

Asbestos Management

Program

Office of Risk Management

Facilities

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DEFINITIONS

Asbestos-containing material - means material that contains 0.5 per cent or more asbestos by dry weight.

Competent worker, means a worker who,

- (a) is qualified because of knowledge, training and experience to perform the work,
- (b) is familiar with the Act and with the provisions of the regulations that apply to the work, and
- (c) has knowledge of all potential or actual danger to health or safety in the work

Friable material means material that,

- (a) when dry, can be crumbled, pulverized or powdered by hand pressure, or
- (b) is crumbled, pulverized or powdered

HEPA Filter means a high efficiency particulate aerosol filter that is at least 99.97 per cent efficient in collecting a 0.3 micrometre aerosol

Homogeneous material means material that is uniform in colour and texture;

Joint Health and Safety Committee

A joint health and safety committee established under section 9 of the Ontario Occupational Health and Safety Act

Type 1 work

The following are *Type 1* operations:

- Installing or removing ceiling tiles that are asbestos-containing material, if the tiles cover an area less than 7.5 square metres and are installed or removed without being broken, cut, drilled, abraded, ground, sanded or vibrated.
- Installing or removing non-friable asbestos-containing material, other than ceiling tiles, if the material is installed or removed without being broken, cut, drilled, abraded, ground, sanded or vibrated.
- Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if the material is wetted to control the spread of dust or fibres, and the work is done only by means of non-powered hand-held tools.
- Removing less than one square meter of drywall in which joint-filling compounds that are asbestos-containing material have been used.

Type 2 work

The following are *Type 2* operations:

- Removing all or part of a false ceiling to obtain access to a work area, if asbestos-containing material is likely to be lying on the surface of the false ceiling.

- The removal or disturbance of one square metre or less of friable asbestos-containing material during the repair, alteration, maintenance or demolition of all or part of machinery or equipment or a building, aircraft, locomotive, railway car, vehicle or ship.
- Enclosing friable asbestos-containing material.
- Applying tape or a sealant or other covering to pipe or boiler insulation that is asbestos-containing material.
- Installing or removing ceiling tiles that are asbestos-containing material, if the tiles cover an area of 7.5 square metres or more and are installed or removed without being broken, cut, drilled, abraded, ground, sanded or vibrated.
- Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-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-containing material from a pipe, duct or similar structure using a glove bag.
- Cleaning or removing filters used in air handling equipment in a building that has sprayed fireproofing that is asbestos-containing material.
- An operation that is not mentioned in the above sections that may expose a worker to asbestos, and is not classified as a Type 1 or Type 3 operation.

Type 3 work

The following are *Type 3* operations:

- The removal or disturbance of more than one square metre of friable asbestos-containing material during the repair, alteration, maintenance or demolition of all or part of a building, aircraft, ship, locomotive, railway car or vehicle or any machinery or equipment.
- The spray application of a sealant to friable asbestos-containing material.
- Cleaning or removing air handling equipment, including rigid ducting but not including filters, in a building that has sprayed fireproofing that is asbestos-containing material.
- Repairing, altering or demolishing all or part of a kiln, metallurgical furnace or similar structure that is made in part of refractory materials that are asbestos-containing materials.
- 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 not attached to dust-collecting devices equipped with HEPA filters.
- Repairing, altering or demolishing all or part of any building in which asbestos is or was used in the manufacture of products, unless the asbestos was cleaned up and removed before March 16, 1986.

- Work on ceiling tiles, drywall or friable asbestos-containing material is classified according to the total area on which work is done consecutively in a room or enclosed area, even if the work is divided into smaller jobs.

The following provisions apply if a dispute arises as to the classification of an operation under these work types:

- A party to the dispute may notify an inspector at the office of the Ministry of Labour nearest the workplace of the dispute.
- The party who notifies the inspector shall promptly inform the other parties that the inspector has been notified.
- Work on the operation shall cease until the inspector has rendered a decision
- The inspector shall, as soon as possible, investigate the matter and give the parties a decision in writing.

