

# DESIGNATED SUBSTANCES AND HAZARDOUS BUILDING MATERIALS ASSESSMENT REPORT

Renovation & Addition Project  
Commercial Building  
Toronto Public Library  
575 Van Horne Avenue  
Toronto, ON  
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Project Manager

Safetech Project Number: 1-3250245

Date of Site Work: April 14, 2025  
Date of Issue: April 24, 2025

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## EXECUTIVE SUMMARY

Safetech Environmental Limited (Safetech) was commissioned by Toronto Public Library to conduct a designated substances and hazardous materials assessment in Commercial Building of 575 Van Horne Avenue, Toronto, ON.

The objective of the assessment was to determine the presence, location, condition and quantities of designated substances and other hazardous materials that have the potential to be disturbed as part of planned construction activities (i.e. Renovation & Addition Project) so that appropriate control measures can be implemented to protect workers during the work.

A summary of the assessment results and general recommendations based on our findings are provided in the following table. This table should be considered a summary only. Please refer to the Results (Section 2.0), Conclusions and Recommendations (Section 3.0), Summary of ACM Occurrences (Appendix A) of our report for additional details.

**Table 1: Summary of Hazardous Materials and Designated Substances**

Designated Substance	Findings	Recommendations
Asbestos	<p>The following asbestos-containing materials were identified in the subject area that may be impacted during the project:</p> <ul style="list-style-type: none"> <li>- pipe fitting insulation</li> <li>- drywall joint compound</li> <li>- vinyl floor tiles.</li> </ul>	<p>Disturbance of asbestos-containing materials must be conducted in accordance with Ontario Regulation 278/05 <i>Designated Substance – Asbestos on Construction Projects and in Building and Repair Operations</i>. Refer to Table 3 (Results of Assessment for Asbestos-Containing Materials), Section 3.1.1 (Conclusions and Recommendations), Appendix A (Summary of ACM Occurrences). Asbestos-containing waste must be disposed of in accordance with R.R.O. 1990, Regulation 347, <i>General - Waste Management</i>.</p>

Lead	Beige and blue paint was confirmed to be a low-level lead-containing paint ( $\leq 0.1\%$ lead content).	Disturbance of lead-containing materials must be conducted in accordance with the Ontario Ministry of Labour, Immigration, Training and Skills Development (MLITSD) <i>Lead on Construction Projects</i> guideline (2011) and/or the Environmental Abatement Council of Canada (EACC) <i>Lead Guideline</i> (October 2014). For additional details, refer to Section 2.1.2 (Results) and Section 3.1.2 (Conclusions and Recommendations). Lead-containing wastes should be recycled if practicable or handled and disposed of according to R.R.O. 1990, Regulation 347, <i>General- Waste Management</i> .
	<p>The following materials are assumed to be lead-containing:</p> <ul style="list-style-type: none"> <li>- glazing associated with ceramic tiles</li> <li>- batteries associated with emergency lighting</li> <li>- solder in copper pipe fittings</li> <li>- solder in electrical components</li> </ul>	
Mercury	<p>Sources of mercury were observed in the subject area and include the following:</p> <ul style="list-style-type: none"> <li>- vapour in fluorescent lamps</li> <li>- vapour in HID lamps</li> </ul>	If required, handle lamps with care and keep intact. All waste lamps are recommended to be sent to a lamp recycling facility.
Silica	<p>Building materials identified that are suspected to contain crystalline silica and may be disturbed as part of the planned construction project include:</p> <ul style="list-style-type: none"> <li>- drywall walls/drywall joint compound</li> <li>- concrete</li> <li>- mortar</li> </ul>	Any work involving the disturbance of silica-containing materials should follow the procedures outlined in the Ontario MLITSD " <i>Silica on Construction Projects</i> " guideline. For additional information, refer to Section 2.1.4 (Results) and Section 3.1.4 (Conclusions and Recommendations).
Other Designated Substances	No other designated substances are expected to be present in any significant quantities or in a form that would represent an exposure concern.	No protective measures or procedures specific to acrylonitrile, arsenic, benzene, coke oven emissions, ethylene oxide, isocyanates, and vinyl chloride are considered necessary.
<b>Other Hazardous Materials</b>	<b>Findings</b>	<b>Recommendations</b>
Urea Formaldehyde Foam Insulation	No UFFI was identified or is suspected in the subject area.	No action required.
Mould Contamination	No suspect mould contamination was observed on building finishes in the subject area.	No action required.
Pest Infestation	No pest infestations were observed in the areas assessed.	No action required.
Polychlorinated Biphenyls	No PCBs were found in the assessed area	No action required.

Ozone Depleting and Global Warming Substances	Two (2) small air-conditioning units on the roof of the building are suspected to contain HCFC-22.	<p>Purge air-conditioning unit(s) of remaining refrigerant prior to removal and disposal. This should be conducted by a certified person who holds a valid Ozone Depletion Prevention Certificate.</p> <p>Servicing and testing of refrigeration equipment should be conducted in accordance with Environment Canada's "<i>Environmental Code of Practice for Elimination of Fluorocarbon Emissions from Refrigeration and Air Conditioning Systems</i>".</p>
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This assessment satisfies the Owner's requirements under Section 30 of the Ontario Occupational Health and Safety Act (OHSA), Revised Statutes of Ontario 1990, as amended.

Should you have any questions regarding the information contained in the report, please contact our office.

**Safetech Environmental Limited**



**Ahmed Khan (OHS)**  
Occupational Health and Safety Technician

April 24, 2025

Toronto Public Library  
1076 Ellesmere Road  
Toronto, Ontario  
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Attention: Katie McGee  
Project Coordinator

**RE: Designated Substances and Hazardous Materials Assessment  
Renovation & Addition Project  
Toronto Public Library – Commercial Building  
575 Van Horne Avenue, Toronto, ON**

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## **1.0 INTRODUCTION**

### **1.1 Background and Objectives**

Safetech Environmental Limited (Safetech) was commissioned by Toronto Public Library to conduct a designated substances and hazardous materials assessment in Commercial Building at 575 Van Horne Avenue, Toronto, ON (subject building). The objective of the assessment was to determine the presence, location, condition and quantities of designated substances and other hazardous materials in the subject building that have the potential to be disturbed as part of planned construction activities (i.e. Renovation & Addition Project) so that appropriate control measures can be implemented to protect workers during the work.

This assessment satisfies the Owner's requirements under Section 30 of the Ontario Occupational Health and Safety Act (OHSA), Revised Statutes of Ontario 1990, as amended. Section 30(1) requires a building owner to determine if there are any designated substances present at a project site prior to construction or demolition activities. Sections 30(2), (3) and (4) require the Owner and constructors for a project to provide the findings in this report as part of the tendering information for any tendered project or to prospective contractors (and subcontractors) of a project before entering into a binding contract.

This report documents findings of our on-site inspection that was conducted on April 14, 2025 and provides conclusions and recommendations based on our findings and knowledge of the planned construction project.

### **1.2 Scope of Work**

In accordance with our fee proposal document, our scope of work included the following activities:

- A review of existing documents, including renovation documents and drawings, floor plans and existing environmental assessment reports, etc., where available;
- A visual assessment of accessible area(s) in the subject building to identify the presence, location, condition and quantities of designated substances and other hazardous materials;
- Collection, analysis and interpretation of representative bulk samples of suspect asbestos-containing building materials for the determination of asbestos content and material classification;
- Collection, analysis and interpretation of representative paint chip samples for the determination of lead content; and
- Preparation of a report to document findings and provide recommendations regarding control measures and/or special handling procedures for designated substances or specific hazardous materials that may be disturbed as part of planned construction activities.

Documents reviewed to aid in the assessment included the following:

- No existing documents were provided.

This assessment only identified designated substances and hazardous materials that were deemed to be part of the building or somehow otherwise incorporated into the building structure and its finishes. **The following items were not included in our scope of work:**

- Assessing occupant items such as stored products, furnishings, items and materials used or produced as part of a manufacturing process;
- Investigating underground materials or equipment (vessels, drums, underground storage tanks, duct-banks, pipes, or cables);
- Assessing enclosed wall or ceiling cavities; and
- Assessing risers, pipe chases or elevator shafts.

### **1.3 Description of Area(s) Assessed**

The area(s) investigated included all accessible locations of the subject building. The extent of the area investigated is indicated on the floor plan(s) provided in Appendix B.

## **2.0 RESULTS**

Results of our visual assessment and bulk sample analytical findings are summarized in the sections below.

## 2.1 Designated Substances

### 2.1.1 Asbestos

Results of bulk sample analysis for the determination of asbestos content are summarized in the following table. Materials have been classified as “ACM”, “Non-ACM”, “Suspected ACM” or “Presumed Non-ACM” based on analytical results. Materials classified as Suspected ACM or Presumed Non-ACM may require further analysis (depending on site-specific conditions) to verify whether the material should be classified as ACM or Non-ACM. Please refer to the Limitations section of this report (Section 4.0) for additional details. The Laboratory Certificate of Analysis is included in Appendix B.

