# Asbestos-Containing Materials Inspection 1474-1484 West Liberty Street Ann Arbor, Michigan 48103

Ann Arbor Housing Development Corporation

April 4, 2023

**ASTI ENVIRONMENTAL** 





# Asbestos-Containing Materials Inspection 1474-1484 West Liberty Street Ann Arbor, Michigan 48103

April 4, 2023

#### **Report Prepared For:**

Ann Arbor Housing Development Corporation c/o Jennifer Hall 2000 S. Industrial Highway Ann Arbor, Michigan 48104

#### **Report Prepared By:**

ASTI Environmental 10448 Citation Drive, Suite 100 Brighton, Michigan 48116 1-800-395-ASTI

**ASTI Project No. 12703** 

Report Prepared by: Report Reviewed by:

elaine D. Tinsley 🔘 David A. Amir, EP

Asbestos Inspector (A16395) Director-Site Redevelopment Services



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#### **Executive Summary**

ASTI Environmental (ASTI) was retained by Ann Arbor Housing Development Corporation to conduct an asbestos-containing materials (ACMs) inspection of the buildings located at 1474-1484 West Liberty Street, Ann Arbor, Washtenaw County, Michigan (Subject Property). ASTI's scope of work included sampling of suspect ACMs in general conformance with the National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 61 Subpart M. The services provided by ASTI in completing this assessment have been provided in a manner consistent with the normal standards of the profession. No other warranties, expressed or implied, are made.

The structures inspected consists of two (2) approximately 2,200 square feet, 2-story buildings with partial basements and gabled roofs. Based on the inspection conducted by ASTI on March 7, 2023, the following ACMs were identified on the Subject Property:

**Asbestos-Containing Materials Quantities** 

MATERIAL	LOCATION	ESTIMATED QUANTITY
9" x 9" vinyl floor tile / Beige with tan spots	Throughout Buildings: 1474-1484 Some of the 9"x 9" floor tile is beneath carpet	3,300 ft <sup>2</sup>
Linoleum / Brown & tan with pebble pattern	1474 Laundry room, 1484 2 <sup>nd</sup> floor landing	300 ft <sup>2</sup>

#### Presumed Asbestos-Containing Materials

During completion of the inspection, several materials were identified as potential ACMs, however, due to inaccessibility, and /or the destructive nature of sampling required; these materials were not sampled at this time and should be considered as presumed asbestoscontaining materials (PACMs) until it can be sampled. The following PACMs were identified during the site inspection.

**Presumed Asbestos-Containing Materials Summary** 

MATERIAL	LOCATION	ESTIMATED QUANTITY
Bathtub undercoating	Throughout the buildings: 1474-1484	4 bathtubs
Roofing Materials	Throughout the buildings: 1474-1484	3,300 ft <sup>2</sup>



#### 1.0 Introduction

ASTI Environmental (ASTI) was retained by Ann Arbor Housing Development Corporation to conduct an asbestos-containing materials (ACM) inspection at 1474-1484 West Liberty Street, Ann Arbor, Washtenaw County, Michigan (Subject Property). Refer to the attached Site Location Map for the approximate location of the Subject Property. The information and opinions rendered in this report are prepared for the benefit of Ann Arbor Housing Development Corporation; ASTI acknowledges that said parties may rely upon the contents and conclusions presented in this report. The services provided by ASTI in completing this assessment have been provided in a manner consistent with the normal standards of the profession. No other warranties, expressed or implied are made.



#### 2.0 LIMITATION AND EXCEPTIONS

ASTI's scope of work included sampling of suspect homogeneous ACMs in general conformance with the National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 61 Subpart M and ASTM E2356-10 Standard Practice for Comprehensive Building Asbestos Surveys. Suspect materials not identified within this report may be encountered in inaccessible wall cavities, chases, floor cavities, etc. during demolition activities. These materials must be presumed to be ACM until they can be sampled and analyzed for asbestos content.

- Hollow concrete block was used in the construction of the buildings. The possibility exists for suspect ACM insulation to be present inside the concrete block. If during demolition/renovation material is found within the concrete block it should be assumed to be ACM until it can be sampled and analyzed for asbestos content.
- Due to the age of the buildings and the use of boilers, straight pipe insulation and elbows/fittings may be located in hidden cavities not accessible during the inspection. If any future work, such as renovation or demolition, which would uncover and disturb these materials, the straight pipe insulation and elbows/fittings are considered regulated ACMs and must be removed by a licensed abatement contractor.



#### 3.0 SUBJECT PROPERTY DESCRIPTION

The Subject Property is currently developed with an apartment housing complex containing four (4) units in two (2) buildings. The buildings were constructed in 1962. Each building is approximately 2,200 square feet and contains two (2) apartment units on two (2) levels. The buildings are of masonry construction with gable roof. Exterior finish materials include asphalt shingles, siding, and brick. Interior finish materials include plaster, resilient floor tiles, linoleum, ceramic tile, carpeting, brick, concrete, paint, and glass.



#### 4.0 ASBESTOS-CONTAINING MATERIALS INSPECTION

Ms. Jelaine D. Tinsley (A16395), and Mr. John Schuitema (A51781) of ASTI's Site Redevelopment Services Group conducted the ACMs inspection of the Subject Property located at 1474-1484 West Liberty Street, Ann Arbor, Michigan on March 7, 2023. Copies of the inspectors' resumes and asbestos accreditations are provided in Appendix A.

#### 4.1 Previous Asbestos-Containing Materials Inspections

ASTI is not aware of any previous ACM inspections of the Subject Property.

#### 4.2 Asbestos Inspection Methodology

ASTI's scope of work included sampling of suspect ACMs in accordance with the AHERA and NESHAP protocols. The inspection included a visual inspection of the building in order to identify homogeneous areas of suspect surfacing materials, thermal system insulation, and miscellaneous materials, as well as the sampling of suspect friable and non-friable materials. The following definitions from 40 CFR Part 763 are provided below.

<u>Asbestos-Containing Material (ACM):</u> any material or product which contains more than one percent asbestos.

<u>Surfacing Materials (SM)</u>: material that is troweled-on, sprayed-on or otherwise applied to surfaces for acoustical, fireproofing or other purposes.

Thermal System Insulation (TSI): material applied to pipes, fittings, boilers, breeching, tanks, ducts, or other interior components to prevent heat loss or gain, or water condensation or for other purposes.

<u>Miscellaneous Materials (MM):</u> interior building material on structural components, structural members or fixtures such as floors and ceilings and does not include surfacing material or thermal system insulation.

<u>Friable:</u> material that when dry, may be crumbled pulverized or reduced to powder by hand pressure, and includes previously non-friable material after such previously non-friable material becomes damaged to the extent that when dry it may be crumbled, pulverized or reduced to powder by hand pressure.

Non-friable: material which when dry may not be crumbled, pulverized or reduced to powder by hand pressure.



Homogeneous areas (HAs): an area of surfacing material, thermal system insulation, or miscellaneous material that is uniform in color and texture.

#### 4.3 Sample Collection

Samples were collected by physically removing a small piece of suspect material and placing it in a marked plastic bag. Samples were collected using wet methods, as appropriate. The sample collection tool was cleaned prior to each use to avoid cross-contamination of samples. ASTI sampled a variety of materials for asbestos testing. The material types sampled are listed below.