Nothing in the abovementioned dispute subsection affects an inspector's power to issue an order for a contravention of the Act or Regulation.

SCOPE

This document applies to all members of the University community, including contractors performing work at uOttawa workplaces.

ASBESTOS CONTROL PROGRAM

PRIOR TO CONDUCTING ANY WORK, CONSULT THE APPROPRIATE DESIGNATED SUBSTANCES REPORT. THIS DOCUMENT MUST BE READ IN CONJUNCTION WITH THE OCCUPATIONAL HEALTH & SAFETY ACT, IN PARTICULAR, REGULATION 278/05.

The purpose of this document is to acquaint all workers, contractors, employees of contractors and uOttawa personnel of the presence of asbestos within University of Ottawa buildings and the procedures required when working with asbestos. The Asbestos Management Program has been established to maintain a safe work environment for the uOttawa community, including workers, students, contractors, occupants, and/or persons making use of these buildings. These procedures are mandatory and failure to follow them will result in potential disciplinary measures in accordance with collective agreements, removal from site, potential exclusion from future work or other sanctions at the discretion of the University of Ottawa.

This document has been revised according to [Ontario Regulation 278/05 – Asbestos on Construction Projects and in Buildings and Repair Operations](#) and is an amended version of the Asbestos Control Program (2001). Regulation 278/05 includes safe work measures, procedures and enhanced respiratory protection for workers who may encounter asbestos in the course of their work

Facilities has established an asbestos control group consisting of the following personnel:

Asbestos Coordinator – Health, Safety and Risk Manager

The Asbestos Coordinator is responsible for all aspects of the asbestos management program; this may include, but is not limited to the day-to-day operations, capital project implications, sampling, maintaining an updated inventory, performing the necessary notifications (i.e. building occupants, health and safety committees, etc.), investigating asbestos-related issues, responding to asbestos-related questions, among other related duties. The Asbestos Coordinator is the Health, Safety and Risk Manager at Facilities.

Resources Persons – Various

Resource Persons remain available to support the Asbestos Management Program. Resource Persons must be aware of the Asbestos Management Program and its application. A Resource Person may be required to provide assistance in the absence of the Asbestos Coordinator. The primary individuals involved include the:

- Director, Technical Services, Operations and Maintenance; Facilities
- Director, Integrated Project Delivery; Facilities

Objective

The main objective of any asbestos management program is to prevent the accidental release of asbestos fibres during normal building operations, maintenance, repair or renovation. These operations must be monitored to ensure that proper asbestos related precautions are followed when work has the potential to disturb asbestos-containing materials.

Building operations can be divided into three main groups:

- Regular maintenance;
- Repair & renovation contracts; and
- Building occupant activities.

In order to ensure that these operations take the asbestos-containing material into consideration, the management program must implement systems in each area that check for the initial presence of asbestos material and allow for proper action to manage it. These systems are monitored by the Asbestos Coordinator and may include, but are not limited to sampling activities, visual inspections, consultation with specialized asbestos consultants, follow-up investigations, etc. Regular Maintenance operations that could disturb asbestos-containing materials can be divided into three groups:

1. Mechanical repairs;
2. Electrical, mechanical or other work above suspended ceilings in areas of sprayed asbestos, and
3. Custodial work.

Regular Maintenance

The work practices which may be undertaken by building maintenance staff or as part of normal building repair or maintenance work are covered by Ontario Regulation 278/05. These activities are most likely to fall under type 1 or type 2 work. **The employees of the University of Ottawa will perform only Type 1 operations.** Type 2 and 3 work is restricted to specialized contractors, who are contracted specifically for this purpose. Type 2 and 3 work involves further specialized procedures

and equipment. Please consult with the Asbestos Coordinator for more information on type 2 and 3 work. Type 3 work is excluded under the University of Ottawa insurance policy.

Supervisors who assign work must be aware of the presence of asbestos and the implications of the asbestos-containing material on the scope of the work. Supervisors and maintenance workers will require training in asbestos handling procedures in order to monitor the work and implement the system.