**Table 2: Bulk Sample Analytical Results for Determination of Asbestos Content**

Sample No.	Material Description	Sample Location	Asbestos Content	Material Classification
1A	1X1 Beige with brown Stripe – Vinyl Floor Tile & Mastic	Office	4% Chrysolite	ACM
1B	1X1 Beige with brown Stripe – Vinyl Floor Tile & Mastic	Office	Not Analyzed	ACM
1C	1X1 Beige with brown Stripe – Vinyl Floor Tile & Mastic	Office	Not Analyzed	ACM
2A	1X1 Orange– Vinyl Floor Tile & Mastic	Office	4% Chrysolite	ACM
2B	1X1 Orange– Vinyl Floor Tile & Mastic	Office	Not Analyzed	ACM
2C	1X1 Orange– Vinyl Floor Tile & Mastic	Office	Not Analyzed	ACM
3A	1X1 Brown– Vinyl Floor Tile & Mastic	Auditorium	None Detected	Non-ACM
3B	1X1 Brown– Vinyl Floor Tile & Mastic	Auditorium	None Detected	Non-ACM
3C	1X1 Brown– Vinyl Floor Tile & Mastic	Auditorium	None Detected	Non-ACM
4A	1X1 Green– Vinyl Floor Tile & Mastic	Auditorium	None Detected	Non-ACM
4B	1X1 Green– Vinyl Floor Tile & Mastic	Auditorium	None Detected	Non-ACM
4C	1X1 Green– Vinyl Floor Tile & Mastic	Auditorium	None Detected	Non-ACM
5A	Concrete Block Mortar	Auditorium	None Detected	Non-ACM
5B	Concrete Block Mortar	Auditorium	None Detected	Non-ACM
5C	Concrete Block Mortar	Auditorium	None Detected	Non-ACM
6A	Carpet Mastic	Kitchen	None Detected	Non-ACM
6B	Carpet Mastic	Kitchen	None Detected	Non-ACM
6C	Carpet Mastic	Library	None Detected	Non-ACM
7A	Pipe Fitting Insulation	Hot water tank room	65% Chrysolite	ACM
7B	Pipe Fitting Insulation	Hot water tank room	Not Analyzed	ACM



Sample No.	Material Description	Sample Location	Asbestos Content	Material Classification
7C	Pipe Fitting Insulation	Hot water tank room	Not Analyzed	ACM
8A	Under Lying Vinyl Floor Tile	Auditorium	None Detected	Non-ACM
8B	Under Lying Vinyl Floor Tile	Auditorium	None Detected	Non-ACM
8C	Under Lying Vinyl Floor Tile	Auditorium	None Detected	Non-ACM
9A	1X1 Beige– Vinyl Floor Tile & Mastic	Auditorium	None Detected	Non-ACM
9B	1X1 Beige– Vinyl Floor Tile & Mastic	Auditorium	None Detected	Non-ACM
9C	1X1 Beige– Vinyl Floor Tile & Mastic	Auditorium	None Detected	Non-ACM
10A	Brick Mortar	Auditorium	None Detected	Non-ACM
10B	Brick Mortar	Auditorium	None Detected	Non-ACM
10C	Brick Mortar	Auditorium	None Detected	Non-ACM
11A	Drywall Joint Compound   Wall	Library	None Detected	Non-ACM
11B	Drywall Joint Compound   Ceiling	Kitchen	1% Chrysolite	ACM
11C	Drywall Joint Compound   Wall	Kitchen	Not Analyzed	ACM
11D	Drywall Joint Compound   Ceiling	Washroom	Not Analyzed	ACM
11E	Drywall Joint Compound   Wall	Library	Not Analyzed	ACM
11F	Drywall Joint Compound   Bulkhead	Library	Not Analyzed	ACM
11G	Drywall Joint Compound   Bulkhead	Library	Not Analyzed	ACM
12A	Grey Caulking	Exterior	None Detected	Non-ACM
12B	Grey Caulking	Exterior	None Detected	Non-ACM
12C	Grey Caulking	Exterior	None Detected	Non-ACM
13A	Brick Mortar	Exterior	None Detected	Non-ACM
13B	Brick Mortar	Exterior	None Detected	Non-ACM
13C	Brick Mortar	Exterior	None Detected	Non-ACM
14A	Beige Ceramic Tile Grout	Library	None Detected	Non-ACM
14B	Beige Ceramic Tile Grout	Library	None Detected	Non-ACM
14C	Beige Ceramic Tile Grout	Library	None Detected	Non-ACM
15A	Beige Ceramic Tile Thinset	Library	None Detected	Non-ACM
15B	Beige Ceramic Tile Thinset	Library	None Detected	Non-ACM
15C	Beige Ceramic Tile Thinset	Library	None Detected	Non-ACM
16A	Roofing Membrane	Roof	None Detected	Non-ACM




Sample No.	Material Description	Sample Location	Asbestos Content	Material Classification
16B	Roofing Membrane	Roof	None Detected	Non-ACM
16C	Roofing Membrane	Roof	None Detected	Non-ACM





1As per O.Reg. 278/05, ACM contains  $\geq 0.5\%$  asbestos by dry weight.



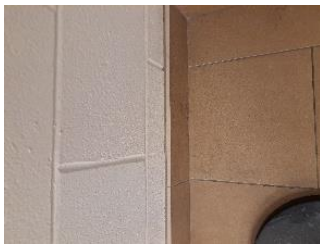
Materials assessed for asbestos content are summarized in the following table based on the type/use of the material.




**Table 3: Results of Assessment for Asbestos-Containing Materials**

Sprayed and Loose Fill Insulating Materials	Location/Description	
Sprayed Fireproofing	None identified in subject building.	
Sprayed Insulation	None identified in subject building.	
Loose Fill / Vermiculite Insulation	None identified in subject building. Interior portions of concrete block walls could not be assessed. However, it is not expected that these walls are insulated with loose fill or vermiculite insulation	
Thermal System Insulation	Location/Description	
Mechanical Pipe Insulation	None identified in subject building.	
Mechanical Pipe Insulation	Pipe insulation was observed in the subject building to be fiberglass during the assessment and confirmed that this building material is not asbestos-containing.	
<b>Mechanical Pipe Insulation – Fittings (elbows, valves, tees, hangars, etc.)</b>	<p>Pipe fitting insulation was observed in the subject building. Bulk samples were collected during the assessment and results of analysis confirmed that this building material contains <b>65% chrysotile asbestos</b>. Refer to sample set 7A-C in Table 2 and the location, condition, friability, and estimated quantity in Appendix A.</p> <p><b>THIS MATERIAL MAY ALSO BE PRESENT WITHIN CONCEALED WALL/CEILING CAVITIES.</b></p>	
HVAC Duct Insulation	None identified in subject building.	

Breeching / Exhaust Insulation	None identified in subject building.	
Tank Insulation	Hot water tank insulation was observed in the subject building to be fiberglass during the assessment and confirmed that this building material is not asbestos-containing	
Boiler Insulation	None identified in subject building.	
Other Mechanical Equipment Insulation	None identified in subject building.	
<b>Architectural Finishes &amp; Finishing Materials</b>	<b>Location/Description</b>	
Sprayed Texture / Stucco Finishes	None identified in subject building.	
Plaster Finishes	None identified in subject building.	
Drywall Joint Compound	Drywall joint compound was observed in the subject building. Bulk samples were collected during the assessment and results of analysis confirmed that this building material contains <b>1% chrysotile asbestos</b> . Refer to sample set 11A-G in Table 2 and the location, condition, friability, and estimated quantity in Appendix A.	
<b>Ceiling Tiles</b>	<b>Location/Description</b>	
Lay-in Acoustic Ceiling Tiles	Lay-in ceiling tiles were observed in the subject building. Based on the date stamp this building material is not asbestos-containing.	
Glued-on Acoustic Ceiling Tiles	None identified in subject building.	

Cement Ceiling Panels	None identified in subject building.	
<b>Flooring</b>	<b>Location/Description</b>	
<b>Vinyl Floor Tiles</b>	<p><b>1x1 beige with brown strip vinyl floor tiles</b> were observed in the subject building. Bulk samples were collected during the assessment and results of analysis confirmed that this building material contains <b>4% chrysotile asbestos</b>. Refer to sample set 1A-C in Table 2 and the location, condition, friability, and estimated quantity in Appendix A.</p> <p><b>THIS MATERIAL MAY ALSO BE PRESENT UNDER SOME CARPETS OR OTHER FLOOR SURFACES.</b></p>	
	<p><b>1x1 orange vinyl floor tiles</b> were observed in the subject building. Bulk samples were collected during the assessment and results of analysis confirmed that this building material contains <b>4% chrysotile asbestos</b>. Refer to sample set 2A-C in Table 2 and the location, condition, friability, and estimated quantity in Appendix A.</p> <p><b>THIS MATERIAL MAY ALSO BE PRESENT UNDER SOME CARPETS OR OTHER FLOOR SURFACES.</b></p>	
	<p>1x1 brown vinyl floor tiles were observed in the subject building. Bulk samples were collected during the assessment and results of analysis confirmed that this building material is not asbestos-containing. Refer to sample set 3A-C in Table 2.</p>	
	<p>1x1 green vinyl floor tiles were observed in the subject building. Bulk samples were collected during the assessment and results of analysis confirmed that this building material is not asbestos-containing. Refer to sample set 4A-C, in Table 2.</p>	

Vinyl Floor Tiles	Underlying vinyl floor tiles were observed in the subject building. Bulk samples were collected during the assessment and results of analysis confirmed that this building material is not asbestos-containing. Refer to sample set 8A-C in Table 2.	
	1x1 beige vinyl floor tiles were observed in the subject building. Bulk samples were collected during the assessment and results of analysis confirmed that this building material is not asbestos-containing. Refer to sample set 9A-C in Table 2.	
Mastic	Carpet mastic were observed in the subject building. Bulk samples were collected during the assessment and results of analysis confirmed that this building material is not asbestos-containing. Refer to sample set 6A-C in Table 2	
Ceramic Tile Thin-set & Grout	Ceramic Tile were observed in the subject building. Bulk samples were collected during the assessment and results of analysis confirmed that this building material is not asbestos-containing. Refer to sample set 14A-C & 15A-C in Table 2.	
Vinyl Sheet Flooring	None identified in subject building.	
<b>Asbestos Cement Products</b>	<b>Location/Description</b>	
Piping	None identified in subject area.	
Roofing, Siding, Wallboard	None identified in subject building.	
Other Cement Products	None identified in subject building.	