- Linoleum and associated mastic (various types)
- Sink undercoating
- Tile grout (various types)
- Caulk (various types)
- Plaster
- 9" x 9" Floor tile and associated mastic
- Block mortar
- Plank flooring
- Brick Mortar

ASTI collected 40 bulk samples from the suspect ACMs. A total of 52 sample layers were analyzed. One sample layer was point counted. The bulk samples were transmitted under chain-of-custody protocol to Apex Laboratory in Whitmore Lake, Michigan or asbestos analysis using polarized light microscopy with dispersion staining (PLM/DS) in accordance with the US Environmental Protection Agency's (US EPA's) "Interim Method for the Determination of Asbestos in Bulk Building Materials" (EPA 600/R-93/116, June 1993). Sample results are presented in the attached Table 1.

#### 4.4 <u>Laboratory Analytical Results</u>

Building materials identified to contain greater than 1% asbestos are defined as ACMs. Review of the asbestos test results revealed that the following ACMs were identified on the Subject Property:

НА	Material/Description	Location	Asbestos Result
7	9" x 9" vinyl floor tile / Beige with tan spots	Throughout Buildings: 1474-1484 Some of the 9"x 9" floor tile is beneath carpet	1.25% Chrysotile (PC)
12	Linoleum / Brown & tan with pebble pattern	1474 Laundry room, 1484 2 <sup>nd</sup> floor landing	30% Chrysotile

PC = Point Counting



A comprehensive list of sampled materials with analytical results is provided as Table 1. A copy of the laboratory data sheets, along with the chain-of-custodies are included in Appendix B.

**Asbestos-Containing Materials Quantities** 

MATERIAL	LOCATION	ESTIMATED QUANTITY
9" x 9" vinyl floor tile / Beige with tan spots	Throughout Buildings: 1474-1484 Some of the 9"x 9" floor tile is beneath carpet	3,300 ft <sup>2</sup>
Linoleum / Brown & tan with pebble pattern	1474 Laundry room, 1484 2 <sup>nd</sup> floor landing	300 ft <sup>2</sup>

#### 4.5 <u>Presumed Asbestos-Containing Materials</u>

During completion of the inspection, several materials were identified as potential ACMs, however, due to inaccessibility, and /or the destructive nature of sampling required; these materials were not sampled at this time and should be considered as presumed asbestoscontaining materials (PACMs) until it can be sampled. The following PACMs were identified during the site inspection.

**Presumed Asbestos-Containing Materials Summary** 

MATERIAL	LOCATION	ESTIMATED QUANTITY
Bathtub undercoating	Throughout the buildings: 1474-1484	4 bathtubs
Roofing Materials	Throughout the buildings: 1474-1484	3,300 ft <sup>2</sup>



#### 5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the inspection completed at the Subject Property by ASTI on March 7, 2023, ACMs were identified in the buildings. A summary of the ACMs identified, along with ASTI's recommendations are as follows:

MATERIAL	LOCATION	ESTIMATED QUANTITY
9" x 9" vinyl floor tile / Beige with tan spots	Throughout Buildings: 1474-1484 Some of the 9"x 9" floor tile is beneath carpet	3,300 ft <sup>2</sup>
Linoleum / Brown & tan with pebble pattern	Throughout Buildings: 1474-1484	300 ft <sup>2</sup>

According to classification guidelines set forth in NESHAP, the 9" x 9" vinyl floor tile and linoleum is classified as Category I non-friable ACMs. These materials in their current condition represents minimal risk of fiber release. If renovation or demolition would disturb these materials, ASTI recommends the ACMs be removed by a licensed abatement contractor prior to disturbance.

#### **Presumed Asbestos-Containing Materials**

During completion of the inspection, several materials were identified as potential ACMs, however, due to inaccessibility, and /or the destructive nature of sampling required; these materials were not sampled at this time and should be considered as presumed asbestoscontaining materials (PACMs) until it can be sampled. The following PACMs were identified during the site inspection.

**Presumed Asbestos-Containing Materials Summary** 

MATERIAL	LOCATION	ESTIMATED QUANTITY
Bathtub undercoating	Throughout the buildings: 1474-1484	4 bathtubs
Roofing Materials	Throughout the buildings: 1474-1484	3,300 ft <sup>2</sup>

According to classification guidelines set forth in NESHAP, the bathtub undercoating and roofing materials are assumed to contain asbestos and are classified as Category II non-friable ACMs. Until testing of these materials is completed, they should be treated as Category II non-friable ACMs.



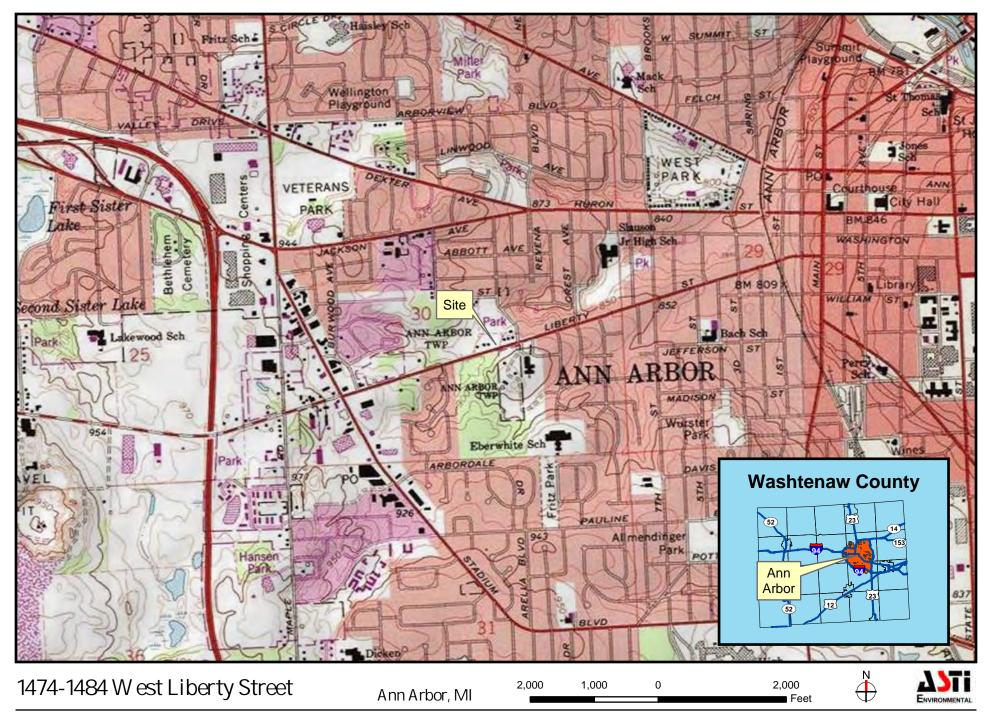
Due to the age of the buildings and the use of boilers, straight pipe insulation and elbows/fittings may be located in hidden cavities not accessible during the inspection. If any future work, such as renovation or demolition, which would uncover and disturb these materials, the straight pipe insulation and elbows/fittings are considered regulated ACMs and must be removed by a licensed abatement contractor.



