 12/13/17  
Date Received: 12/15/17  
Date Analyzed: 12/19/17  
Date Reported: 12/20/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 73782 - 20 Cust. #: AS8-1 Material: Basement Floor Cement Location: Basement Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: 73782 - 21 Cust. #: AS8-2 Material: Basement Floor Cement Location: Basement Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: <b>NO</b> No Asbestos Observed	Other - 100%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

Apex # **73782**

**APEX Research, Inc.**

1054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: **2193 Association Drive, Suite 200**  
 City, St., Zip: **Okemos, MI, 48864**  
 Phone: **(517) 316-9232** Fax: **(517) 316-9233**

Date of Survey: **12/13/2017 5:00**  
 Project: **1031 N LARCH ST**  
 Project #: **11440002**  
 Contact Person: **Charlie Bush**  
 Email: **cbush@manniksmithgroup.com**

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) Terms and conditions on the other side.

Rush \_\_\_\_\_ 24 Hour \_\_\_\_\_  
 48 Hour \_\_\_\_\_ **72 Hour** \_\_\_\_\_  
 Other: \_\_\_\_\_ TTP **yes** / no \_\_\_\_\_  
 (Test Till Positive)

Samples received after 3pm  
 logged in next morning

**Circle analyses required, indicate type and quantity**

Asbestos: Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	AS 4-3	RM-4 - Plaster	Bag	HA-4	
2	AS 5-1	RM-7 - Tan tile	Bag	HA-5	
3	AS 5-2	RM-7 - Tan tile	Bag	HA-5	
4	AS 4-1	RM-5 - Plaster	Bag	HA-4	
5	AS 4-2	RM-6 - Plaster	Bag	HA-4	
6	AS 6-1	Roof - Shingles	Bag	HA-6	
7	AS 6-2	Roof - Shingles	Bag	HA-6	
8	AS 1-1	RM-1 - Drywall	Bag	HA-1	
9	AS 3-1	RM-1 - Vent wrap	Bag	HA-3	
10	AS 1-2	RM-2 - Drywall	Bag	HA-1	
11	AS 3-2	RM-2 - Vent wrap	Bag	HA-3	
12	AS 3-3	RM-2 - Vent wrap	Bag	HA-3	

Relinquished By: [Signature]  
 Date: 12/15/17

Received By: [Signature]  
 Time/Date: 12/15/17

Relinquished By: \_\_\_\_\_ Received By: [Signature]  
 Date: \_\_\_\_\_ Time/Date: DEC 15 2017

Revision R4 Date: May/2017

73782

### APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: **MANNIK & SMITH GROUP**  
 Address: 2193 Association Drive, Suite 200  
 City, St., Zip: Okemos, MI, 48864  
 Phone: (517) 316-9232 Fax: (517) 316-9233

Date of Survey: 12/13/2017 5:00  
 Project: 1031 N LARCH ST  
 Project #: I1440002  
 Contact Person: Charlie Bush  
 Email: cbush@manniksmithgroup.com

Lab Use Only  
 Log-In: \_\_\_\_\_  
 Report: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Verbal: \_\_\_\_\_  
 Email: \_\_\_\_\_

Turn Around Time: (circle one) Terms and conditions on the other side.

Rush \_\_\_\_\_ 24 Hour \_\_\_\_\_  
 48 Hour \_\_\_\_\_ **72 Hour** \_\_\_\_\_  
 Other: \_\_\_\_\_ TTP **yes** / no  
 (Test Till Positive)

Samples received after 3pm logged in next morning

Circle analyses required, indicate type and quantity

**Asbestos:** Bulk  Wipe \_\_\_\_\_ Point Count \_\_\_\_\_ PCM \_\_\_\_\_  
 Lead / Cad / Chrome: Air \_\_\_\_\_ Paint \_\_\_\_\_ Wipe (ASTM) \_\_\_\_\_ Bulk \_\_\_\_\_  
 Mold: Bulk \_\_\_\_\_ Air \_\_\_\_\_ BioSIS \_\_\_\_\_ Tape \_\_\_\_\_  
 TEM: Bulk \_\_\_\_\_ NIOSH \_\_\_\_\_ EPA Level II \_\_\_\_\_ Other \_\_\_\_\_

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
13	AS 2-1	RM-2 - Window glaze	Bag	HA-2	
14	AS 2-2	RM-2 - Window glaze	Bag	HA-2	
15	AS 1-3	RM-3 - Drywall	Bag	HA-1	
16	AS 9-1	RM-3 - Sink coating	Bag	HA-9	
17	AS 9-2	RM-3 - Sink coating	Bag	HA-9	
18	AS 7-1	Basement - Stack Cement	Bag	HA-7	
19	AS 7-2	Basement - Stack Cement	Bag	HA-7	
20	AS 8-1	Basement - Basement floor cement	Bag	HA-8	
21	AS 8-2	Basement - Basement floor cement	Bag	HA-8	

Relinquished By:

Date: 12/15/17

Revision R4 Date: May/2017

Received By:

Time/Date: 12/15/17

Relinquished By: \_\_\_\_\_ Received By:

Date: \_\_\_\_\_ Time/Date: \_\_\_\_\_

RECEIVED  
DEC 15 2017

APEX RESEARCH

**ATTACHMENT D**

**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH**



# NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
(MDEQ) AIR QUALITY DIVISION  
NESHAP, 40 CFR Part 61, Subpart M



MICHIGAN DEPARTMENT OF LICENSING AND  
REGULATORY AFFAIRS (LARA), ASBESTOS PROGRAM,  
P.A. 135 OF 1986, AS AMENDED, Section 220 (1-4) or (8)

### DEQ/LARA USE ONLY

Postmark Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Rec'd Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Emergency Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Valid No. \_\_\_\_\_

OK  Send Def Ltr. Date of Def Ltr. \_\_\_\_/\_\_\_\_/\_\_\_\_

FOLLOW UP \_\_\_\_/\_\_\_\_/\_\_\_\_ Spoke w/ \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Notification No. \_\_\_\_\_ Trans No. \_\_\_\_\_

### Calculate LARA Asbestos Project Fee: (1% Project Fee)

Total Project Cost: \_\_\_\_\_ x 0.01 = \_\_\_\_\_

Type of Contractor: \_\_\_\_\_ License No.: \_\_\_\_\_

Licensing Authority: \_\_\_\_\_

### 1. NOTIFICATION:

Date of Notification: \_\_\_\_\_

Date of Revision(s): \_\_\_\_\_

Notification Type:  Original  Revised  Canceled  Annual

#### Mark appropriate boxes: (both DEQ and LARA may apply):

#### DEQ (NESHAP) [260 ln. ft./160 sq. ft. or more is threshold]

Planned Renovation – 10 **working** days notice

Emergency Renovation

Scheduled Demolition – 10 **working** days notice

Intentional Burn – 10 **working** days notice

Ordered Demolition

#### LARA (MIOSHA) [Will not accept annual notifications]

Demo, Reno, Encap. (>10 ln. ft./15 sq. ft.) 10 **calendar** days notice

Emergency Renovation/Encapsulation

### 2. PROJECT SCHEDULE:

**START DATE** **END DATE**

\* Renovation \_\_\_\_\_

+Asb. Removal \_\_\_\_\_

+Demolition: \_\_\_\_\_

Encapsulation: \_\_\_\_\_

**Work Schedule:** Please indicate the anticipated days of the week and work hours for the purpose of scheduling a compliance inspection.

**Days of the Week** **Work Hours**

Asb. Removal: \_\_\_\_\_

Demolition: \_\_\_\_\_

Encapsulation: \_\_\_\_\_

\* Includes setup, build enclosure, asbestos removal, demobilizing, etc.

+Include **only** those dates you are conducting asbestos removal/demo.

Check here if this is a multi-phased project, attach a schedule showing the start/end date of each phase.

### 3. ABATEMENT CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 4. DEMOLITION CONTRACTOR: Internal Project #: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 5. FACILITY OWNER: ("Facility" includes Bridges)

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

Mailing Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

### 6. FACILITY DESCRIPTION:

Facility Name: \_\_\_\_\_

Location Address/Description: \_\_\_\_\_

\_\_\_\_\_ If Apt. # of units: \_\_\_\_\_

City/Twp. \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

County: \_\_\_\_\_ Nearest Crossroad: \_\_\_\_\_

Size: (sq. ft.) \_\_\_\_\_ No. of Floors: \_\_\_\_\_ Floor No.: \_\_\_\_\_

Age: \_\_\_\_\_ Present Use: \_\_\_\_\_ Prior Use: \_\_\_\_\_

Specific Location(s) in Facility: \_\_\_\_\_

### 7. DISPOSAL SITE:

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

Location Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

### 8. WASTE TRANSPORTER 1:

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

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

### WASTE TRANSPORTER 2:

### 9. ORDERED DEMOLITIONS: (See NESHAP regulations for definition of "Ordered Demolition.") A copy of the official Order must accompany this notification.

Gov't Agency Ordering Demo: \_\_\_\_\_

Name/Title of Person Signing Order: \_\_\_\_\_

Date of Order: \_\_\_\_\_ Date Ordered to Begin: \_\_\_\_\_

### 10. IS ASBESTOS PRESENT? Yes No To be removed prior to demolition

**Estimate the amount of asbestos:** Include RACM (Regulated Asbestos Containing Material) to be removed, encapsulated, etc. Also include the amount and type (floor tile, roofing, etc.) of non-friable Category I and/or Category II ACM that **will not** be removed prior to demolition. (**NOTE:** In a demolition, cementitious ACM **cannot** remain in a structure, as it is likely to become regulated in the demolition/handling process. It **must** be removed prior to demolition.)

RACM to be Removed

RACM to be Encapsulated

Non-friable ACM **not** removed prior to demo.

Category I

Category II

Units of Measure

				<input type="checkbox"/> Ln. Ft.	<input type="checkbox"/> Ln. M.
				<input type="checkbox"/> Sq. Ft.	<input type="checkbox"/> Sq. M.
				<input type="checkbox"/> Cu. Ft.*	<input type="checkbox"/> Cu. M.*

\*Volume (cubic ft./meters) should be used only if unable to measure by linear/square measure (example: asbestos has fallen off of surface).