Mortar	Mortar was observed in the subject building. Bulk samples were collected during the assessment and results of analysis confirmed that this building material is not asbestos-containing. Refer to sample set 5A-C, 10A-C & 13A-C in Table 2.	
<b>Exterior Building Materials</b>	<b>Location/Description</b>	
Caulking	Caulking was observed in the subject building. Bulk samples were collected during the assessment and results of analysis confirmed that this building material is not asbestos-containing. Refer to sample set 12A-C in Table 2.	
Shingles	None identified in subject building.	
Roofing Material	Roofing membrane were observed in the subject building. Bulk samples were collected during the assessment and results of analysis confirmed that this building material is not asbestos-containing. Refer to sample set 16A-C in Table 2.	

### 2.1.2 Lead

Laboratory analytical results for paints tested to determine lead content are summarized in the following table. The Laboratory Certificate of Analysis is included in Appendix C. Refer to Section 3.1.2 of this report for recommended lead abatement procedures (if any) that correspond to the type of proposed construction, renovation, or demolition work.

**Table 4: Results of Paint Condition and Lead Content Assessment**



Sample No.	Location	Surface	Paint Colour	Condition	Lead Conc. (% by wt.)	Material Classification
L1	Library	Drywall	Beige	Good	0.086%	LLLP
L2	Library	Drywall	Blue	Good	<0.0092%	LLLP

LCP: Lead-Containing Paint (>0.1% Lead Content); LLLP: Low-Level Lead Paint (≤0.1% Lead Content)

**Suspect lead-containing materials** observed in the subject building included the following:

- glazing associated with ceramic tiles
- batteries associated with emergency lighting
- solder in copper pipe fittings
- solder in electrical components

**Table 5: Results of Assessment for Lead-Containing Materials**

Location/Description	Picture
<p>Beige paint was sampled during our investigation. Results of analysis did not indicate the presence of any detectable concentrations of lead. Therefore, the Beige paint is not considered to be lead-containing. Refer to sample L1 in Table 4.</p>	
<p>Blue paint was sampled during our investigation. Results of analysis did not indicate the presence of any detectable concentrations of lead. Therefore, the Blue paint is not considered to be lead-containing. Refer to sample L2 in Table 4.</p>	

### 2.1.3 Mercury

Mercury is present in the subject building in the form of:

- vapour in fluorescent lamps
- vapour in HID lamps

#### **2.1.4 Silica**

A number of building materials were identified in the subject building that are ***suspected to contain crystalline silica***. This includes the following materials:

- drywall walls/drywall joint compound
- concrete
- mortar

#### **2.1.5 Other Designated Substances**

Acrylonitrile, arsenic, benzene, coke oven emissions, ethylene oxide, isocyanates, and vinyl chloride were not included in the assessment as these substances are not expected to be a significant component of building materials or present in a form that would represent an exposure concern. Additionally, no specific information regarding their use was provided to us.

### **2.2 Other Hazardous Materials**

#### **2.2.1 Chemical Hazards**

No visible evidence of UFFI installation (i.e. injection openings) or overspray of foam insulation at wall/ceiling joints was identified in the subject building. In addition, due to the age of construction and use of the building, the presence of UFFI insulation within wall cavities is not suspected.

#### **2.2.2 Biological Hazards**

##### **2.2.2.1 Mould Contamination**

There was no visible evidence of obvious mould growth on building finishes in the subject building at the time of the assessment. In addition, there was no visible evidence of any significant water staining or discolouration to building finishes in the subject building that would suggest the potential for hidden mould growth behind these finishes.

##### **2.2.2.2 Pest Infestation**

There was no visible evidence of a pest infestation in the subject building.

#### **2.2.3 Environmental Hazards**

##### **2.2.3.1 Polychlorinated Biphenyls (PCBs)**

No sources of polychlorinated biphenyls (PCBs) were observed in the subject building.

### **2.2.3.2 Ozone Depleting and Global Warming Substances**

Equipment identified in the subject building that are suspected to contain ozone depleting substances (ODS) and/or global warming substances (GWS) are summarized below.

Two (2) air-conditioning units on the roof of the building did not display sufficient information and therefore are assumed to contain ozone depleting substances (ODS) and/or global warming substances (GWS).

## **3.0 CONCLUSIONS AND RECOMMENDATIONS**

### **3.1 Designated Substances**

#### **3.1.1 Asbestos**

Results of the assessment indicated that the following asbestos-containing materials are present in the subject building that may be disturbed as part of the construction project.

- pipe fitting insulation
- drywall joint compound
- vinyl floor tiles.

Refer to Appendix A (Summary of ACM Occurrences) for types, locations, estimated quantities, and condition of asbestos-containing materials identified in the subject area.

Removal or disturbance of identified asbestos-containing materials must be conducted in accordance with O.Reg. 278/05. Asbestos containing materials in Poor condition must be removed and/or repaired immediately following applicable asbestos abatement procedures. Asbestos-containing materials in Good condition can remain in place until major system upgrading, maintenance or demolition which could result in disturbance of this material.

**Vinyl Floor Tiles:** The 1'x1' beige vinyl floor tile located throughout the office is considered to be a non-friable ACM. As per O. Reg. 278/05, removal of non-friable ACM can be conducted following Type 1 operations; as long as the material can be removed without being broken, cut, drilled or otherwise similarly disturbed. If the material cannot be removed without it breaking or being similarly disturbed then the work should be conducted using non-powered hand tools and the material should be wetted to control the spread of dust. If the material cannot be wetted or if power tools attached to dust-collecting devices equipped with HEPA (high efficiency particulate aerosol) filters are used during removal or disturbance, then work should be performed following Type 2 operations. If non-friable materials are removed or disturbed using power tools that are not attached to dust-collecting devices that are equipped with HEPA filters then work should be conducted following Type 3 operations.

**Pipe Fitting Insulation:** The pipe insulation is considered to be a friable ACM. As per O. Reg. 278/05, removal or disturbance of 1 square metre or less of friable ACM is classified as a Type 2 operation. If more than 1 square metre of friable ACM is to be removed or disturbed then work should be conducted following Type 3 operations; unless the material is removed using a glove bag, in which case Type 2 operations are applicable.

**Drywall Joint Compound:** In accordance with O. Reg. 278/05, removal of less than 1 square metre of drywall where asbestos-containing drywall joint compound has been used can be conducted following Type 1 operations. If 1 square metre or more of drywall is removed where asbestos-containing drywall joint compound has been used then work should be conducted following Type 2 operations.

### 3.1.2 Lead

#### **Low Level Lead Paint ( $\leq 0.1\%$ )**

Results of paint chip analysis for the determination of lead content indicated that paint associated with drywall is considered a 'low-level lead paint' ( $\leq 0.1\%$  based on requirements of the Environmental Abatement Council of Canada (EACC) Lead Guideline (2014)). If the 'low-level lead paint' is disturbed in a non-aggressive manner (no use of power tools/abrasive blasting, grinding, welding, heating, etc.), then respirators are not considered necessary. However, Class 1 measures and procedures should still be implemented during the non-aggressive disturbance of 'low-level lead paints', including, but not limited to, no smoking, eating, drinking and chewing gum in the work area; dust suppression methods must be implemented; and facilities must be made available so that workers can wash their hands and face.

**Additional suspect lead-containing products** includes solder on pipe fittings and electrical components. Future testing of these materials and specific handling/disposal requirements may be necessary if/when these materials are to be disturbed.

Any disturbance of the lead-containing materials should be conducted in accordance with the procedures outlined in the Environmental Abatement Council of Canada (EACC) "Lead Guideline" (October 2014) and/or the Ontario Ministry of Labour, Immigration, Training and Skills Development (MLITSD) "Lead on Construction Projects" guideline (April 2011). The extent of procedures required depends on the type of work to be conducted.

At this time the method of disturbance, if any, of lead-containing materials is unknown. It is recommended that any contractor whose work requires lead-containing materials to be disturbed consult the EACC or Ontario MLITSD guidelines prior to the start of work to determine the Class/Type of operation(s) and the corresponding control measures (engineering controls, work/hygiene practices, protective clothing and equipment and worker training) necessary to conduct the work in a manner that will prevent worker overexposure to lead. The following table outlines the classification of lead disturbance based on the EACC guideline.