# **Figures**

Site Location Map





### Tables

1 Asbestos Sample Results



#### Table 1 Asbestos Sample Results 1474-1484 West Liberty Street Ann Arbor, MI

ASTI Project No: 12703

	ASI	1 Project No: 12703	1
ASTI Sample ID	Material/Description	Sample Location	Asbestos Result
1A	Linoleum / Beige & White	1484-2 Kitchen	NAD
1B	Linoleum / Beige & White	1484-2 Kitchen	NAD
2A	Sink Undercoat / White	1484-2 Kitchen	NAD
2B	Sink Undercoat / White	1484-2 Kitchen	NAD
3A	Tile Grout / White	1484-2 Living Room	NAD
3B	Tile Grout / White	1484-2 Living Room	NAD
4A	Caulk / White	1484-2 Kitchen	NAD
4B	Caulk / White	1484-2 Bath	NAD
5A	Tile Grout / White	1484-2 Tub Surround	NAD
5B	Tile Grout / White	1484-2 Tub Surround	NAD
6A	Plaster Base Coat / Grey	1484-2 Bed 2	NAD
0A	Drywall	1404-2 Beu 2	NAD
	Plaster Finish Coat / White		NAD
6B	Plaster Base Coat / Grey	1484-2 Bed 2	NAD
	Drywall		NAD
	Plaster Finish Coat / White		NAD
6C	Plaster Base Coat / Grey	1484-2 Bed 2	NAD
	Drywall		NAD
<u> </u>	Plaster Finish Coat / White		NAD
6D	Plaster Base Coat / Grey	1484-2 Bed 2	NAD
	Drywall		NAD
	Plaster Finish Coat / White		NAD
6E	Plaster Base Coat / Grey	1484-2 Bed 2	NAD
	Drywall		NAD
6F	Plaster Base Coat / Grey	1474-2 Bed 2	NAD
6G	Plaster Finish Coat / White	1474-2 Bed 2	NAD
	Plaster Base Coat / Grey		NAD
7A	9"x9" Floor Tile / Beige w/Tan Spots	1474-2 Bed 2	1.25% Chrysotile (PC)
	Mastic		NAD
7B	9"x9" Floor Tile / Beige w/Tan Spots	1474-2 Laundry	NA NA
	Mastic	· · · · · · · · · · · · · · · · · · ·	NAD
8A	Block Mortar / Grey	1474-2 Bed 2	NAD
8B	Block Mortar / Grey	1474-2 Bed 2	NAD
9A	Tile Grout / Grey	1474-2 Bathroom	NAD
9B	Tile Grout / Grey	1474-2 Bathroom	NAD
10A	Plaster Finish Coat / White	1474 Laundry	NAD
	Plaster Base Coat / Grey	-	NAD
10B	Plaster Finish Coat / White	1474 Laundry	NAD
400	Plaster Base Coat / Grey	4.474 Louis day	NAD
10C	Plaster Finish Coat / White	1474 Laundry 1484 Entry	NAD
11A 11B	Tile Grout / Grey Tile Grout / Grey	1484 Entry 1484 / Entry	NAD NAD
			30% Chrysotile
	Linglaum / Brown X. Lan Dahhla Dattarn		
12A	Linoleum / Brown & Tan Pebble Pattern	1484 Hall	
12B	Linoleum / Brown & Tan Pebble Pattern	1474 Hall	NA
<b>12B</b> 13A	Linoleum / Brown & Tan Pebble Pattern Plank Flooring / Brown Faux Wood	<b>1474 Hall</b> 1474-2 Hall	NA NAD
12B 13A 13B	Linoleum / Brown & Tan Pebble Pattern Plank Flooring / Brown Faux Wood Plank Flooring / Brown Faux Wood	<b>1474 Hall</b> 1474-2 Hall 1474-2 Hall	NA NAD NAD
12B 13A 13B 14A	Plank Flooring / Brown Faux Wood Plank Flooring / Brown Faux Wood Plank Flooring / Brown Faux Wood Linoleum / Beige & Tan w/White Lines	1474 Hall 1474-2 Hall 1474-2 Hall 1474-1 Kitchen	NA NAD NAD NAD
12B 13A 13B 14A 14B	Plank Flooring / Brown Faux Wood Plank Flooring / Brown Faux Wood Plank Flooring / Brown Faux Wood Linoleum / Beige & Tan w/White Lines Linoleum / Beige & Tan w/White Lines	1474 Hall 1474-2 Hall 1474-2 Hall 1474-1 Kitchen 1474-1 Kitchen	NA NAD NAD NAD NAD
12B 13A 13B 14A 14B 15A	Linoleum / Brown & Tan Pebble Pattern Plank Flooring / Brown Faux Wood Plank Flooring / Brown Faux Wood Linoleum / Beige & Tan w/White Lines Linoleum / Beige & Tan w/White Lines Exterior Caulk / Brown	1474 Hall 1474-2 Hall 1474-2 Hall 1474-1 Kitchen 1474-1 Kitchen 1484 Exterior Window south side	NA NAD NAD NAD NAD NAD
12B 13A 13B 14A 14B 15A 15B	Linoleum / Brown & Tan Pebble Pattern Plank Flooring / Brown Faux Wood Plank Flooring / Brown Faux Wood Linoleum / Beige & Tan w/White Lines Linoleum / Beige & Tan w/White Lines Exterior Caulk / Brown Exterior Caulk / Brown	1474 Hall 1474-2 Hall 1474-2 Hall 1474-1 Kitchen 1474-1 Kitchen 1484 Exterior Window south side 1474 Exterior Window south side	NA NAD NAD NAD NAD NAD NAD NAD NAD
12B 13A 13B 14A 14B 15A 15B 16A	Linoleum / Brown & Tan Pebble Pattern  Plank Flooring / Brown Faux Wood  Plank Flooring / Brown Faux Wood  Linoleum / Beige & Tan w/White Lines  Linoleum / Beige & Tan w/White Lines  Exterior Caulk / Brown  Exterior Caulk / Brown  Exterior Caulk / Cream	1474 Hall 1474-2 Hall 1474-2 Hall 1474-1 Kitchen 1474-1 Kitchen 1484 Exterior Window south side 1474 Exterior Window south side 1484 Exterior Window south side	NA NAD NAD NAD NAD NAD NAD NAD NAD NAD N
12B 13A 13B 14A 14B 15A 15B 16A 16B	Linoleum / Brown & Tan Pebble Pattern  Plank Flooring / Brown Faux Wood  Plank Flooring / Brown Faux Wood  Linoleum / Beige & Tan w/White Lines  Linoleum / Beige & Tan w/White Lines  Exterior Caulk / Brown  Exterior Caulk / Brown  Exterior Caulk / Cream  Exterior Caulk / Cream	1474 Hall 1474-2 Hall 1474-2 Hall 1474-1 Kitchen 1474-1 Kitchen 1484 Exterior Window south side 1474 Exterior Window south side 1484 Exterior Window south side 1474 Exterior Window south side	NA NAD NAD NAD NAD NAD NAD NAD NAD NAD N
12B 13A 13B 14A 14B	Plank Flooring / Brown Faux Wood Plank Flooring / Brown Faux Wood Plank Flooring / Brown Faux Wood Linoleum / Beige & Tan w/White Lines Linoleum / Beige & Tan w/White Lines	1474 Hall 1474-2 Hall 1474-2 Hall 1474-1 Kitchen 1474-1 Kitchen	NA NAD NAD NAD NAD
12B 13A 13B 14A 14B 15A 15B	Linoleum / Brown & Tan Pebble Pattern  Plank Flooring / Brown Faux Wood  Plank Flooring / Brown Faux Wood  Linoleum / Beige & Tan w/White Lines  Linoleum / Beige & Tan w/White Lines  Exterior Caulk / Brown  Exterior Caulk / Brown  Exterior Caulk / Cream	1474 Hall 1474-2 Hall 1474-2 Hall 1474-1 Kitchen 1474-1 Kitchen 1484 Exterior Window south side 1474 Exterior Window south side 1484 Exterior Window south side	NA NAD NAD NAD NAD NAD NAD NAD NAD NAD N

### Appendix A

Resumes and Accreditations of the Inspectors







JELAINE D. TINSLEY Environmental Professional

#### **PROFILE**

#### Certifications/Licenses

NIOSH 582-Equivalent Course Sampling and Analysis of Airborne Asbestos Fibers

OSHA 29 CFR 1910.120 HAZWOPER 40-Hour and 8-Hour Refresher

Asbestos Inspector-Michigan (License No. A16395)

