



Frequently Asked Questions about Asbestos

The University has engaged Pinchin Environmental to undertake comprehensive and consistent surveys of most campus buildings for asbestos in order to meet new regulatory requirements in the province of Ontario and update our current inventory. The following document is intended to provide faculty, staff and students information regarding asbestos-containing material and the upcoming survey.

What is asbestos and why was it used?

Asbestos is the fibrous form of certain silicate rocks. It is found naturally in the earth's crust and separated from the rock by the mining and milling process. It has a number of useful properties (heat resistance, strength, reinforcing ability, insulating properties) which made it useful in many products, mainly in construction. Asbestos fibres are present in the natural environment in both water and air. Due to the natural occurrence of asbestos, every person breathes a low level of asbestos daily. To put into perspective, the average person will inhale approximately 1.5 million fibres per year. There is no evidence that this low level ambient exposure to asbestos causes any ill effects.

What products containing asbestos have been used in the construction of buildings?

Asbestos has been used in many products in buildings and continues to be used in some building products today. Non-friable (hard or non-crumbly) products have been used in some floor tiles, cement sheeting and pipes, brakes and friction products, in roofing materials and other products in which it served as a reinforcing fibre. The frequency of use of these products has declined sharply since the 1970's but these products are still legal and some are still used in Canada today.

Friable asbestos materials can be crumbled, pulverized or reduced to powder by hand pressure. Since these are softer products, the fibres can more readily be released to the air where they can be inhaled by building workers or occupants. Due to concern over the asbestos exposure of workers installing these friable products most friable products were withdrawn from the Canadian market in the mid-1970's; most were totally unavailable by the early 1980's and all were banned by 1986. Common friable products include sprayed fireproofing, sprayed acoustic or decorative finishes and thermal insulation on piping or mechanical systems.

Why is there concern over asbestos and who does it affect?

It has become very clear that exposure to airborne asbestos of asbestos workers or construction workers who installed asbestos causes serious, often fatal diseases. These diseases (cancer of the lungs or the lining of the lungs or abdomen or fibrosis of the lung known as asbestosis) are caused by the inhalation of airborne asbestos. Ingestion (eating or drinking) of asbestos and skin contact are not known to lead to any significant health problem. There is a long period, called a latent period, between asbestos exposure and the first clinical detection of these diseases. This is usually greater than 20 years and may be in excess of 40 years. Therefore workers becoming ill from asbestos today are as a result of exposure from the 1960's, 1970's and 1980's and not due to current work. Safety precaution decades ago were very poor and the worker exposures were very high.

It is also quite possible that workers and others were exposed to asbestos at years ago without even being aware of it since asbestos was so widely used. Some uses at that time included uses in moulding compounds and clays used in kindergartners and schools, in taxidermy, as artificial snow or dust in movies and in cigarettes filters.

Why is the survey being performed?

This survey will ensure regulatory compliance with the new regulations relating to asbestos inventories, while providing an updated, comprehensive and readily accessible survey of all building which may contain asbestos-containing material. The University wants to ensure that it has a comprehensive and accessible survey that can be made available to all persons (both Queen's employees and contractors) who have a need to be aware of the presence of asbestos prior to maintenance, renovation or demolition. This survey will be commenced shortly and it will be completed by the end of the year.

Will there be any risk to occupants during the asbestos survey?

No. The surveyors will be required to enter every room and the ceiling space of most rooms to prepare the comprehensive survey. All surveyors have extensive classroom and field training and perform their work with the absolute minimum of asbestos disturbance. Guidelines for performing such surveys will be followed and these have been shown to not cause any measurable exposure to the surveyor or the building occupants). In order to minimize occupant or classroom interruption surveys may be scheduled outside normal class or working hours but this is done merely for the convenience of University staff – not due to any health risk.

Is the presence of asbestos in buildings a risk to occupants?

In the early 1980's the question had no answer and for this reason the Ontario Government established the "Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario". The Commission Report is still available in libraries (ISBN 0-7743-8508-1). After 3 years of study, testing and research, the Commission concluded that the risk posed to building occupants by the presence of even the most friable form of asbestos (namely sprayed fireproofing) was not significant. They concluded any risk was "orders of magnitude below the risks faced by the general population" (page 585) in normal day-to-day activities.

In addition, "the Commission found no evidence that disease inflicts individuals who breathe asbestos in the outdoor air or inhale it as occupants of asbestos-containing buildings" (page 8). Although the Commission's report was published over 20 years ago these conclusions have been confirmed by other more recent studies and remain valid today.

When is asbestos a hazard in buildings?

The Commission concluded that when asbestos (particularly friable asbestos) was disturbed by cutting, grinding, abrasion or other direct physical contact that it could become airborne and inhaled sufficiently to cause health effects. The final report stated "On the other hand, construction, demolition, renovation, maintenance, and custodial workers in asbestos-containing buildings may be exposed to significant asbestos fibre levels and may, during their work, cause elevated fibre levels for nearby occupants"(page 548).

Is asbestos in buildings regulated today in Ontario?

The Ontario Ministry of Labour acted on the Commission's report and published the "Regulation respecting Asbestos on Construction Projects and in Buildings and Repair Operations" in 1985. This was the first asbestos in buildings regulation in the world. The regulation follows a management-in-place philosophy but requires removal in specific situations such as when it is being disturbed by major renovation or demolition or deteriorating and being disturbed by occupant activity. A Management Program to prevent inadvertent disturbance and exposure is required and the University has such a policy in place.

If I want more information or have any questions, where do I go?

Any health and safety issues related to asbestos can be addressed to Dan Langham, Director, Environmental Health and Safety at 613-533-6000 x74980 or at langhamd@post.queensu.ca

Questions or concerns related to survey operations, Pinchin Environmental Staff, or room access should be directed to Lisa Marion, Safety Technician at 513-6000 x77617 or at lisa.marion@queensu.ca

41819-Frequently Asked Questions about Asbestos.doc