Operation	Description
Class 1	<ol style="list-style-type: none"> <li>1. Removal of lead-containing or lead-based paints and surface coatings with a chemical gel/stripper or paste;</li> <li>2. Application of lead-containing or lead-based paints and surface coatings with a brush, roller or sponge.</li> <li>3. Installation or removal of lead sheeting or flashing.</li> <li>4. Installation or removal of lead-containing packing, babbitt, caulking, gasket or similar material.</li> <li>5. Removal of materials coated with lead-containing or lead-based paints and surface coatings, using non-powered hand tools, where the material remains chiefly intact and is not crumbled, pulverized or powdered.</li> <li>6. Operating construction or demolition equipment (e.g. excavator, bulldozer) during building renovation or demolition where lead-based paints or surface coatings are present on building materials and are being disturbed.</li> <li>7. Soldering with lead solder.</li> <li>8. Removing lead-containing or lead-based paints or surface coatings with a heat gun.</li> <li>9. Removing lead-containing and lead-based paints and surface coatings using a high-pressure water jet (e.g. pressure washer).</li> </ol>
Class 2a	<ol style="list-style-type: none"> <li>1. Removal of lead-containing or lead-based paints and surface coatings or lead-containing materials using a power tool that has an effective dust collection system equipped with a HEPA filter*.</li> <li>2. Welding, torching or high temperature cutting of lead-containing materials indoors when using an effective fume collector or smoke eater that filters and exhausts lead fume and expels it directly outdoors (away from occupants, entrances, walkways, rest areas, etc.). Fume collector or smoke eater must have effective source control and capture velocity, minimum of 0.5 metres per second (100 feet per minute) at the work surface.</li> <li>3. Welding, torching or high temperature cutting of lead-containing and lead-based paints and surface coatings or lead-containing materials outdoors.</li> <li>4. Removal of lead-containing mortar using handheld non-powered tools.</li> <li>5. Removal of lead-containing and lead-based paints and surface coatings or lead-containing materials by scraping or sanding (including wet sanding) using non-powered hand tools.</li> <li>6. Demolition of plaster or building components that crumble, pulverize or powder and are covered with lead-containing or lead-based paints or surface coatings.</li> <li>7. Clean up and removal of a significant amount of lead-containing dust and debris (that can be made easily airborne) using wet methods or HEPA vacuums.</li> </ol>
Class 2b	<ol style="list-style-type: none"> <li>1. Spray application of lead-containing paints and surface coatings</li> </ol>

Operation	Description
Class 3a	<ol style="list-style-type: none"> <li>1. Removal of lead-containing or lead-based paints and surface coatings or lead-containing materials using a power tool without an effective dust collection system equipped with a HEPA filter.</li> <li>2. Welding, torching or high temperature cutting of lead-containing materials indoors or in a confined space (e.g. within a ditch or pit).</li> <li>3. Removal of lead-containing mortar using a powered cutting device.</li> <li>4. Burning of a material containing lead.</li> <li>5. Removal, cleaning or repair of a ventilation system or ductwork used for controlling lead exposure.</li> <li>6. Spray application of lead-based paints and surface coatings.</li> <li>7. In the absence of an exposure assessment: <ol style="list-style-type: none"> <li>a. demolition or cleanup of a facility where lead-containing products were manufactured and significant dust and debris, which can be made easily airborne, is present.</li> <li>b. cleanup of dust and debris down range of a firing station in an indoor firing range. an operation that may expose a worker to lead dust, fume or mist that is not a Class 1, Class 2, or Class 3B operation.</li> </ol> </li> </ol>
Class 3b	<ol style="list-style-type: none"> <li>1. Abrasive blasting of lead-containing and lead-based paints and surface coatings or lead-containing materials (including wet, slurry and dry abrasive blasting and dry-ice blasting).</li> </ol>

\* Effective implies that the dust collection system should be capable of controlling airborne lead concentration levels to below 0.05 mg/m<sup>3</sup>. Employers should follow manufacturer's recommendations and maintenance specifications for optimal function.

If practicable, all bulk lead waste materials should be separated from other wastes and sent to a recycling facility. If not practicable, lead-containing waste should be handled and disposed of according to R.R.O. 1990, Regulation 347, *General - Waste Management* (Reg. 347) made under the Environmental Protection Act. Under this regulation (and depending on the quantity of waste generated) the waste may be subject to analysis following the Toxicity Characteristic Leaching Procedure (TCLP) to determine if it is a "leachate toxic waste" based on the leachate quality criteria provided in Schedule 4 of the regulation. Such wastes must meet specific treatment requirements (Schedule 5) or undergo alternative treatment for hazardous debris (Schedule 8) prior to land disposal.

### 3.1.3 Mercury

Fluorescent and HID lamps that require removal should be handled with care and kept intact to avoid potential exposure to mercury vapour present within the lamps. To prevent the release of mercury into the environment, Safetech recommends that all waste lamps be sent to a lamp recycling facility and not disposed of in landfill.

A mercury-containing thermostat, gauges and thermometers associated with the boiler and other mechanical equipment were observed in the subject building. These items are not expected to be removed as part of the construction project. However, care should be taken not to disturb these items during the work as breakage could cause a spill of liquid mercury. If any of these items are to be removed it should be done so carefully to avoid spillage and stored/packaged in a manner that will prevent breakage or spillage. Any

mercury-containing equipment that is to be removed is recommended to be recycled rather than disposed of in landfill.

Liquid mercury is suspected to be present in thermometers, barometers and other measuring devices (pressure gauges/sensors, vacuum gauges, manometers, etc.), thermostats and a variety of other electrical switches (temperature sensitive, tilt switches, float switches, etc.) associated with mechanical equipment. These items are expected to be removed as part of the construction project. Care should be taken not to disturb these items during the work as breakage could cause a spill of liquid mercury. If any of these items are to be removed it should be done so carefully to avoid spillage and stored/package in a manner that will prevent breakage or spillage. Any mercury-containing equipment that is to be removed is recommended to be recycled rather than disposed of in landfill.

Although no mercury was visibly identified in other equipment, dismantling of equipment was not conducted to verify the presence/absence of mercury. It is cautioned that thermometers, barometers and other measuring devices (pressure gauges/sensors, vacuum gauges, manometers, etc.), thermostats and a variety of other electrical switches (temperature sensitive, tilt switches, float switches, etc.) may contain mercury that may not be visible without dismantling the equipment. Such devices should be assumed to contain mercury until proven otherwise and similar precautions to those outlined above should be taken if any of these items are to be disturbed or taken out of service in the future.

#### **3.1.4 Silica**

Suspect silica-containing materials were identified to be present in the subject building. In their current state, building materials containing silica do not represent a risk to building occupants or construction workers. Risks associated with exposure to silica arise during demolition activities that cause silica dust to be created (particularly grinding, drilling or cutting operations and during major demolition), resulting in a crystalline silica inhalation hazard.

If any materials suspected to contain silica are to be removed or otherwise disturbed as a result of renovation/demolition activities it is recommended that procedures be put in place to control the generation of dust (such as routine water misting) and thus reduce the potential for worker exposure. Workers that have the potential to be exposed to airborne silica should also wear appropriate protective clothing and respiratory protection. Any work involving the disturbance of silica-containing materials should follow the procedures outlined in the Ontario MLITSD "Silica on Construction Projects" guideline (April 2011). The appropriate engineering controls, work practices, hygiene practices, personal protective measures and training necessary to conduct the work in a safe manner are provided in this guideline. The general measures and procedures (or Type of operation) necessary depends on the type of work to be conducted. The following table outlines the classification of silica disturbance based on the Ontario MLITSD guideline.

Operation	Description
Type 1	<ol style="list-style-type: none"> <li>1. The drilling of holes in concrete or rock that is not part of a tunneling operation or road construction.</li> <li>2. Milling of asphalt from concrete highway pavement</li> <li>3. Charging mixers and hoppers with silica sand (sand consisting of at least 95% silica) or silica flour (finely ground sand consisting of at least 95% silica)</li> <li>4. Any other operation at a project that requires the handling of silica-containing material in a way that may results in a worker being exposed to airborne silica.</li> <li>5. Entry into a dry mortar removal or abrasive blasting area while airborne dust is visible for less than 15 minutes for inspection and/or sampling.</li> <li>6. Working within 25 metres of an area where compressed air is being used to remove silica-containing dust outdoors.</li> </ol>
Type 2	<ol style="list-style-type: none"> <li>1. Removal of silica containing refractory materials with a jackhammer</li> <li>2. The drilling of holes in concrete or rock that is part of a tunneling or road construction.</li> <li>3. The use of a power tool to cut, grind, or polish concrete, masonry, terrazzo or refractory materials.</li> <li>4. The use of a power tool to remove silica containing materials.</li> <li>5. Tunneling (operation of the tunnel boring machine, tunnel drilling, and tunnel mesh installation).</li> <li>6. Tuckpoint and surface grinding</li> <li>7. Dry mortar removal with an electric or pneumatic cutting device</li> <li>8. Dry method dust cleanup from abrasive blasting operations</li> <li>9. The use of compress air outdoors for removing silica dust</li> <li>10. Entry into area where abrasive blasting is being carried out for more than 15 minutes</li> </ol>
Type 3	<ol style="list-style-type: none"> <li>1. Abrasive blasting with an abrasive that contains &gt;1% silica</li> <li>2. Abrasive blasting or a material that contains &gt;1% silica</li> </ol>

### 3.1.5 Other Designated Substances

No other designated substances are expected to be a component of building materials in the subject building in a form that would represent an exposure concern. Therefore, no protective measures or procedures specific to acrylonitrile, arsenic, benzene, coke oven emissions, ethylene oxide, isocyanates, and vinyl chloride are considered necessary.

## 3.2 Other Hazardous Materials

### 3.2.1 Chemical Hazards

As no UFFI was identified or is suspected to be present in the subject building, no further action is required. However, given that no destructive testing was conducted, there is a remote possibility that UFFI could be hidden within locations such as exterior wall cavities. If suspect foam insulation is identified during renovation/demolition activities work should be stopped and the area should be re-assessed to evaluate conditions and determine appropriate control measures and worker protection, if necessary.