Asbestos Inspector-Illinois (License No. 100-19756)

Asbestos Inspector-Indiana (License No. 19A007625)

Asbestos Hazard Evaluation Specialist-Ohio (License No.ES36108)

Asbestos Inspector / Management Planner-Kentucky (License No. 66369)

Asbestos Inspector-West Virginia (License No. AlO10697)

Asbestos Project Designer-Michigan (License No. A16395)

Certified Confined Space Entrant and Attendant

American Red Cross First Aide and Adult CPR Certified

ASTM Certification in RBCA Applied at Petroleum Release Sites

Michigan Provisional Teaching Certificate

#### Education

Western Michigan University, B.S., Earth Science and Education

#### **Experience History**

Environmental Professional, ASTI ENVIRONMENTAL

Project Manager, Yeoman Group

Project Manager, A&F Environmental

Environmental Consultant, DLZ Corporation

Environmental Consultant, AKT Peerless

Geologist, ATC Associates

Geologist, NUS Corporation

Teacher, Detroit Public Schools

Staff Scientist, CTI and Associates, Inc.

#### Professional Memberships and Service

Michigan Association of Environmental Professionals (MAEP)

Commercial Real Estate Women Detroit (CREW)

#### Professional Background

Ms. Tinsley has more than 33years' experience in the environmental industry in a variety of areas including Phase I environmental site assessments (ESAs), Phase II ESAs, baseline environmental assessments (BEAs), subsurface investigations (soil and groundwater testing), soil and groundwater evaluations, asbestos and mold inspections, abatement oversight, and specification development. Ms. Tinsley has also coordinated numerous hazardous material and pre-demolition surveys which included evaluations of asbestos, mold, radon and universal wastes for municipal, commercial, and industrial facilities.

Years' Experience:

8—ASTI ENVIRONMENTAL 25—other firms

# ENVIRONMENTAL DUE DILIGENCE AND SITE INVESTIGATION PROJECTS

#### **Environmental Site Assessments**

Completed numerous site assessments for a variety of projects (vacant land, agricultural, residential, commercial, and industrial) to determine the environmental condition of sites for real estate transactions. Projects involved both surface and subsurface evaluations of sites for a variety of hazardous substances. Responsibilities included the preparation and/or review of ASTM Phase I and Phase ESAs, Baseline Environmental Assessments (BEAs), and Due Care Plans. Ms. Tinsley has experience working in Michigan, Illinois, Indiana, Ohio, Kentucky, Tennessee, Georgia, Alabama, Mississippi, and Florida. Ms. Tinsley also has performed listing site evaluations for a dedicated contactor to the US EPA. Ms. Tinsley is also knowledgeable with All Appropriate Inquiries (AAI) per 40 CFR Part 312 and meets the requirements of an Environmental Professional per AAI.

#### **Customer Training**

Provided training for financial institutions on the types of properties that should have environmental evaluations.

#### Vapor Intrusion Evaluation, Jackson, Michigan

Conducted vapor intrusion studies at commercial properties to assess potential vapor migration. Scope of work included coordination of vapor intrusion points, vapor sample collection, and coordination of chemical testing.

#### CONSTRUCTION TESTING

Conducted construction material analysis which included soil proctors, soil sieve analysis, asphalt extractions, and concrete stress testing.

# ASBESTOS INSPECTIONS AND ABATEMENT COORDINATION/OVERSIGHT

Responsible for asbestos program management including coordination and technical lead for hazardous material surveys and asbestos and mold related testing activities.

#### <u>Asbestos Inspections, City of Detroit Neighborhood</u> Redevelopment Project

Inspector of asbestos hazards at over 300 residential and commercial properties. Collected samples of suspect ACM for laboratory analysis. Provided report to the City of Detroit with findings and compliance requirements.

#### Asbestos Inspections, City of Inkster Neighborhood Redevelopment Project

Conducted asbestos inspections at over 100 residential and commercial properties. Collected samples of suspect ACM for laboratory analysis. Provided report to the City of Inkster with findings and compliance requirements.

#### Large Hotel Detroit, Michigan

Inspected the hotel property as part of a team. Collected samples, reviewed laboratory analysis, and provided client a report of methods and findings. Performed oversight of ACM abatement.

#### Medical Complex Kalamazoo, Michigan

Responsible for coordination of field activities for the ACM abatement of the complex. Conducted schedule and strategy meetings.

#### Hotel, Detroit, Michigan

Inspected the hotel property. Collected samples, reviewed laboratory analysis, and provided client a report of methods and findings.

#### Former Coal Power Plant

Conducted a thorough asbestos inspection of an inactive multi-building coal power plant in Detroit, Michigan. Collected samples, and performed thorough photo documentation and quantification of all ACMs in the power plant and supporting buildings.

# UNDERGROUND STORAGE TANKS AND PETROLEUM REMEDIATION PROJECT

#### Commercial Development Royal Oak, Michigan

Coordinated the remediation of a former gasoline service station, during site development for a commercial company. Work included Phase I ESA and Phase II site investigation to evaluate USTs and hoists onsite, as well as coordinating a GPR survey for additional USTs on site, a BEA, and a Due Care Plan. Assisted with the development bid specifications for site remediation activities including UST and hoist removal, soil remediation, and asbestos abatement. Coordinated the removal of five (5) USTs, one in-ground hoist, and 300,000 cubic yards of petroleum-impacted soils.



# State of Michigan

Department of Labor and Economic Opportunity
higan Occupational Safety & Health Administration - Asbestos Program

# Asbestos Inspector

Jelaine D. Tinslev

Accreditation Number A16395

Expiration Date 09/26/2023

This individual has satisfactorily met or exceeded the requirements of Michigan Public Act 440 of 1988, as amended, to be accredited as an Asbestos Inspector.

Accreditation card is not valid if altered.

159722







JOHN F. SCHUITEMA Associate II

#### **PROFILE**

#### Certifications

Asbestos Inspector (A51781)
Michigan Lead Inspector/Risk Assessor (P-07409)
ICC Property Maintenance Inspector
ICC Zoning Inspector
40-Hour OSHA HAZWOPER Training
8-Hour OSHA HAZWOPER Refresher

#### Education

Lead Inspector/Risk Assessor Training Asbestos Awareness Training Lead Awareness Training Asbestos Inspector Training

#### **Experience History**

Associate I, ASTI Environmental Field Technician, ASTI Environmental Government

#### Professional Background

Mr. Schuitema has experience in the field with soil sampling, lead dust sampling, asbestos surveys, air monitoring, hazardous materials surveys, and lead inspections. Mr. Schuitema has assisted with Phase II investigations, property condition assessments, mold sampling, indoor air quality assessments, moisture operation and maintenance plans, and performed health and safety related building inspections.

Years' Experience: 5—ASTI ENVIRONMENTAL

3—Government

# ENVIRONMENTAL DUE DILIGENCE AND SITE INVESTIGATION PROJECTS

#### **Environmental Site Assessments**

Completed numerous site assessments for a variety of projects (vacant land, agricultural, residential, commercial, and industrial), to determine the environmental condition of sites for real estate transactions. Projects involved both surface and subsurface evaluations of sites for a variety of hazardous substances.

# ASBESTOS AND LEAD INSPECTION AND RISK ASSESSMENTS

Responsible for asbestos inspections and lead inspections and risk assessments on commercial, multi-family, and single-family properties.