Although custodial work will rarely affect the asbestos-containing materials, custodial workers and supervisors should be aware of these materials. Custodial activities should be reviewed to ensure that asbestos-containing material is not being disturbed. **Clean up of potential asbestos-containing material shall not be carried out by the housekeeping staff.**

Repair / Renovation Contract

The Asbestos Coordinator must also ensure that the presence and condition of asbestos is considered by all project coordinators in the development of the various repair and renovation contracts tendered by the University.

Asbestos considerations must be addressed at the initial design (or conceptualization) stage of the project. The asbestos survey must be reviewed (and updated as required) during the design of the project; this design will then include the review of asbestos precautions or abatement procedures that are to be undertaken in conjunction with the project. The possibility of including other asbestos abatements within the scope of the project should also be considered (i.e. removing additional asbestos containing material during the current project), where feasible. The Asbestos Coordinator must then determine whether the abatement specifications can be prepared internally or whether the scope of the work warrants the services of an asbestos consultant.

Building Occupant Activities

Although the activities of the buildings' occupants are difficult to monitor, the likelihood of the disturbance of asbestos-containing material will be reduced when building occupants are aware of the location and condition of the material.

Occupants have the right to be informed of asbestos assessment results and upcoming asbestos-related work, therefore the asbestos coordinator will ensure that the building(s) occupants are notified in a straightforward manner and that the information on asbestos (including any hazard assessment) be made available to the occupants. By providing useful information on the health effects and potential hazards of the asbestos containing materials, the incidence of disturbance (accidental or vandalism) can be significantly reduced.

The Asbestos Coordinator is responsible for the notification of the building occupants in each building; as a result, he/she is also responsible for the fielding, documenting, and responding to questions from occupants. Certain questions may be referred to the Director, Integrated Project Delivery from Facilities, the Assistant Director, Health and Wellness from Human Resources, and/ or the Assistant Director, Occupational Health and Safety from the Office of Risk Management.

In accordance with the Ontario Occupational Health and Safety Act, the Occupational Health and Safety Committee have the right to (section 9(18)):

- e) obtain information from the constructor or employer concerning the conducting or taking of tests of any equipment, machine, device, article, thing, material or biological, chemical or physical agent in or about a workplace for the purpose of occupational health and safety; and
- f) be consulted about, and have a designated member representing workers be present at the beginning of, testing referred to in clause (e) conducted in or about the workplace if the designated member believes his or her presence is required to ensure that valid testing procedures are used or to ensure that the test results are valid.

The Asbestos Coordinator will, in writing, formally notify the respective Occupational Health and Safety Committee(s) and the Office of Risk Management well in advance of any sampling for the purposes of asbestos. The Asbestos Coordinator may also request the Office of Risk Management to facilitate the notification of the respective Occupational Health and Safety Committee(s).

Asbestos Surveys

A reassessment of friable and non-friable asbestos-containing material detected in earlier asbestos surveys was conducted by an external consultant in 2007-08. In order to determine whether building materials contained asbestos, bulk material samples representative of each area were collected by a competent worker and laboratory evaluated.

The re-evaluation was to encompass all factors originally noted in existing reports and concentrated on any signs of deterioration, delaminating or disturbance by maintenance, renovation or occupant activity. The frequency of such re-evaluations is not to be less than once in each 12-month period and may be more frequent if the area is subject to any change of use or frequent maintenance activity.

In the event of potential disturbance of friable or non-friable material that may be asbestos-containing by water leak, structural failure, or other means all friable asbestos in the area shall be re-evaluated promptly using the criteria outlined by the Asbestos Coordinator or his/her delegate.

PERSONNEL TRAINING

As a requirement of the Ontario Regulation 278/05 s. 19, all workers, who may work in close proximity to and who might disturb the asbestos-containing material, must be notified of its presence and appropriately trained in methods of asbestos dust control, including area (such as shelters) and personal protection (such respiratory protection and fit testing). In addition to this requirement, the Asbestos Management Program will require an Asbestos Coordinator who is knowledgeable in all aspects of the program. Thus two separate training courses are recommended.