### **3.2.2 Biological Hazards**

#### **3.2.2.1 Mould Contamination**

No mould contamination was identified in the subject building and no further action is required at this time. Although no obvious mould contamination or evidence to suggest possible hidden mould contamination was identified in the subject building, there is still a potential for hidden mould growth to exist behind or underneath building finishes. Should suspect mould growth be discovered during the course of renovation or demolition work, Safetech recommends that all work stop so that the area can be assessed to evaluate proper control measures and remediation protocols in order to avoid worker exposure to mould and possible contamination of adjacent areas.

#### **3.2.2.2 Pest Infestation**

No visual evidence of any significant pest infestation was observed in the subject building. Therefore, no additional precautionary measures are deemed necessary for protection against biological contaminants potentially associated with pest infestation.

### **3.2.3 Environmental Hazards**

#### **3.2.3.1 Polychlorinated Biphenyls (PCBs)**

No equipment was identified in the subject building that is expected to be PCB-containing. Additionally, it was confirmed that all original T12 fluorescent lights (including the ballasts and complete fixtures) have been replaced with T8 fluorescent lights in the subject building and, therefore, this lighting should not have PCB-containing ballasts.

#### **3.2.3.2 Ozone Depleting and Global Warming Substances**

Ontario Regulation 463/10, *Ozone Depleting Substances and Other Halocarbons* (O.Reg. 463/10, made under the Environmental Protection Act) controls the use, discharge, sale, transfer, transport, storage and disposal of ozone depleting substances and halocarbons in Ontario. This regulation enhances the control and management of ODS and other halocarbons to prevent or minimize emissions, which serves a dual environmental benefit of lowering emissions of substances that deplete the ozone layer and contribute to global warming.

Two (2) air-conditioning units on the roof of the building did not display sufficient information and therefore are assumed to contain ozone depleting substances (ODS) and/or global warming substances (GWS). Under O.Reg. 463/10 HCFCs are considered “class 2” ozone depleting substances.

O.Reg. 463/10 restricts the discharge of a class 1 and class 2 ozone depleting substance or a halocarbon into the natural environment or within a building. Servicing and testing of refrigeration equipment should be conducted in accordance with Environment

Canada's "Environmental Code of Practice for Elimination of Fluorocarbon Emissions from Refrigeration and Air Conditioning Systems". This work must be conducted by a certified person who holds a valid Ozone Depletion Prevention (ODP) Certificate. Refrigeration equipment and containers that are to be dismantled and disposed of need to be properly purged of remaining refrigerant by a certified person and a notice must be affixed to the equipment or container that indicates it no longer contains a refrigerant (in addition to other information required by the regulation).

Any refrigerant that is removed from an air-conditioning unit, heat pump, refrigeration or freezer unit (that is not mobile) is defined as a Stationary Refrigerant Waste under Reg. 347 and must be collected, handled, transported and recycled or disposed of in accordance with the requirements set forth in Sections 30 to 35 of this regulation.

#### **4.0 LIMITATIONS**

The information and recommendations detailed in this report were carried out by trained professional and technical staff in accordance with generally accepted environmental and industrial hygiene work practices and procedures. Recommendations provided in this report have been generated in accordance with accepted industry guidelines and practices. These guidelines and practices are considered acceptable as of the date of this report.

In preparation of this report, Safetech relied on information supplied by others, including without limitation, information pertaining to the history and operation of the site, test results and reports of other consultants and testing services provided by independent laboratories. Except as expressly set out in this report, Safetech has not made any independent verification of information provided by independent entities.

The collection of samples at the location noted was consistent with the scope of work agreed-upon with the person or entity to whom this report is addressed and the information obtained concerning prior site investigations. As conditions between samples may vary, the potential remains for the presence of unknown additional contaminants for which there were no known indicators.

The analytical method used for determination of asbestos content meets the requirements of O. Reg. 278/05. However, small asbestos fibres may be missed by PLM due to resolution limitations of the optical microscope. Interfering binder/matrix and/or low asbestos content may also hinder positive identification by PLM. These conditions are common for vermiculite attic insulation (VAI) and non-friable organically bound (NOB) materials such as vinyl floor tiles, roofing materials, mastics and caulking and can lead to "false negative" results. If PLM analytical results for these types of materials indicate no asbestos detected they have been reported as "Presumed Non-ACM". Due to limitations of the analytical method we cannot confirm that low quantities of asbestos are not present in these samples using solely PLM analysis. Additional analytical procedures should be considered for such materials to rule out false negative results.

Conclusions are based on site conditions at the time of inspection and can only be extrapolated to an undefined limited area around inspected locations. The extent of the limited area depends on building construction and conditions. Building materials that are not detailed within this survey due to inaccessibility during the time of survey and/or are uncovered during renovation/demolition activities should be properly assessed by a qualified person prior to their disturbance. Safetech cannot warrant against undiscovered environmental liabilities. If any information becomes available that differs from the findings in this report, we request that we be notified immediately to reassess the conclusions provided herein.

No other person or entity is entitled to use or rely upon this report without the express written consent of Safetech and the person or entity to who it is addressed. Any use that a third party makes of this report, or any reliance based on conclusions and recommendations made, are the responsibility of such third parties. Safetech accepts no responsibility for damages suffered by third parties as a result of actions based on this report.

## **Appendix A: Summary of ACM Occurrences**

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Floor	Room No.	Room Description	System	Material	Description	Classification	Friable/ Non-Friable	Condition	Est. Quantity	Unit	Access	Action
1	Office		Floor	Vinyl Floor Tile	1x1 Beige with Brown Strip	ACM	Non-Friable	Good	200	SF	B	7
1	Hot Water Tank Room		Floor	Vinyl Floor Tile	1x1 Beige with Brown Strip	ACM	Non-Friable	Good	20	SF	B	7
1	Store Room		Floor	Vinyl Floor Tile	1x1 Beige with Brown Strip	ACM	Non-Friable	Good	200	SF	B	7
1	Office		Floor	Vinyl Floor Tile	1x1 Orange	ACM	Non-Friable	Good	20	SF	B	7
1	Store Room		Floor	Vinyl Floor Tile	1x1 Orange	ACM	Non-Friable	Good	20	SF	B	7
1	Hot Water Tank Room		Pipe	Pipe Fitting Insulation	Parging Cement	ACM	Friable	Good	4	EA	B	7
1	Throughout	Throughout	Wall	Drywall Joint Compound		ACM	Non-Friable	Good	20000	SF	A	7
1	Throughout	Throughout	Ceiling	Drywall Joint Compound		ACM	Non-Friable	Good	7,500	SF	C	7

## **Appendix B: Laboratory Certificate of Analysis – Asbestos**

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# EMSL Canada Inc.

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EMSL Canada Order 552506960  
Customer ID: 55SELI62  
Customer PO: 1-3250245  
Project ID:

**Attn:** Ahmed Khan  
Safetech Environmental Limited  
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Unit 14  
Mississauga, ON L4X 2X7  
**Proj:** 1-3250245 575 Van Horne

**Phone:** (905) 624-2722  
**Fax:** (905) 624-4306  
**Collected:**  
**Received:** 4/16/2025  
**Analyzed:** 4/22/2025

## Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

**Client Sample ID:** 1A **Lab Sample ID:** 552506960-0001  
**Sample Description:** 1x1 Beige with Brown Strip VFT & Mastic - Office

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Beige	0.0%	96.0%	4% Chrysotile	

**Client Sample ID:** 1B **Lab Sample ID:** 552506960-0002  
**Sample Description:** 1x1 Beige with Brown Strip VFT & Mastic - Office

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025					Positive Stop (Not Analyzed)

**Client Sample ID:** 1C **Lab Sample ID:** 552506960-0003  
**Sample Description:** 1x1 Beige with Brown Strip VFT & Mastic - Office

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025					Positive Stop (Not Analyzed)

**Client Sample ID:** 2A-Floor Tile **Lab Sample ID:** 552506960-0004  
**Sample Description:** 1x1 Orange VFT & Mastic - Office

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Red	0.0%	96.0%	4% Chrysotile	

**Client Sample ID:** 2A-Mastic **Lab Sample ID:** 552506960-0004A  
**Sample Description:** 1x1 Orange VFT & Mastic - Office

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Black	0.0%	100.0%	None Detected	

**Client Sample ID:** 2B-Floor Tile **Lab Sample ID:** 552506960-0005  
**Sample Description:** 1x1 Orange VFT & Mastic - Office

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025					Positive Stop (Not Analyzed)

**Client Sample ID:** 2B-Mastic **Lab Sample ID:** 552506960-0005A  
**Sample Description:** 1x1 Orange VFT & Mastic - Office

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Black	0.0%	100.0%	None Detected	



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EMSL Canada Order 552506960  
Customer ID: 55SELI62  
Customer PO: 1-3250245  
Project ID:

## Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

**Client Sample ID:** 2C **Lab Sample ID:** 552506960-0006

**Sample Description:** 1x1 Orange VFT & Mastic - Office

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025					Positive Stop (Not Analyzed)

**Client Sample ID:** 3A **Lab Sample ID:** 552506960-0007

**Sample Description:** 1x1 Brown VFT - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Beige	0.0%	100.0%	None Detected	

**Client Sample ID:** 3B **Lab Sample ID:** 552506960-0008

**Sample Description:** 1x1 Brown VFT - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Beige	0.0%	100.0%	None Detected	

**Client Sample ID:** 3C **Lab Sample ID:** 552506960-0009

**Sample Description:** 1x1 Brown VFT - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Tan	0.0%	100.0%	None Detected	