#### <u>Lead Based Paint Inspections and Risk Assessments,</u> Flint Housing Commission

Inspection of lead hazards throughout Flint's public housing complexes, dust wipe sample collection for laboratory analysis, XRF sampling, and writing the report to the Flint Housing Commission with findings and compliance requirements.

#### Large Apartment Complex in Flint, Michigan

Conducted asbestos inspections of over 100 residential units. Collected samples of suspect ACM for laboratory analysis. Provided report to the City of Flint with findings and compliance requirements.

#### INDOOR AIR QUALITY AND MOLD

Conducted mold assessments and verification sampling on municipal buildings, schools, and private facilities in the State of Michigan. Assessment scopes included mold identification and moisture infiltration, abatement scope design, and post abatement visual inspection and clearance sampling.

Conducted visual and indoor air quality clearance samples for multiple residential homes following ACM removal, prior to demolition, throughout the State of Michigan.

#### Highrise Apartment Building Detroit, Michigan

Monitored indoor air quality during removal of asbestos containing materials. Provided clearance air sampling upon completion.

#### Multiple School Buildings Detroit, Michigan

Performed visual inspection, tape lift samples, air sampling, and moisture readings to evaluate potential mold growth. Completed clearance inspection and

sampling after remediation and provided the client with a report of methods and findings.

#### PROPERTY CONDTION ASSESSMENTS

Completed inspections of commercial, industrial, and residential properties in the State of Michigan. Identified physical deficiencies, material defects, and deferred maintenance. Reported findings, including cost estimates for repairs and replacements deemed necessary.

#### **STORM WATER INSPECTIONS**

Performed inspections of construction sites to determine compliance with state storm water regulations. Reported deficiencies and recommend remedies.

#### Large Apartment Complex Howell, Michigan

Conducted weekly inspections during construction to ensure compliance with construction storm water regulations. Provided weekly report with findings, deficiencies, and remedy options to the client and County.

#### **WASTEWATER OPERATIONS**

#### Super Fund Site, St. Joseph, Michigan

Performed monthly maintenance and sampling to insure proper operation and compliance with applicable regulations. Maintained air striper and CatOx system for removal of VOCs from contaminated groundwater.

#### **AIR MONITORING**

#### Former McLouth Steel Site, Trenton, Michigan

Operated outdoor air monitoring and sampling stations to ensure chemicals of concern and fugitive dust did not leave the property. Performed real time air monitoring during demolition activities.





### Appendix B

Results of Asbestos Sample Analysis and Chain of Custody



ASTI Project No.: 12703 Asbestos-Containing Materials Inspection 1474-1484 West Liberty



# Test Method, Polarized Light Microscopy (PLM)



Project: 1484-1474 W. Liberty Project #: 12703

 Report To:
 ARI Report # 23-103618

 Mr. David Amir
 Date Collected: 03/07/23

 ASTI Environmental
 Date Received: 03/09/23

 10448 Citation Dr., Suite 100
 Date Analyzed: 03/13/23

 Brighton, MI 48116
 Date Reported: 03/14/23

Sample Information Asbestos Type/Percent Non-Asbestos Material

Lab ID #: 103618 - 01 Asbestos Present: **NO** Cellulose - 20% Cust. #: 1A No Asbestos Observed Fiberglass - 5%

Material: Linoleum-Beige & White

No Aspestos Observed

Probergiass - 5%

Other - 75%

Material: Linoleum-Beige & White Other - 75%

Location: 1484-2 Kitchen
Appearance: beige,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 103618 - 02 Asbestos Present: **NO** Cellulose - 20% Cust. #: 1B No Asbestos Observed Fiberglass - 5%

Material: Linoleum-Beige & White

Other - 75%

Location: 1484-2 Kitchen

Other - 75%

Layer: 1 of 1

Lab ID #: 103618 - 03 Asbestos Present: **NO**Cust. #: 2A No Asbestos Observed

Cust. #: 2A No Asbestos Observed
Material: Sink Undercoat-White

Location: 1484-2 Kitchen

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Appearance: beige, fibrous, homogenous

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

Robert T. Letarte Jr., Laboratory Director

Other - 100%



# Test Method, Polarized Light Microscopy (PLM)



Project: 1484-1474 W. Liberty Project #: 12703

 Report To:
 ARI Report # 23-103618

 Mr. David Amir
 Date Collected: 03/07/23

 ASTI Environmental
 Date Received: 03/09/23

 10448 Citation Dr., Suite 100
 Date Analyzed: 03/13/23

 Brighton, MI 48116
 Date Reported: 03/14/23

Sample Information Asbestos Type/Percent Non-Asbestos Material

Lab ID #: 103618 - 04 Asbestos Present: **NO** Other - 100%

Cust. #: 2B No Asbestos Observed

Material: Sink Undercoat-White

Location: 1484-2 Kitchen

Appearance: grey,nonfibrous,homogenous Layer: 1 of 1

Lab ID #: 103618 - 05 Asbestos Present: **NO** Other - 100%

Cust. #: 3A No Asbestos Observed

Material: Tile Grout-White
Location: 1484-2 Living Room

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 103618 - 06 Asbestos Present: **NO** Other - 100%

Cust. #: 3B No Asbestos Observed

Material: Tile Grout-White Location: 1484-2 Living Room

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

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

Robert T. Letarte Jr., Laboratory Director



# Test Method, Polarized Light Microscopy (PLM)



Project: 1484-1474 W. Liberty Project #: 12703

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 Date Collected: 03/07/23

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 10448 Citation Dr., Suite 100
 Date Analyzed: 03/13/23

 Brighton, MI 48116
 Date Reported: 03/14/23

Sample Information

Asbestos Type/Percent Non-Asbestos Material

Lab ID #: 103618 - 07 Asbestos Present: **NO** Other - 100%

Cust. #: 4A No Asbestos Observed

Material: Caulk-White Location: 1484-2 Kitchen

Appearance: beige,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 103618 - 08 Asbestos Present: **NO** Other - 100%

No Asbestos Observed

No Asbestos Observed

Cust. #: 4B

Material: Caulk-White Location: 1484-2 Bath

Appearance: beige, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 103618 - 09 Asbestos Present: **NO** Other - 100%

Cust. #: 5A

Material: Tile Grout-White Location: 1484-2 Tub Surround

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

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

Robert T. Letarte Jr., Laboratory Director



# Test Method, Polarized Light Microscopy (PLM)



Project: 1484-1474 W. Liberty Project #: 12703

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 Date Analyzed: 03/13/23

 Brighton, MI 48116
 Date Reported: 03/14/23

Sample Information Asbestos Type/Percent Non-Asbestos Material

No Asbestos Observed

No Asbestos Observed

Lab ID #: 103618 - 10 Asbestos Present: **NO** Other - 100%

Cust. #: 5B

Material: Tile Grout-White Location: 1484-2 Tub Surround

Appearance: white,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 103618 - 11 Asbestos Present: **NO** Other - 100%

Cust. #: 6A Material: Plaster Base Coat-Grey

Location: 1484-2 Bed 2

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 2

Lab ID #: 103618 - 11a Asbestos Present: **NO** Cellulose - 20% Cust. #: 6A No Asbestos Observed Other - 80%

Cust. #: 6A
Material: Drywall
Location: 1484-2 Bed 2

Appearance: beige, fibrous, nonhomogenous

Layer: 2 of 2

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

Robert T. Letarte Jr., Laboratory Director



# Test Method, Polarized Light Microscopy (PLM)



Project: 1484-1474 W. Liberty Project #: 12703

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 10448 Citation Dr., Suite 100
 Date Analyzed: 03/13/23

 Brighton, MI 48116
 Date Reported: 03/14/23

Asbestos Present: NO

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Sample Information Asbestos Type/Percent No.

