

## 1. Introduction

The Environmental Health & Safety Standard Operating Procedure (SOP) for asbestos was developed by the Department of Environmental Health & Safety in accordance with the University's Policy Statement on Health and Safety and to ensure compliance with the Ontario Occupational Health & Safety Act and Regulations.

## 2. Applicable Legislation

- Occupational Health and Safety Act
- Ont. Reg. 490/09 – Designated Substances
- Ont. Reg. 278/05 – Asbestos on Construction Projects and in Buildings and Repair Operations
- Canadian Standards Association (CSA) Z94.4-11

## 3. Definitions

### Asbestos

Asbestos is a generic term describing a number of naturally occurring fibrous, hydrated mineral silicates that differ in chemical composition and are suitable for use as non-combustible, non-conducting and chemically resistant materials. Different types of asbestos which may be found in buildings are chrysotile, crocidolite, amosite, tremolite, actinolite or anthrophyllite.

### Asbestos Abatement/Remediation

Corrective action taken to minimize or eliminate the hazards associated with asbestos-containing materials, including repair, encapsulation, enclosure or removal.

### Asbestos-Containing Material

Any material found to contain 0.5% or greater content of asbestos by dry weight.

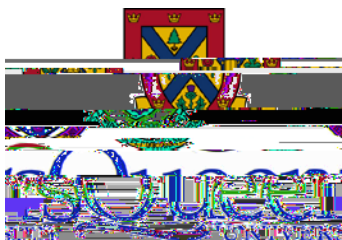
### Asbestos Inventory

The Asbestos Inventory is a record of the location of all asbestos-containing materials present within a building, or those suspected of containing asbestos. The Inventory is available to any employee or contractor whose work may result in the disturbance of such materials. The Inventory will be made available online.

### Friable Material

Asbestos containing materials may be classified as friable or non-friable. A friable material is defined as material that, when dry, can be crumbled, pulverized or powdered by hand pressure. This category includes material that falls apart at the slightest touch, as well as products with a relatively hard surface.

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Friable materials present a greater hazard of releasing asbestos fibres than non-friable materials. Common friable asbestos-containing building materials include sprayed fibrous fireproofing, thermal pipe insulation, and decorative or acoustic texture plasters. Common non-friable asbestos-containing building materials include asbestos cement boards, ceiling tiles and vinyl floor tiles.

Non-Friable Material

A non-friable asbestos product is one in which the asbestos fibres are bound or locked into the product matrix, so that the fibres are not readily released. Such a product would present a risk for fibre release only when it is subject to sanding or cutting with electric power tools. Examples of non-friable asbestos products include vinyl asbestos floor tiles, acoustic ceiling tiles, and asbestos cement products.

**4. Responsibilities**

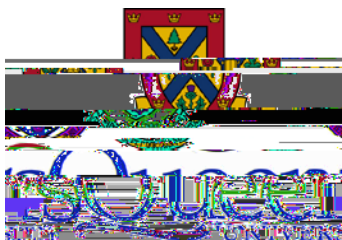
This section outlines the responsibilities within the University for the implementation of this SOP.

**4.1 Directors and Department Heads:**

Ensure that pertinent construction project managers, supervisors and employees are notified of their responsibilities for working with asbestos.

Ensure that all employees who may come in contact with asbestos have received instruction in asbestos through courses offered by the Department of Environmental Health & Safety, and departmental instruction on the specific locations of asbestos.

Ensure that procedures, equipment and materials appropriate for the specific work locations under his/her authority are provided to protect the heacons >>BDC 0 -1.15 TD (E)T( )Tj EMC (p)5 <</MCID



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**4.2 Physical Plant Services Project Managers, Managers and Supervisors:**

Prior to calling for tenders for any construction-related activity, or repair work on equipment or machinery, determine whether any asbestos containing material will be disturbed. Building materials are identified as confirmed or presumed asbestos materials in the online Asbestos Inventory database. Materials that have been identified as “presumed” require sampling or need to be treated as asbestos containing material, in the case of friable spray on insulation, as though it contains a form of asbestos other than chrysotile. Appendix B, Asbestos Sampling Requisition, must be filled out and forwarded to the Department of Environmental Health & Safety to initiate sampling of materials which are presumed to contain asbestos or materials which have not previously been identified.

Prior to any building demolition, ensure that all asbestos has been removed from the structure.

Provide any contractor in advance of receiving tenders a designated substance report which includes a copy of all drawings, plans or specifications identifying the location of asbestos containing material.

Classify all asbestos work under his/her jurisdiction as Type 1, Type 2 or Type 3, in consultation with the Department of Environmental Health & Safety.

Ensure that employees of the University are only assigned to perform Type 1 asbestos work.

Ensure that any Type 2 or Type 3 Asbestos work is done by a qualified external contractor, who specializes in such work and has a well-established reputation for quality workmanship in the field of asbestos control and remediation. (Contractor Qualifications – Appendix D).