**Client Sample ID:** 4A-Floor Tile **Lab Sample ID:** 552506960-0010

**Sample Description:** 1x1 Green VFT & Mastic - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Blue	0.0%	100.0%	None Detected	

**Client Sample ID:** 4A-Mastic **Lab Sample ID:** 552506960-0010A

**Sample Description:** 1x1 Green VFT & Mastic - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Black	0.0%	100.0%	None Detected	

**Client Sample ID:** 4B-Floor Tile **Lab Sample ID:** 552506960-0011

**Sample Description:** 1x1 Green VFT & Mastic - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Blue	0.0%	100.0%	None Detected	

**Client Sample ID:** 4B-Mastic **Lab Sample ID:** 552506960-0011A

**Sample Description:** 1x1 Green VFT & Mastic - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Black	0.0%	100.0%	None Detected	



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Customer ID: 55SELI62  
Customer PO: 1-3250245  
Project ID:

## Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

**Client Sample ID:** 4C-Floor Tile **Lab Sample ID:** 552506960-0012

**Sample Description:** 1x1 Green VFT & Mastic - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Blue	0.0%	100.0%	None Detected	

**Client Sample ID:** 4C-Mastic **Lab Sample ID:** 552506960-0012A

**Sample Description:** 1x1 Green VFT & Mastic - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Black	0.0%	100.0%	None Detected	

**Client Sample ID:** 5A **Lab Sample ID:** 552506960-0013

**Sample Description:** Concrete Block Mortar - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Gray	0.0%	100.0%	None Detected	

**Client Sample ID:** 5B **Lab Sample ID:** 552506960-0014

**Sample Description:** Concrete Block Mortar - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Gray	0.0%	100.0%	None Detected	

**Client Sample ID:** 5C-Block Fill **Lab Sample ID:** 552506960-0015

**Sample Description:** Concrete Block Mortar - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	White	0.0%	100.0%	None Detected	

**Client Sample ID:** 5C-Mortar **Lab Sample ID:** 552506960-0015A

**Sample Description:** Concrete Block Mortar - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Gray	0.0%	100.0%	None Detected	

**Client Sample ID:** 6A **Lab Sample ID:** 552506960-0016

**Sample Description:** Carpet Mastic - Kitchen

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Yellow	0.0%	100.0%	None Detected	

**Client Sample ID:** 6B **Lab Sample ID:** 552506960-0017

**Sample Description:** Carpet Mastic - Kitchen

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Yellow	0.0%	100.0%	None Detected	



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Project ID:

## Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

**Client Sample ID:** 6C **Lab Sample ID:** 552506960-0018

**Sample Description:** Carpet Mastic - Kitchen

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Brown/Yellow	0.0%	100.0%	None Detected	

**Client Sample ID:** 7A **Lab Sample ID:** 552506960-0019

**Sample Description:** PFI - Hot water tank room

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Gray	0.0%	35.0%	65% Chrysotile	

**Client Sample ID:** 7B **Lab Sample ID:** 552506960-0020

**Sample Description:** PFI - Hot water tank room

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025				Positive Stop (Not Analyzed)	

**Client Sample ID:** 7C **Lab Sample ID:** 552506960-0021

**Sample Description:** PFI - Hot water tank room

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025				Positive Stop (Not Analyzed)	

**Client Sample ID:** 8A **Lab Sample ID:** 552506960-0022

**Sample Description:** Under Lying VFT - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	White/Black	0.0%	100.0%	None Detected	

**Client Sample ID:** 8B **Lab Sample ID:** 552506960-0023

**Sample Description:** Under Lying VFT - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	White/Black	0.0%	100.0%	None Detected	

**Client Sample ID:** 8C **Lab Sample ID:** 552506960-0024

**Sample Description:** Under Lying VFT - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	White/Black	0.0%	100.0%	None Detected	

**Client Sample ID:** 9A-Floor Tile **Lab Sample ID:** 552506960-0025

**Sample Description:** 1x1 Beige VFT & Mastic - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Beige	0.0%	100.0%	None Detected	



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EMSL Canada Order 552506960  
Customer ID: 55SELI62  
Customer PO: 1-3250245  
Project ID:

## Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

**Client Sample ID:** 9A-Mastic **Lab Sample ID:** 552506960-0025A

**Sample Description:** 1x1 Beige VFT & Mastic - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Black	0.0%	100.0%	None Detected	

**Client Sample ID:** 9B-Floor Tile **Lab Sample ID:** 552506960-0026

**Sample Description:** 1x1 Beige VFT & Mastic - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Beige	0.0%	100.0%	None Detected	

**Client Sample ID:** 9B-Mastic **Lab Sample ID:** 552506960-0026A

**Sample Description:** 1x1 Beige VFT & Mastic - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Black	0.0%	100.0%	None Detected	

**Client Sample ID:** 9C-Floor Tile **Lab Sample ID:** 552506960-0027

**Sample Description:** 1x1 Beige VFT & Mastic - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Beige	0.0%	100.0%	None Detected	

**Client Sample ID:** 9C-Mastic **Lab Sample ID:** 552506960-0027A

**Sample Description:** 1x1 Beige VFT & Mastic - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Black	0.0%	100.0%	None Detected	

**Client Sample ID:** 10A **Lab Sample ID:** 552506960-0028

**Sample Description:** Brick Mortar - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Red	0.0%	100.0%	None Detected	

**Client Sample ID:** 10B **Lab Sample ID:** 552506960-0029

**Sample Description:** Brick Mortar - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Red	0.0%	100.0%	None Detected	

**Client Sample ID:** 10C **Lab Sample ID:** 552506960-0030

**Sample Description:** Brick Mortar - Auditorium

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Brown/Red	0.0%	100.0%	None Detected	



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EMSL Canada Order 552506960  
Customer ID: 55SELI62  
Customer PO: 1-3250245  
Project ID:

## Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

**Client Sample ID:** 11A **Lab Sample ID:** 552506960-0031

**Sample Description:** DJC - Library

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	White/Beige	0.0%	100.0%	None Detected	

**Client Sample ID:** 11B **Lab Sample ID:** 552506960-0032

**Sample Description:** DJC - Kitchen

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Beige	0.0%	99.0%	1% Chrysotile	

**Client Sample ID:** 11C **Lab Sample ID:** 552506960-0033

**Sample Description:** DJC - Kitchen

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025					Positive Stop (Not Analyzed)

**Client Sample ID:** 11D **Lab Sample ID:** 552506960-0034

**Sample Description:** DJC - Washroom

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025					Positive Stop (Not Analyzed)

**Client Sample ID:** 11E **Lab Sample ID:** 552506960-0035

**Sample Description:** DJC - Library

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025					Positive Stop (Not Analyzed)

**Client Sample ID:** 11F **Lab Sample ID:** 552506960-0036

**Sample Description:** DJC - Bulkhead Library

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025					Positive Stop (Not Analyzed)

**Client Sample ID:** 11G **Lab Sample ID:** 552506960-0037

**Sample Description:** DJC - Bulkhead Library

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025					Positive Stop (Not Analyzed)

**Client Sample ID:** 12A **Lab Sample ID:** 552506960-0038

**Sample Description:** Grey Caulking - Exterior

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	4/22/2025	Brown	0.0%	100%	None Detected	



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Customer ID: 55SELI62  
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Project ID:

## Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

**Client Sample ID:** 12B **Lab Sample ID:** 552506960-0039

**Sample Description:** Grey Caulking - Exterior

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	4/22/2025	Brown	0.0%	100%	None Detected	

**Client Sample ID:** 12C **Lab Sample ID:** 552506960-0040

**Sample Description:** Grey Caulking - Exterior

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	4/22/2025	Brown	0.0%	100%	None Detected	

**Client Sample ID:** 13A **Lab Sample ID:** 552506960-0041

**Sample Description:** Brick Mortar - Exterior

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Tan	0.0%	100.0%	None Detected	

**Client Sample ID:** 13B **Lab Sample ID:** 552506960-0042

**Sample Description:** Brick Mortar - Exterior

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Tan	0.0%	100.0%	None Detected	

**Client Sample ID:** 13C **Lab Sample ID:** 552506960-0043

**Sample Description:** Brick Mortar - Exterior

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Brown	0.0%	100.0%	None Detected	

**Client Sample ID:** 14A **Lab Sample ID:** 552506960-0044

**Sample Description:** Ceramic Tile Grout Beige - Library

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Brown	0.0%	100.0%	None Detected	

**Client Sample ID:** 14B **Lab Sample ID:** 552506960-0045

**Sample Description:** Ceramic Tile Grout Beige - Library

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Brown	0.0%	100.0%	None Detected	

**Client Sample ID:** 14C **Lab Sample ID:** 552506960-0046

**Sample Description:** Ceramic Tile Grout Beige - Library

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Brown	0.0%	100.0%	None Detected	



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Customer ID: 55SELI62  
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Project ID:

## Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

**Client Sample ID:** 15A-Thinset **Lab Sample ID:** 552506960-0047

**Sample Description:** Ceramic Tile Thinset - Library

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Gray	0.0%	100.0%	None Detected	

**Client Sample ID:** 15A-Mastic **Lab Sample ID:** 552506960-0047A

**Sample Description:** Ceramic Tile Thinset - Library

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Yellow	0.0%	100.0%	None Detected	

**Client Sample ID:** 15B-Thinset **Lab Sample ID:** 552506960-0048

**Sample Description:** Ceramic Tile Thinset - Library

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Gray	0.0%	100.0%	None Detected	