(continued on reverse side)

**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH (continued)**

**11. PROJECT DESCRIPTION:** Complete **A) for Renovation** (asbestos removal/encapsulation) and/or **B) for Demolition**:

**A) RENOVATION:** Mark all surfaces/types of RACM to be removed:

- Piping     Fittings     Boiler(s)     Tanks(s)  
 Beam(s)     Duct(s)     Tunnel(s)     Ceiling Tile(s)  
 Mag Block     Other (describe) \_\_\_\_\_

**Encapsulation (for LARA):** Mark surfaces/types to be encapsulated:

- Piping     Fittings     Boiler(s)     Tank(s)  
 Beam(s)     Duct(s)     Tunnel(s)     Ceiling Tile(s)  
 Other (describe) \_\_\_\_\_

**Method of removal:** Describe how the asbestos will be removed from the surface (example: glove bag, scrape with hand tools, cut in sections and carefully lower, etc.): \_\_\_\_\_  
 \_\_\_\_\_

**B) DEMOLITION:** Describe the method of demolition of facility, bridge, etc., and indicate if complete or partial. If partial, describe which part of facility bridge, etc., will be demolished: \_\_\_\_\_  
 \_\_\_\_\_

**12. ENGINEERING CONTROLS:** Describe work practices and engineering controls used to prevent visible emissions before, during, and after removal, and until proper disposal: \_\_\_\_\_  
 \_\_\_\_\_

**13. UNEXPECTED ASBESTOS:** Describe the steps you intend to follow in the event that unexpected RACM is found or previously non-friable asbestos becomes friable (crumbled, pulverized, reduced to powder, etc.) and therefore regulated: \_\_\_\_\_  
 \_\_\_\_\_

**14. PROCEDURE(S) USED TO DETECT THE PRESENCE OF ASBESTOS:** **A)** Indicate how you determined whether or not asbestos is in the facility. If analytical sampling was used, describe method of analysis. (The determination of the presence or absence of asbestos must be made prior to submitting a renovation/demolition notification.): \_\_\_\_\_  
 \_\_\_\_\_

**B)** Name, address, and phone number of company performing asbestos survey: \_\_\_\_\_

**C)** Name, accreditation number of inspector, and date of inspection: \_\_\_\_\_

**15. EMERGENCY RENOVATIONS:** Date/time of emergency: \_\_\_\_\_ Describe the sudden, unexpected event: \_\_\_\_\_  
 \_\_\_\_\_

Explain how the event caused unsafe conditions, and/or would cause equipment damage and/or an unreasonable financial burden: \_\_\_\_\_  
 \_\_\_\_\_

**16.** I certify that an individual trained in the provisions of 40 CFR Part 61, Subpart M, will be on-site during the renovation and during demolition involving RACM above the threshold and/or during an ordered demolition. Evidence that this person has completed the required training will be available for inspection at the renovation or demolition site.

\_\_\_\_\_  
*Signature of Owner or Abatement Contractor      Date*

\_\_\_\_\_  
*Signature of Owner or Demolition Contractor      Date*

**17. Signature Requirements for Projects with Negative Pressure Enclosures: (required by LARA)**  
**Per Section 221(1)(2) of P.A. 135 of 1986, as amended, clearance air monitoring is required for any asbestos abatement project involving 10 linear feet/15 square feet or more of friable material which is performed within a negative pressure enclosure. I (the building owner or lessee) have been advised by the contractor of my responsibility under Act 135 to have clearance air monitoring performed on this project.**

\_\_\_\_\_  
*Signature of Building Owner or Lessee      Date*

\_\_\_\_\_  
*Signature of Asbestos Abatement Contractor Representative      Date*

**NOTE:** It is not mandatory that a signed copy be sent to LARA unless requested. For affected projects, this section of the notification form must be completed, signed, and made part of your records before the project begins.

**18. I certify that the above information is correct:**

\_\_\_\_\_  
*Printed Name of Owner/Operator      Date*

\_\_\_\_\_  
*Signature of Owner/Operator      Date*

**MAILING ADDRESSES/PHONE NUMBERS:** (See Item 1 to determine which agency requirements/regulations are applicable to your project.)

For **Public Act 135 of 1986, as amended, Section 220 (1-4) or (8)**, mail to address below. For more info visit:  
<http://www.michigan.gov/asbestos>

MIOSHA Asbestos Program  
 LARA, CSHD  
 P.O. Box 30671  
 Lansing, MI 48909-8171

517.636.4551 (office), 517.322.1713 (fax)

For **NESHAP Demolitions/Renovations, 40 CFR, Part 61, Subpart M**, please use the e-submittal process. For more information visit <http://www.michigan.gov/air>, under Air Links click on Asbestos NESHAP Program.

NESHAP Asbestos Program  
 DEQ, AQD  
 P.O. Box 30260  
 Lansing, MI 48909-7760

517.284.6777 (Office)