Detailed information on the regulations and procedures for working around asbestos are available in the asbestos training presentation, which is provided to all participants in the asbestos training courses.

Asbestos Coordinator Training

Due to the responsibilities of the Asbestos Coordinator, he / she must be fully aware of the asbestos health risks, actions for remedial work and obligations, and procedures under Ontario Regulation 278/05. This type of knowledge may be accomplished by through training courses presented by industry leaders in asbestos training.

The course shall topics include: a general introduction to asbestos, its uses and health effects, hazard assessment and addressing occupant concerns, control measures during cleaning and maintenance, specification and inspection of projects and preparation and performance of contracts, suppliers of equipment and specific site problems, etc.

Worker and Supervisor Training

If the control of asbestos exposure of maintenance and renovation workers is to be achieved, it is essential that everyone involved in conducting work, both workers and supervisors, be properly trained. As noted, uOttawa staff will only conduct certain Type 1 operations.

Under Ontario Regulation 278/05, an owner is required to institute and maintain a training program for those workers who are likely to disturb friable or non-friable asbestos-containing material in the course of their work. All employers (including owners of buildings) must ensure that instruction and training is provided to their employees performing Type 1 work. Representatives from the union and the joint health and safety committee are invited to participate in the development of the training program as well as the training program itself.

The training will cover the following areas:

1. Hazards of asbestos exposure;
2. Personal hygiene and proper work practices;
3. Use, cleaning and disposal of respirators and protective clothing.

In addition to maintenance workers and their supervisors, the project coordinators and other staff of Facilities, Information Technology, and Facility Managers / Building Management Agents are recommended to take a modified [Asbestos Awareness](#) workshop. The Office of Risk Management is coordinating this training and provides assistance and / or input where required. Asbestos Awareness workshops are conducted internally and are arranged on an as-needed basis, however typically are scheduled once per year. Contractors hired by the University are also required to have been trained, be insured for asbestos work, produce a WSIB clearance certificate, and if performing or supervising a Type 3 operation, be certified under section 20 of Regulation 278/05. Note – additional requirements may apply. Contact the Asbestos Coordinator for additional information.

Respirator Training and Use

The asbestos work to be performed by personnel in building maintenance will require the use of respirators. This is mandatory for all Type 2, glove Bag work, and Type 3 operations and is also recommended for Type 1 work. Respirator use requires the training of workers on:

- a. Limitations of the protective equipment;
- b. Inspection and maintenance of the protective equipment;
- c. Proper fitting of a respirator; and
- d. Respirator cleaning and disinfection.

The training is to be supplemented by procedures regarding the selection, use and care of respirators. The University will provide the worker with a NIOSH approved respirator in accordance with the Table in Appendix 1.

The most practical respirator for Type 2 procedures is a half-face non-powered respirator equipped with HEPA / P100 filters. The respirator must be properly fitted to produce an effective seal to the workers' face. Please refer to the University Respirator Selection, Use and Care guidelines (available from the Office of Risk Management) for fit-testing procedures. Fit testing is of the utmost importance, since the degree of protection provided by the respirator is very dependent upon the fit of the device to the user's face. This requirement means that respiratory protection devices are not to be worn unless they have been formally verified to ensure that there are no leaks around the face piece. Beards and course facial hair, which prevent contact between the face piece and the worker's face, are not permitted.

Positive and negative seal checks are performed to check the respirator function. These will be demonstrated to the worker, **but are not acceptable substitutes for formal quantitative or qualitative fit tests.**

The use of a respirator places added physical demands on the wearer. Regulation 278/05 requires that a worker not be assigned to an operation requiring the use of a respirator unless physically able to perform the work while using the respirator. Where there is doubt about a worker's ability to work with a respirator, the worker will be required to seek the advice of a physician. The medical examination should concentrate on conditions that affect the worker's ability to breathe. It is strongly recommended to consult a physician to ensure the user is medically fit to wear a respirator. In some instances, the wearing of a respirator may not be recommended; therefore work may not be safe to conduct.