**Client Sample ID:** 15B-Mastic **Lab Sample ID:** 552506960-0048A

**Sample Description:** Ceramic Tile Thinset - Library

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Yellow	0.0%	100.0%	None Detected	

**Client Sample ID:** 15C **Lab Sample ID:** 552506960-0049

**Sample Description:** Ceramic Tile Thinset - Library

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Gray	0.0%	100.0%	None Detected	

**Client Sample ID:** 16A-Shingle **Lab Sample ID:** 552506960-0050

**Sample Description:** Roofing Membrane - Roof

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Black	15.0%	85.0%	None Detected	

**Client Sample ID:** 16A-Fiberboard **Lab Sample ID:** 552506960-0050A

**Sample Description:** Roofing Membrane - Roof

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Brown	90.0%	10.0%	None Detected	

**Client Sample ID:** 16B-Shingle **Lab Sample ID:** 552506960-0051

**Sample Description:** Roofing Membrane - Roof

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Black	15.0%	85.0%	None Detected	



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EMSL Canada Order 552506960  
Customer ID: 55SELI62  
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Project ID:

## Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

**Client Sample ID:** 16B-Foam **Lab Sample ID:** 552506960-0051A

**Sample Description:** Roofing Membrane - Roof

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Yellow	0.0%	100.0%	None Detected	

**Client Sample ID:** 16B-Fiberboard **Lab Sample ID:** 552506960-0051B

**Sample Description:** Roofing Membrane - Roof

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Brown	90.0%	10.0%	None Detected	

**Client Sample ID:** 16C-Shingle **Lab Sample ID:** 552506960-0052

**Sample Description:** Roofing Membrane - Roof

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Gray/Black	15.0%	85.0%	None Detected	

**Client Sample ID:** 16C-Fiberboard **Lab Sample ID:** 552506960-0052A

**Sample Description:** Roofing Membrane - Roof

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Brown	80.0%	20.0%	None Detected	

**Client Sample ID:** 16C-Tar Felt **Lab Sample ID:** 552506960-0052B

**Sample Description:** Roofing Membrane - Roof

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/22/2025	Black	35.0%	65.0%	None Detected	



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EMSL Canada Order 552506960  
Customer ID: 55SELI62  
Customer PO: 1-3250245  
Project ID:

### Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

#### Analyst(s):

Hassan Moez	PLM (25) PLM Grav. Reduction (1)
Kira Ramphal	PLM (16) PLM Grav. Reduction (2)
Vanessa Gallego	PLM (13)

#### Reviewed and approved by:

Matthew Davis or other approved signatory  
or Other Approved Signatory

None Detected = <0.1%. EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This is a summary report; official reports are available on LabConnect or upon request and relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Canada Inc. Mississauga, ON NVLAP Lab Code 200877-0

Initial report from: 04/22/2025 13:05:34

## **Appendix C: Laboratory Certificate of Analysis – Lead**

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**EMSL Canada Inc.**

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EMSL Canada Or 552506956

CustomerID: 55SELI62

CustomerPO: 1-3250245

ProjectID:

Attn: **Ahmed Khan**  
**Safetech Environmental Limited**  
**3045 Southcreek Road**  
**Unit 14**  
**Mississauga, ON L4X 2X7**

Phone: (905) 624-2722  
Fax: (905) 624-4306  
Received: 4/16/2025 03:30 PM  
Collected: 4/14/2025

Project: 1-3250245 575 Van horne

**Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)\***

<i>Client Sample</i>	<i>Description</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Weight</i>	<i>RDL</i>	<i>Lead Concentration</i>
L1		4/14/2025	4/17/2025	0.2522 g	0.0064 % wt	0.086 % wt
552506956-0001		Site: Beige - Library				
L2		4/14/2025	4/17/2025	0.1748 g	0.0092 % wt	<0.0092 % wt
552506956-0002		Site: Blue - Library				
		Insufficient sample to reach reporting limit.				

Rowena Fanto, Lead Supervisor  
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. \* Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.0064% wt based on the minimum sample weight per our SOP. "<" (less than) result signifies the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. Definitions of modifications are available upon request.

Samples analyzed by EMSL Canada Inc. Mississauga, ON AIHA LAP, LLC-ELLAP Accredited #196142

Initial report from 04/22/2025 10:05:44

## **Appendix D: Methodology**

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## A. METHODOLOGY

The presence of hazardous materials was assessed by visual inspection. For the purpose of this assessment and this document, hazardous materials include designated substances as well as other chemical, biological and environmental hazards as defined below:

- Designated Substances (as prescribed by Ontario Regulation 490/09):
  - Acrylonitrile, Arsenic, Asbestos, Benzene, Coke Oven Emissions, Ethylene Oxide, Isocyanates, Lead, Mercury, Silica and Vinyl Chloride.
- Other Hazardous Materials:
  - **Chemical Hazards** – Urea Formaldehyde Foam Insulation (UFFI)
  - **Biological Hazards** – Mould Contamination and Pest Infestation
  - **Environmental Hazards** – Polychlorinated Biphenyls (PCBs) and Ozone Depleting & Global Warming Substances

Concealed locations such as above solid plaster or drywall ceilings, within plaster or drywall wall cavities, enclosed mechanical/pipe shafts and bulkheads, etc. were not investigated, unless otherwise stated in Section 1.3. Similarly, motors, blowers, electrical panels, etc., were not de-energized or disassembled to examine concealed conditions. Building materials that are not detailed within this assessment due to inaccessibility at the time of our site visit and/or uncovered during renovation/demolition activities should be assessed by a qualified person prior to their disturbance.

Bulk sampling followed by laboratory analysis was also conducted to confirm the presence/absence of select hazardous materials. Bulk sampling was limited to asbestos in building materials and lead in paint on building finishes (if flaking paint was present). All other hazardous materials were identified by visual inspection only. Where possible, observations regarding the location, quantity and condition of the hazardous materials identified were made in order to determine the potential for exposure and provide appropriate recommendations for remedial action, if necessary. Specific methodology for each individual hazardous material assessed is further detailed below.

### A.1 Designated Substances

#### A.1.1 Asbestos

A visual inspection for the presence of both friable and non-friable asbestos-containing material (ACM) was performed in the subject area.

If an existing asbestos survey was available for review, Safetech relied on the information present. Building materials that were visually similar to materials previously tested and that were confirmed to be either ACM or non-ACM were considered to have consistent content and were not re-sampled. Additional sampling was only conducted where the investigator believed a need existed.

Bulk samples of building materials suspected to contain asbestos were retrieved by Safetech only for materials that were deemed to have a potential to be disturbed as part

of the construction project. Some suspect materials may not have been sampled during our investigation. Bulk samples were retrieved in accordance with Section 3 and Table 1 of Ontario Regulation 278/05, "Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations". The number of samples collected for each material was based on the type and quantity of the material present in the subject area. Each individual sample was placed in a labeled zip-lock bag for transportation to an independent laboratory (EMSL). EMSL is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for bulk asbestos fiber analysis.

Analysis for asbestos content was performed by the independent laboratory in accordance with the U.S. Environmental Protection Agency (EPA) Test Method *EPA/600/R-93-116: Method for the Determination of Asbestos in Bulk Building Materials (June 1993)*. This method identifies the asbestos fibre content of building materials using polarized light microscopy (PLM) analytical techniques, with confirmation of presence and type of asbestos made by dispersion staining optical microscopy. This analytical method meets the requirements set forth in Section 3 of O. Reg. 278/05.

In accordance with O. Reg. 278/05, an asbestos-containing material is defined as material that contains 0.5 per cent or more asbestos by dry weight. The laboratory was instructed to conduct "stop-positive" analysis for all materials. If a sample was found to be asbestos-containing no further analysis was conducted for samples taken from the same homogeneous material.

Locations where ACM have been identified are detailed in this report. Recommendations pertaining to ACM were made based on the friability, accessibility and condition of the material in conjunction with the potential for the planned renovation work to disturb the ACM.

### **A.1.2 Assessment of Asbestos-Containing Building Materials**

Accessibility, Condition and Action (Priority) ratings for individual items, or defined areas were developed by Safetech to determine remedial action plans specific to the facility's needs.

#### **A.1.2.1 Accessibility**

Accessibility has been assessed as: (A) Accessible to all non-maintenance occupants of the building; (B) Accessible to maintenance staff without a ladder; (C) Accessible to maintenance staff with a ladder and exposed to view without moving a building component; (D) Accessible to maintenance staff with a ladder and concealed from view due to a building component; (E) Not accessible without demolition or removal of fixed building components or building systems

### A.1.2.2 Condition

The condition of asbestos-containing materials identified in the subject area was assessed as Good (G), Fair (F) or Poor (P). The assessment criteria used to determine condition is dependent on material characteristics, such as friability. The following table summarizes the criteria used by Safetech to evaluate the condition of ACM.