Non-Asbestos Material

Other - 100%

Other - 100%

Cellulose - 20%

Other - 80%

Lab ID #: 103618 - 12

Cust. #: 6B

Material: Plaster Finish Coat-White

Location: 1484-2 Bed 2

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 103618 - 12a

Cust. #: 6B

Material: Plaster Base Coat-Grey

Location: 1484-2 Bed 2

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 103618 - 12b Asbestos Present: **NO**Cust. #: 6B No Asbestos Observed

Material: Drywall Location: 1484-2 Bed 2

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 3

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

Robert T. Letarte Jr., Laboratory Director



# Test Method, Polarized Light Microscopy (PLM)



Project: 1484-1474 W. Liberty Project #: 12703

 Report To:
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 Brighton, MI 48116
 Date Reported: 03/14/23

Sample Information Asbestos Type/Percent Non-Asbestos Material

No Asbestos Observed

No Asbestos Observed

Lab ID #: 103618 - 13 Asbestos Present: **NO** Other - 100%

Cust. #: 6C

Material: Plaster Finish Coat-White Location: 1484-2 Bed 2

Appearance: white,nonfibrous,homogenous

Layer: 1 of 3

Lab ID #: 103618 - 13a Asbestos Present: **NO** Other - 100%

Cust. #: 6C

Material: Plaster Base Coat-Grey

Location: 1484-2 Bed 2

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 103618 - 13b Asbestos Present: **NO** Cellulose - 20% Cust. #: 6C No Asbestos Observed Other - 80%

Material: Drywall Location: 1484-2 Bed 2

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 3

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

Robert T. Letarte Jr., Laboratory Director



# Test Method, Polarized Light Microscopy (PLM)



Project: 1484-1474 W. Liberty Project #: 12703

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 ARI Report # 23-103618

 Mr. David Amir
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 Date Received: 03/09/23

 10448 Citation Dr., Suite 100
 Date Analyzed: 03/13/23

 Brighton, MI 48116
 Date Reported: 03/14/23

No Asbestos Observed

Asbestos Present: NO

No Asbestos Observed

Sample Information Asbestos Type/Percent

Non-Asbestos Material

Other - 100%

Other - 100%

Lab ID #: 103618 - 14 Asbestos Present: **NO** 

Cust. #: 6D

Material: Plaster Finish Coat-White

Location: 1484-2 Bed 2

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 103618 - 14a

Cust. #: 6D

Material: Plaster Base Coat-Grey

Location: 1484-2 Bed 2

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 103618 - 14b Asbestos Present: **NO** Cellulose - 20% Cust. #: 6D No Asbestos Observed Other - 80%

Material: Drywall Location: 1484-2 Bed 2

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 3

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

Robert T. Letarte Jr., Laboratory Director



# Test Method, Polarized Light Microscopy (PLM)



Project: 1484-1474 W. Liberty Project #: 12703

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 Date Analyzed: 03/13/23

 Brighton, MI 48116
 Date Reported: 03/14/23

Asbestos Present: NO

Asbestos Present: NO

No Asbestos Observed

No Asbestos Observed

Sample Information Asbestos Type/Percent

Non-Asbestos Material

Other - 100%

Other - 100%

Lab ID #: 103618 - 15

Cust. #: 6E

Material: Plaster Finish Coat-White

Location: 1484-2 Bed 2

Appearance: white, nonfibrous, homogenous

Layer: 1 of 3

Lab ID #: 103618 - 15a

Cust. #: 6E

Material: Plaster Base Coat-Grey

Location: 1484-2 Bed 2

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 3

Lab ID #: 103618 - 15b Asbestos Present: **NO** Cellulose - 20% Cust. #: 6E No Asbestos Observed Other - 80%

Material: Drywall Location: 1484-2 Bed 2

Appearance: beige, fibrous, nonhomogenous

Layer: 3 of 3

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

Robert T. Letarte Jr., Laboratory Director



# Test Method, Polarized Light Microscopy (PLM)



Project: 1484-1474 W. Liberty Project #: 12703

 Report To:
 ARI Report # 23-103618

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 Date Collected: 03/07/23

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 Brighton, MI 48116
 Date Reported: 03/14/23

Sample Information Asbestos Type/Percent Non-Asbestos Material

Lab ID #: 103618 - 16 Asbestos Present: **NO** Other - 100%

Cust. #: 6F No Asbestos Observed

Material: Plaster Base Coat-Grey

Location: 1474-2 Bed 2
Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 103618 - 17 Asbestos Present: **NO** Other - 100%

Cust. #: 6G No Asbestos Observed

Material: Plaster Finish Coat-White

Location: 1474-2 Bed 2

Appearance: white,nonfibrous,homogenous Layer: 1 of 2

Lab ID #: 103618 - 17a Asbestos Present: **NO** Other - 100%

Cust. #: 6G No Asbestos Observed

Material: Plaster Base Coat-Grey

Location: 1474-2 Bed 2

Appearance: grey,nonfibrous,homogenous

Layer: 2 of 2

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

Robert T. Letarte Jr., Laboratory Director



### Test Method, Polarized Light Microscopy (PLM)



Project: 1484-1474 W. Liberty Project #: 12703

Report To: ARI Report # 23-103618 Date Collected: Mr. David Amir 03/07/23 **ASTI Environmental** Date Received: 03/09/23 10448 Citation Dr., Suite 100 Date Analyzed: 03/13/23 Brighton, MI 48116 Date Reported: 03/14/23

Sample Information Asbestos Type/Percent

Lab ID #: 103618 - 18

Cust. #:

Material:

9x9 Floor Tile-Beige w/Tan Spots

Location: 1474-2 Bed 2

Appearance: beige, fibrous, homogenous

Layer: of

103618 - 18a Lab ID #:

Cust. #: 7A Material: Mastic

Location: 1474-2 Bed 2

Appearance: black,nonfibrous,homogenous

Layer: 2 of

Lab ID #: 103618 - 19

Cust. #:

9x9 Floor Tile-Beige w/Tan Spots Material:

Location: 1474-2 Laundry

Layer: of Non-Asbestos Material

Asbestos Present: YES Other - 98%

Chrysotile - 2%

Asbestos Present: NO

No Asbestos Observed

Other - 100%

Asbestos Present:

NOT ANALYZED

Appearance:

2

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



# Test Method, Polarized Light Microscopy (PLM)



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 Report To:
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 Brighton, MI 48116
 Date Reported: 03/14/23

No Asbestos Observed

No Asbestos Observed

No Asbestos Observed

Sample Information Asbestos Type/Percent

Non-Asbestos Material

Lab ID #: 103618 - 19a Asbestos Present: **NO** Other - 100%

Cust. #: 7B Material: Mastic Location: 1474 Laundry

Appearance: black,nonfibrous,homogenous

Layer: 2 of 2

Lab ID #: 103618 - 20 Asbestos Present: **NO** Other - 100%

Cust. #: 8A Material: Block Mortar-Grev

Material: Block Mortar-Grey Location: 1474-2 Bed 2

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 103618 - 21 Asbestos Present: **NO** Other - 100%

Cust. #: 8B Material: Block Mortar-Grey

Material: Block Mortar-Grey Location: 1474-2 Bed 2

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

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

Robert T. Letarte Jr., Laboratory Director



# Test Method, Polarized Light Microscopy (PLM)



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 Report To:
 ARI Report # 23-103618