Supervisors must be knowledgeable about the locations of, hazards and standard operating procedures associated with working with asbestos, the education and training requirements for working with asbestos, the appropriate standard operating procedures for all such locations under his/her authority, as well as the other requirements of this program.

Ensure that employees are familiar with the hazards and that all employees receive training as required by this Standard Operating Procedure and only perform work in accordance with the level of training received.

Ensure that all employees under his/her authority are informed about the location of asbestos-containing materials that may be disturbed in the course of their duties and that employees and building occupants are notified of scheduled asbestos work within their workplace.

Ensure that all employees use appropriate equipment and materials for working with asbestos at all



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times.

Arrange for the clean-up, sealing, enclosure or removal of any fallen or deteriorated asbestos.

Provide notification (Asbestos Work Requisition – Appendix C) to the Department of Environmental Health & Safety prior to the commencement of asbestos removal and repair operations which specifies the extent of the work to be used in the development and updating of the Asbestos Inventory. Provide copies of Bill of Lading for Asbestos removal to the Department of Environmental Health & Safety.

In the event that previously unidentified asbestos-containing material is discovered in the course of work, ensure that employees immediately stop all work and notify the Department of Environmental Health & Safety.

Ensure that contractors who will be performing abatement work perform the work in accordance with our asbestos policy and Ontario Regulation 278/05 – “Designated Substance – Asbestos on Construction Projects and in Building and Repair Operations”.

#### 4.3 The Department of Environmental Health & Safety

Ensure that each department is aware of responsibilities under this Standard Operating Procedure.

Review this Standard Operating Procedure (SOP) periodically to ensure that it meets all legislative requirements, and amend as necessary.

Develop and update an online database of Asbestos Inventory.

Provide technical advice and recommendations regarding asbestos identification, hazard evaluation, and control measures related to asbestos.

Maintain dated records of inspection results, hazard assessments and test results.

Decommission equipment containing asbestos, and provide means of disposal of such equipment.

Perform sampling and testing of suspected asbestos-containing material.

Review all Asbestos Work Requisitions / Permits (Appendix C) and provide final approval.

Ensure that competent and reputable external contractors provide clearance testing following any Type 3 asbestos removal operations.



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Maintain dated records of all clearance testing performed.

Provide ongoing asbestos training and education programs.

Consult with the Joint Health and Safety Committees and receive recommendations regarding the measures and procedures contained in this SOP.

#### **4.4 Employees**

Be familiar with the hazards associated with working with asbestos and the pertinent standard operating procedures for asbestos.

Work in accordance with written standard operating procedures for asbestos.

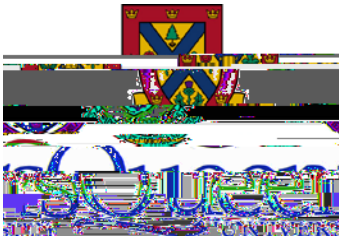
Perform only Type 1 asbestos removal operations and follow the procedures as outlined in Appendix E.

Use the appropriate equipment and materials provided for working with asbestos.

Promptly report any known or suspected a

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containing material if,

- The material is not wetted to control the spread of dust or fibres, and
- The work is done only by means of non-powered hand-held tools.
- Removing one square metre or more of drywall in which joint filling compounds that are asbestos-containing material have been used.
- Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if the work is done by means of power tools that are attached to dust-collecting devices equipped with HEPA filters.
- Removing insulation that is asbestos-con







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## 8. Sampling

The Department of Environmental Health & Safety will perform sampling on material suspected of containing asbestos, and will maintain documentation of the results of all testing. Asbestos canrial sulth





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**APPENDIX A**

**USES OF ASBESTOS IN BUILDINGS**

Asbestos has been widely used in buildings and some uses continue today. The following list does not include every product/material that may contain asbestos. It is intended as a general guide to show which types of materials may contain asbestos.

- Cement pipes



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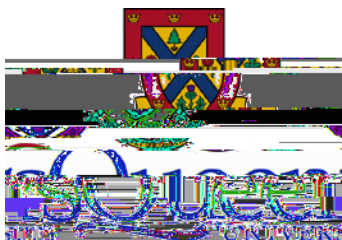
**APPENDIX B**

**ASBESTOS**



**Queen's University Environmental Health & Safety**

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**ASBESTOS PROCEDURES**

(Check applicable Removal Type)

- ( ) Type 1 Removal or Repairs
- ( ) Type 2 Removal or Repairs
- ( ) Type 3 Removal or Repairs

Project Specifics – Include Safety Measures being used

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**RESTRICTIONS:**

(Check all applicable)

|                              |                          |
|------------------------------|--------------------------|
| ( ) Restricted Hours of Work | Specify Hours:           |
| ( ) Weekend Work             | Specify Hours:           |
| ( ) Occupant Access Required | Specify Areas/Equipment: |

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