<b>Sprayed Fireproofing, Sprayed Insulation and Sprayed Texture Finishes</b>	
<b>Good</b>	<ul style="list-style-type: none"> <li>Surface shows no significant signs of damage, deterioration, or delamination (i.e. &lt;1%).</li> <li>Unencapsulated or unpainted fireproofing or texture finishes, where no delamination or damage is observed.</li> <li>Encapsulated fireproofing or texture finishes where encapsulation applied after damage or fallout.</li> </ul>
<b>Fair</b>	<ul style="list-style-type: none"> <li>Not utilized as part of condition assessment for these materials.</li> </ul>
<b>Poor</b>	<ul style="list-style-type: none"> <li>Greater than 1% damage, delamination, or deterioration to surface.</li> </ul>
<b>In areas where damage exists in isolated locations, both Good and Poor may be applicable.</b>	
<b>Mechanical Insulation</b> (boilers, breeching, ductwork, piping, tanks, equipment, etc.)	
<b>Good</b>	<ul style="list-style-type: none"> <li>Insulation completely covered in jacketing and exhibits no evidence of damage or deterioration.</li> <li>Jacketing may have minor damage (i.e. scuffs or stains), but is not penetrated.</li> </ul>
<b>Fair</b>	<ul style="list-style-type: none"> <li>Minor penetrating damage to jacketed insulation (cuts, tears, nicks, deterioration or delamination).</li> <li>Undamaged insulation that had never been jacketed.</li> <li>Insulation is exposed but not showing surface disintegration.</li> <li>Extent of missing insulation ranges from minor to none.</li> <li>Damage that can be repaired.</li> </ul>
<b>Poor</b>	<ul style="list-style-type: none"> <li>Original insulation jacket is missing, damaged, deteriorated, or delaminated.</li> <li>Insulation is exposed and significant areas have been dislodged.</li> <li>Damage that cannot be easily repaired.</li> </ul>
<b>Non-Friable and Potentially Friable Materials</b> (includes materials such as plaster finishes, drywall compound, ceiling tiles, asbestos cement products, vinyl asbestos tile and asbestos paper backed vinyl sheet flooring, etc., which have the potential to become friable when handled)	
<b>Good</b>	<ul style="list-style-type: none"> <li>No significant damage.</li> <li>Material may be cracked or broken but is stable and not likely to become friable upon casual contact.</li> <li>No friable debris present</li> </ul>
<b>Fair</b>	<ul style="list-style-type: none"> <li>Not utilized as part of condition assessment for these materials.</li> </ul>
<b>Poor</b>	<ul style="list-style-type: none"> <li>Material is severely damaged.</li> <li>Debris is present or binder has disintegrated to the point where the material has become friable.</li> </ul>
<b>Asbestos-Containing Debris</b> (noted separately from the presumed source material)	
<b>Poor</b>	<ul style="list-style-type: none"> <li>Debris is always considered to be in Poor condition.</li> </ul>

### A.1.2.3 Action

Recommended ACTION for compliance and for management of identified asbestos-containing materials has been provided for each condition and component outlined in the above table. Recommendations have been classified under the following 8 ACTIONS:

1. Action dealing with the immediate clean-up of fallen ACM likely to be disturbed.

2. Action dealing with the need to use Type 2 asbestos procedures to enter an area (other than a ceiling space).
3. Action dealing with performing asbestos removal for compliance with regulations.
4. Action dealing with Type 2 asbestos procedures for ceiling entry where friable ACM debris is present on the top side of a ceiling system.
5. Action dealing with the removal of asbestos that goes beyond compliance requirements but simplifies the asbestos management.
6. Action dealing with the repair of asbestos.
7. Action dealing with ACM surveillance requirements of the regulation.
8. Action for dealing with material that may contain asbestos but was not conclusively identified in the survey.

#### **A.1.2.4 Quantity**

The approximate quantity and the units of measure related to the quantity (i.e.: linear feet (LF), square feet (SF) or each (EACH) as appropriate to the item) have only been provided for materials requiring remedial or corrective action (i.e. materials in Fair or Poor condition). In such circumstances any quantities provided should be considered rough estimates only and should not be solely relied upon for bidding purposes. It is the responsibility of the selected Contractor to obtain actual quantities.

#### **A.2 Lead**

If paint samples were collected, they would be collected by scraping the paint down to the base material substrate to ensure collection of all layers of paint. Care would be taken to avoid collection of the underlying substrate to reduce analytical substrate matrix interference.

If collected, paint samples would be submitted to an independent laboratory for the determination of lead content. The laboratory would participate in and accredited by the EPA (U.S. Environmental Protection Agency) for analysis of lead in paint chips through the American Industrial Hygiene Association (AIHA) Environmental Lead Laboratory Accreditation Program (ELLAP). Analysis would be conducted by the laboratory following the EPA "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846), Method 7000B "Flame Atomic Absorption Spectrophotometry". Result of analysis would be reported by the laboratory as the percentage of lead by weight of the total sample (% by wt.).

The presence of lead in other materials, such as lead sheeting, pigmented mortar, lead piping, lead solder, etc. would be noted where observed but not sampled to verify lead content. Lead can be present in these materials to varying degrees, depending on their age of application and should be considered lead-containing until proven otherwise.

### **A.3 Mercury**

The type, quantity and location of mercury-containing equipment and devices in the subject area were determined by visual inspection based on appearance, age and knowledge of historical uses. Sampling for mercury-containing building materials and dismantling of suspect mercury-containing equipment was not performed. Where possible, attempts were made to verify the presence/absence of mercury by gathering additional information such as equipment model number, serial number, etc.

### **A.4 Silica**

The presence of crystalline silica in building materials was determined through visual inspection of building materials only, based on knowledge of the historic use of silica-containing materials in certain building materials. Sampling to verify the presence/absence of silica in building materials was not performed.

### **A.5 Other Designated Substances**

Other designated substances (i.e. acrylonitrile, arsenic, benzene, coke oven emissions, ethylene oxide, isocyanates, and vinyl chloride) are typically not expected to be encountered in building materials as significant constituents or in a form that would represent an exposure concern. These substances were not included in the assessment unless specific information regarding their use (e.g. in a manufacturing process) was provided to us. No sampling for these designated substances was performed.

### **A.6 Other Hazardous Materials**

#### **A.6.1 Chemical Hazards**

##### **A.6.1.1 Urea Formaldehyde Foam Insulation (UFFI)**

A visual inspection to evaluate the possible presence of Urea Formaldehyde Foam Insulation (UFFI) was conducted in the subject area. Our visual inspection was limited to identifying evidence of possible UFFI installation (i.e. repaired nozzle holes in walls) and overspray at wall/ceiling joints, etc. No destructive testing or material sampling was conducted as part of the assessment.

### **A.7 Biological Hazards**

#### **A.7.1.1 Mould Contamination**

A visual inspection to determine the possibility of mould growth was conducted in the subject area. The assessment was limited to identifying evidence of mould growth and water damage (staining, material deterioration, efflorescence, etc.) on the surface of building materials, which may be an indicator of hidden mould growth. No moisture content readings of building materials were taken to determine their current condition. Additionally, destructive testing to confirm the presence/absence of hidden mould growth and material sampling to verify the presence/absence of mould on suspect surfaces was beyond the scope of this assessment.

#### **A.7.1.2 Pest Infestation**

The presence and extent of pest infestation in the subject area was based on visually inspecting for evidence of significant pest activity, including signs of nesting, droppings/fecal accumulation, dead insects/carcass accumulation, etc. Evidence of minor pest presence was not considered to be indicative of pest infestation.

### **A.8 Environmental Hazards**

#### **A.8.1 Polychlorinated Biphenyls (PCBs)**

The presence of PCB-containing electrical equipment in the subject area was identified through visual inspection and knowledge of the timeline of historical use.

For stand-alone transformers and capacitors, information from the manufacturer nameplate (such as the date of manufacture, dielectric fluid trade name or “Type Number”, etc.) was gathered, where possible, to further evaluate if the equipment may contain PCBs. This information was then compared to the information provided in the Environment Canada document entitled “Handbook on PCB’s in Electrical Equipment” (Third Edition, April 1988) to aid in identification. Transformers and capacitors confirmed to be manufactured after 1979 were assumed to not contain PCBs. If appropriate information could not be obtained it was assumed that the transformer or capacitor contained PCBs.

For fluorescent light ballasts, a representative number of fixtures were inspected, if possible, for assessment areas that were constructed prior to 1980 and where there was no history or evidence of a complete lighting retrofit. The light fixtures were examined by removing any lenses and ballast covers to expose the ballast and identify information such as ballast make, model number, serial number, and date code. This information was then compared to the information provided in the Environment Canada document entitled “Identification of Lamp Ballasts Containing PCBs” (Report EPS 2/CC/2 (revised) August 1991) to aid in identification. Ballasts that could not be confirmed Non-PCB-containing were assumed to contain PCBs. The light fixtures were not de-energized and ballasts were not removed to obtain manufacturer information that may be on the back of the ballast. If visual confirmation of ballast type could not be made it was assumed that light fixtures in areas constructed prior to 1980 that have not undergone a complete lighting retrofit have PCB-containing ballasts until proven otherwise.

No sampling of materials or fluids within equipment was conducted to verify the presence/absence of PCBs. Inspection and testing of other materials for PCB content, including (but not limited to) caulking, asphalt, oil-based paint, plastics, switches, electric cables and hydraulic fluids was beyond the scope of the assessment.

#### **A.8.2 Ozone Depleting and Global Warming Substances**

The presence of fixed equipment likely to contain ozone-depleting substances (ODS) and/or global-warming substances (GWS) was identified through visual inspection and

knowledge of the timeline of historical use. This included equipment such as chillers, air-conditioners, walk-in refrigeration and freezer units and fixed dry-chemical fire extinguishers, where chemicals such as hydrochlorofluorocarbons (HCFCs), hydrofluorocarbons (HFCs) or halons may be present. Where possible, information regarding the type and quantity of refrigerant present was obtained from the manufacturer nameplate. Our visual assessment was limited to fixed equipment in the subject area and did not include portable equipment such as stand-alone refrigerators, freezers, water coolers, air-conditioners and fire extinguishers, etc.