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 Date Analyzed: 03/13/23

 Brighton, MI 48116
 Date Reported: 03/14/23

Sample Information Asbestos Type/Percent Non-Asbestos Material

No Asbestos Observed

No Asbestos Observed

No Asbestos Observed

Lab ID #: 103618 - 22 Asbestos Present: **NO** 

Cust. #: 9A

Material: Tile Grout-Grey Location: 1474-2 Bathroom

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 103618 - 23 Asbestos Present: **NO** Other - 100%

Cust. #: 9B

Material: Tile Grout-Grey Location: 1474-2 Bathroom

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 103618 - 24 Asbestos Present: **NO** Other - 100%

Cust. #: 10A

Material: Plaster Finish Coat-White

Location: 1474 Laundry

Appearance: white, nonfibrous, homogenous

Layer: 1 of 2

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

Robert T. Letarte Jr., Laboratory Director

Other - 100%



## Test Method, Polarized Light Microscopy (PLM)



Project: 1484-1474 W. Liberty Project #: 12703

Report To: ARI Report # 23-103618 Mr. David Amir Date Collected: 03/07/23 **ASTI Environmental** Date Received: 03/09/23 10448 Citation Dr., Suite 100 Date Analyzed: 03/13/23 Brighton, MI 48116 Date Reported: 03/14/23

Sample Information Asbestos Type/Percent Non-Asbestos Material

Lab ID #: 103618 - 24a Asbestos Present: NO

Cust. #: 10A No Asbestos Observed

Material: Plaster Base Coat-Grey

Location: 1474 Laundry

Appearance: grey,nonfibrous,homogenous

Layer: of

Asbestos Present: NO 103618 - 25 Other - 100% Lab ID #:

Cust. #: 10B No Asbestos Observed

Plaster Finish Coat-White Material:

Location: 1484 Laundry

Appearance: white, nonfibrous, homogenous

Layer: 1 of

Lab ID #: 103618 - 25a Asbestos Present: NO Other - 100%

No Asbestos Observed Cust. #: 10B

Material: Plaster Base Coat-Grey

Location: 1484 Laundry

Appearance: grey,nonfibrous,homogenous

Layer: 2 of

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

Other - 100%



## Test Method, Polarized Light Microscopy (PLM)



Project: 1484-1474 W. Liberty Project #: 12703

 Report To:
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 Mr. David Amir
 Date Collected: 03/07/23

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 Brighton, MI 48116
 Date Reported: 03/14/23

Sample Information

Asbestos Type/Percent Non-Asbestos Material

Lab ID #: 103618 - 26 Asbestos Present: **NO** Other - 100%

Cust. #: 10C No Asbestos Observed

Material: Plaster Finish Coat-White

Location: 1474 Laundry

Appearance: white,nonfibrous,homogenous Layer: 1 of 1

Lab ID #: 103618 - 27 Asbestos Present: **NO**Cust. #: 11A No Asbestos Observed

Cust. #: 11A No Asbestos Observ Material: Tile Grout-Grey

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Location: Entry 1484

Lab ID #: 103618 - 28 Asbestos Present: **NO** Other - 100%

Cust. #: 11B No Asbestos Observed

Material: Tile Grout-Grey Location: Entry 1484

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

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

Robert T. Letarte Jr., Laboratory Director

Other - 100%



#### Test Method, Polarized Light Microscopy (PLM)



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 Date Reported: 03/14/23

**Sample Information** 

Asbestos Type/Percent

Non-Asbestos Material

 Lab ID #:
 103618 - 29
 Asbestos Present: YES
 Cellulose - 5%

 Cust. #:
 12A
 Chrysotile - 30%
 Other - 65%

Material: Linoleum-Brown & Tan Pebble Pattern

Location: 1484 Hall

Appearance: brown,fibrous,homogenous

Layer: 1 of 1

Lab ID #: 103618 - 30 Asbestos Present:

Cust. #: 12B

Material: Linoleum-Brown & Tan Pebble Pattern

Location: 1474 Hall NOT ANALYZED

Appearance: Layer: of

Lab ID #: 103618 - 31 Asbestos Present: **NO** Other - 100%

Cust. #: 13A

Material: Plank Flooring-Brown Faux Wood

Location: 1474-2 Hall

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 1

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

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 40 CFR - Part 763 and/or 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 as submitted and to insure the integrity of the results, may only be reproduced in full. This certificate must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal 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.

No Asbestos Observed



## Test Method, Polarized Light Microscopy (PLM)



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 Brighton, MI 48116
 Date Reported: 03/14/23

Sample Information Asbestos Type/Percent Non-Asbestos Material

Lab ID #: 103618 - 32 Asbestos Present: **NO** Other - 100%

Cust. #: 13B No Asbestos Observed

Material: Plank Flooring-Brown Faux Wood

Location: 1474-2 Hall

Appearance: brown,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 103618 - 33 Asbestos Present: **NO** Cellulose - 15% Cust. #: 14A No Asbestos Observed Fiberglass - 5%

Material: Linoleum-Beige & Tan w/White Lines Synthetic - 5%
Location: 1474-1 Kitchen Other - 75%

Location: 1474-1 Kitchen
Appearance: beige, fibrous, homogenous

Layer: 1 of 1

Lab ID #: 103618 - 34 Asbestos Present: **NO** Cellulose - 15% Cust. #: 14B No Asbestos Observed Fiberglass - 5%

Material: Linoleum-Beige & Tan w/White Lines Synthetic - 5% Location: 1474-1 Kitchen Other - 75%

Appearance: beige, fibrous, homogenous

Layer: 1 of 1

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

Robert T. Letarte Jr., Laboratory Director



## Test Method, Polarized Light Microscopy (PLM)



Project: 1484-1474 W. Liberty Project #: 12703

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 Brighton, MI 48116
 Date Reported: 03/14/23

Sample Information Asbestos Type/Percent Non-Asbestos Material

Lab ID #: 103618 - 35 Asbestos Present: **NO** Other - 100%

Cust. #: 15A No Asbestos Observed

Material: Exterior Caulk-Brown

Location: #

Appearance: grey,nonfibrous,homogenous Layer: 1 of 1

Lab ID #: 103618 - 36 Asbestos Present: **NO** Other - 100%

Cust. #: 15B No Asbestos Observed

Material: Exterior Caulk-Brown

Location: #

Appearance: grey,nonfibrous,homogenous Layer: 1 of 1

Lab ID #: 103618 - 37 Asbestos Present: **NO**Cust. #: 16A No Asbestos Observed

Material: Exterior Caulk-Cream

Location: #

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

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

Robert T. Letarte Jr., Laboratory Director

Other - 100%



## Test Method, Polarized Light Microscopy (PLM)



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 Date Received: 03/09/23

 10448 Citation Dr., Suite 100
 Date Analyzed: 03/13/23

 Brighton, MI 48116
 Date Reported: 03/14/23

Sample Information Asbestos Type/Percent Non-Asbestos Material

No Asbestos Observed

No Asbestos Observed

Lab ID #: 103618 - 38 Asbestos Present: **NO** Other - 100%

Cust. #: 16B No Asbestos Observed

Material: Exterior Caulk-Cream

Location: #

Appearance: white, nonfibrous, homogenous

Layer: 1 of 1

Lab ID #: 103618 - 39 Asbestos Present: **NO** Other - 100%

Cust. #: 17A

Material: Brick Mortar-Grey

Location: #

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

Lab ID #: 103618 - 40 Asbestos Present: **NO** Other - 100%

Cust. #: 17B

Material: Brick Mortar-Grey

Location: #

Appearance: grey,nonfibrous,homogenous

Layer: 1 of 1

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

Robert T. Letarte Jr., Laboratory Director



#### Test Method, Polarized Light Microscopy (PLM)



Project: 1484-1474 W. Liberty Project #: 12703

 Report To:
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 Mr. David Amir
 Date Collected: 03/07/23

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 Date Received: 03/09/23

 10448 Citation Dr., Suite 100
 Date Analyzed: 03/13/23

 Brighton, MI 48116
 Date Reported: 03/14/23

Sample Information Asbestos Type/Percent Non-Asbestos Material

Lab ID #: 103618 - 18pc Asbestos Present: **YES** Other - 98.75%

Cust. #: 7A Chrysotile - 1.25%

Material: 9x9 Floor Tile-Beige w/Tan Spots

Location: 1474-2 bed 2

Appearance: beige, fibrous, homogenous POINT COUNT RESULT

Layer: of

Lab ID #: Asbestos Present:

Cust. #:
Material:
Location:
Appearance:
Layer: of

Lab ID #: Asbestos Present:

Cust. #:
Material:
Location:
Appearance:
Layer: of

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

Robert T. Letarte Jr., Laboratory Director



Revision R4 Date: May/2017

# APEX Research, Inc.

APEX	

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			Date of Survey: _				Lab Use Only
Customer I	Name: <u>ASTI</u>		Project: <u>/                                   </u>	1474 6	W. Liber	17	Log-In:
	448 Citation Dr.		Project # / Z	Report:			
	o: Brighton, MI, 481		Contact Person: [		Fax:		
Phone: <u>810</u>	-225-2800	Fax:	Email: damir@asti	-env.com jsc	chuitema@as	<u>₃ti-</u> env.com	Verbal:
Turn Around	Time: (circle one)***Tern	ns and conditions on the other side.	Circle analyses requ	ired, indicate	type and qua	antity	Email:
Rush	24 hour	Asbestos:	Bulk X Wipe	e	Point Count	PCM	
48 hour	72 <b>h</b> our	Lead / Cad / Chrome:	Wipe ASTM E1792? circle	YES or NO	Air	Paint	Bulk
Other:	TTP <b>yX</b> s	/ no Mold:	Bulk Air/2	Zefon/Alergeno	coD	BioSIS	Таре
Samples received after logged in next morning	•	ive) <b>TEM:</b>	Bulk/NOB	NIOSH 7402	EPA Lo	evel II	Other
Lab ID	Customer ID#	Material/Lo	The state of the s	Volume		The state of the s	sults
	. 14	Linoleum - Beign + w	hite - 1484-2	Kitchen			
	13	11	11				***************************************
	2 A	Sink undecont - whit	e - 1484-2	Kitchen			
	23	11	(1				
	3 A	Tile Grout - white	- 1484-2	Living 1200	es		
	38	41					
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Revision R4 Date: May/2017

# APEX Research, Inc.

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

			Date of Survey: _	3/7/2023	•		Lab Use Only
Customer	Name: ASTI		Project: <u>/ / / 8</u> / -	1474	W. Libe.	ity	Log-In:
	448 Citation Dr.		Project #		Report:		
City, St., Zij	p: Brighton, MI, 481	69	Contact Person: _		Fax:		
Phone: 810-225-2800 Fax:			Email: damir@asti	sti-env.com	Verbal:		
	Time: (c <i>ircle one</i> )***Tern		Circle analyses requ	ired, indicate	type and qua	antity	Email:
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	8B	. 11	11				Cook 9 F Cook Cook
	94	Tile Grost - Gray	- 1474-2 3	athrous		MAK	0 8 2023
	98	10	"			APEX	RESEARCH
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# APEX Research, Inc.

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

		en brive, which ore Lake, 141 40105.	Date of Survey:	1 7	<del></del>		Lab Use Only	
Customer	Name: ASTI		Project: _/484-	1474	W. Liber	+7	Log-In:	
Address: 10	448 Citation Dr.		Project # /27		Report:			
City, St., Zij	City, St., Zip: Brighton, MI, 48169			Contact Person: Dave Amir				
Phone: 810-225-2800 Fax:			Email: damir@asti-	sti-env.com	Fax: Verbal:			
Turn Around	Time: (circle one)***Tern	ns and conditions on the other side.	Circle analyses requ	ired, indicate	type and qua	antity	Email:	
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48 hour	72 h <b>X</b> ur	Lead / Cad / Chrome:	Wipe ASTM E1792? circle	YES or NO	Air	Paint	Bulk	
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	Name: <u>ASTI</u>		-	Projec	t: <u>1484</u>	- 1474	W. C	liberty	Log-In:
-	448 Citation Dr.	***		Projec	t# <u>/2</u>	703		,	Report:
City, St., Zip: Brighton, MI, 48169			Conta	ct Person:	Dave Amir		***	Fax:	
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Revision R4 Date: May/2017

#### Appendix C

Photo Log



#### **PHOTO LOG**

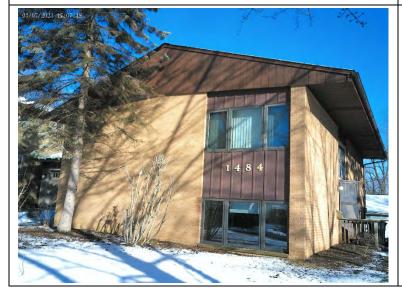
1474-1484 West Liberty Street, Ann Arbor, Michigan



**Photo 1.** A view of the front of 1474 West Liberty



**Photo 2.** A view of the side of 1474 West Liberty



**Photo 3.** A view of the front of 1484 West Liberty



#### **PHOTO LOG**

1474-1484 West Liberty Street, Ann Arbor, Michigan



**Photo 4.** View of the typical 1474-1484 West Liberty Street apartment's living room



**Photo 5.** View of the asbestoscontaining 9" x 9" floor tile

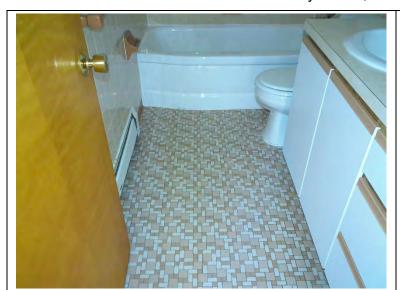


**Photo 6.** View of the asbestoscontaining linoleum pebble pattern



#### **PHOTO LOG**

1474-1484 West Liberty Street, Ann Arbor, Michigan



**Photo 7.** View of the bathtub with presumed undercoating



#### **ASTI ENVIRONMENTAL**

# ENVIRONMENTAL INVESTIGATION, REMEDIATION, COMPLIANCE AND RESTORATION PROJECTS THROUGHOUT THE GREAT LAKES SINCE 1985.

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- ASBESTOS, LEAD, MOLD, AND RADON ASSESSMENTS
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- DEVELOPMENT INCENTIVES AND GRANT MANAGEMENT
- ECOLOGICAL ASSESSMENTS AND RESTORATION
- Environmental Assessments and Impact Statements
- ENVIRONMENTAL OPPORTUNITIES ASSESSMENT
- GIS MAPPING
- HAZARD MITIGATION PLANNING
- MINING AND RECLAMATION ASSISTANCE
- REMEDIATION IMPLEMENTATION, OPERATION AND MAINTENANCE
- Phase I ESA and Environmental Due Diligence Assessments
- REGULATORY COMPLIANCE AND PERMITTING
- Soil and Groundwater Assessments
- Soil and Groundwater Remediation
- STORAGE TANK COMPLIANCE AND CLOSURE
- THREATENED AND ENDANGERED SPECIES SURVEYS
- WATERSHED AND STORMWATER MANAGEMENT PROGRAMS
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