Respirators have to be maintained in good operating condition to retain its original effectiveness.

- The respirator shall be cleaned, disinfected and inspected after use on each shift, or more often if necessary, when issued for the exclusive use of one worker, or after each use when used by more than one worker.
- After being cleaned and disinfected, each respirator shall be inspected and tested to determine if it is in proper working condition. Where the inspection indicates repairs are required, they are to be carried out before the respirator is used again. Replacement components must be those of the manufacturer of the equipment;
- When not in use, respirators shall be stored in a convenient, clean and sanitary location. The storage area should protect the equipment from dust, heat, extreme cold, excessive moisture and damaging chemicals. Individual respirators are recommended to be placed in plastic bags and stored in a manner that will prevent distortion of rubber or plastic parts.

BUILDING RELATED DIRECTIVE

Prior to the completion of the CRA study in 2008, a list of buildings was compiled to indicate where regular work in ceiling spaces was prohibited due to the likelihood of asbestos settled dust above the ceiling tiles. This list was developed in May 2006 taking into account section 12(3) of Reg.278/05 where it states that a Type 2 operation is required when removing all or part of a false ceiling to obtain access to a work area, if asbestos-containing material is likely to be lying on the surface of the false ceiling.

The list of buildings where this directive applied was revised to reflect new information from the CRA study. The original list had many buildings for which it was later determined that there was no asbestos present that could affect the **ceiling spaces** (i.e. in ceiling tiles, piping above suspended ceilings, insulation, etc.).

The full Directive (including Appendices), and updated list of buildings where this directive applies is attached as Appendix 3.

200 Lees Avenue Site Specific Procedure

In addition to the Building Related Directive, there is also a special procedure for access to any crawlspace at 200 Lees Avenue. Please consult the 200 Lees Crawlspace procedure in Appendix 4.

EQUIPMENT AND SUPPLIES

In order to successfully complete small asbestos maintenance jobs following Type 1 procedures, a limited amount of equipment is required. As indicated, University workers will only conduct certain Type 1 operations.

The equipment for a Type 1 is as follows:

- Asbestos approved respirators and filters, in accordance with Appendix 1; if requested by a worker;
- Asbestos approved protective clothing, in accordance with paragraph 12 of section 15 of Regulation 278/05; if requested by a worker;
- Asbestos approved vacuum, equipped with a HEPA filter;
- Safety goggles;
- Drop sheets of polyethylene to protect surfaces;
- Damp cloths;
- Manually-powered tools – not a power tool (either electric or battery operated);
- Yellow asbestos waste bags identified as “Asbestos Containing Material”.

ASBESTOS WORK PRACTICES

Asbestos fibers are harmful if inhaled frequently over long periods of time and can result in diseases of the lungs like asbestosis and cancer several years following initial exposure. Asbestos fibers are not harmful if the fibers are not disturbed, thus the worst types of asbestos-containing materials are "friable" (easily broken up or pulverized).

The minor disturbance of non-friable asbestos-containing materials, other than removing ceiling tiles, can be performed under Type 1 conditions.

Operations classified as Type 1 have a low risk of releasing airborne asbestos. The precautions to adequately protect workers are defined below:

Type 1 Work Procedures (Low Risk)

The **procedures to be taken in Type 1** tasks are summarized as follows:

1. Before beginning work, visible dust shall be removed with a damp cloth or a vacuum equipped with a HEPA filter from any surface in the work area, including the thing to be worked on, if the dust on that surface is likely to be disturbed.
2. The spread of dust from the work area shall be controlled by measures appropriate to the work to be done including the use of drop sheets of polyethylene or other suitable material that is impervious to asbestos.
3. In the case of an operation mentioned in paragraph 4 of subsection 12 (2) of Regulation 278/05, the material shall be wetted before and kept wet during the work to control the spread of dust or fibres, unless wetting would create a hazard or cause damage.
4. A wetting agent shall be added to water that is to be used to control the spread of dust and fibres.
5. Frequently and at regular intervals during the doing of the work and immediately on completion of the work,
 - a. dust and waste shall be cleaned up and removed using a vacuum equipped with a HEPA filter, or by damp mopping or wet sweeping, and placed in a container as described in paragraph 5 of section 15, and
 - b. drop sheets shall be wetted and placed in a container as described in paragraph 5 of section 15, as soon as practicable after subparagraph i has been complied with.
6. Drop sheets shall not be reused.
7. After the work is completed, polyethylene sheeting and similar materials used for barriers and enclosures shall not be reused, but shall be wetted and placed in a container as described in 278/05 s. 15(5) as soon as practicable after s. 15(5) has been complied with.
8. After the work is completed, barriers and portable enclosures that will be reused shall be cleaned, by using a vacuum equipped with a HEPA filter or by damp wiping, as soon as practicable after paragraphs (5) and (7) have been complied with.
9. Barriers and portable enclosures shall not be reused unless they are rigid and can be cleaned thoroughly.
10. Compressed air shall not be used to clean up and remove dust from any surface.
11. Eating, drinking, chewing or smoking shall not be permitted in the work area.
12. If a worker requests that the employer provide a respirator to be used by the worker, the employer shall provide the worker with a NIOSH approved respirator in accordance with Table 2, and the worker shall wear and use the respirator.
13. If a worker requests that the employer provide protective clothing to be used by the worker, the employer shall provide the worker with protective clothing as described in s. 15(12), and the worker shall wear the protective clothing.
14. A worker who is provided with protective clothing shall, before leaving the work area,
 - a. decontaminate his or her protective clothing by using a vacuum equipped with a HEPA filter, or by damp wiping, before removing the protective clothing,
 - b. if the protective clothing will not be reused, place it in a container as described in section 15(5).

15. Facilities for the washing of hands and face shall be made available to workers and shall be used by every worker when leaving the work area.

Type 2 Work Procedures (Moderate Risk)

The minor disturbance of friable material will be performed under Type 2 conditions.

Type 2 operations have a greater risk of asbestos release and require significant precautions to protect the worker and limit the spread of dust. Type 2 work is the minor disturbance of friable asbestos materials. Type 2 procedures include:

1. The work area shall be identified by clearly visible signs warning of an asbestos dust hazard.
2. Signs required by paragraph 1 shall be posted in sufficient numbers to warn of the hazard and shall state in large clearly visible letters that,
 - a. there is an asbestos dust hazard, and
 - b. access to the work area is restricted to persons wearing protective clothing and equipment.
3. A wetting agent shall be added to water that is to be used to control the spread of dust and fibres.
4. Eating, drinking, chewing or smoking shall not be permitted in the work area.
5. Containers for dust and waste shall be,
 - a. dust tight,
 - b. suitable for the type of waste,
 - c. impervious to asbestos,
 - d. identified as asbestos waste,
 - e. cleaned with a damp cloth or a vacuum equipped with a HEPA filter immediately before being removed from the work area, and
 - f. removed from the workplace frequently and at regular intervals.
6. Frequently and at regular intervals during the doing of the work and immediately on completion of the work,
 - a. dust and waste shall be cleaned up and removed using a vacuum equipped with a HEPA filter, or by damp mopping or wet sweeping, and placed in a container as described in paragraph 5, and
 - b. drop sheets shall be wetted and placed in a container as described in paragraph 5, as soon as practicable after subparagraph i has been complied with.
7. Drop sheets shall not be reused.
8. After the work is completed, polyethylene sheeting and similar materials used for barriers and enclosures shall not be reused, but shall be wetted and placed in a container as described in paragraph 5 as soon as practicable after paragraph 6 has been complied with.
9. After the work is completed, barriers and portable enclosures that will be reused shall be cleaned, by using a vacuum equipped with a HEPA filter or by damp wiping, as soon as practicable after paragraphs 6 and 8 have been complied with.
10. Barriers and portable enclosures shall not be reused unless they are rigid and can be cleaned thoroughly.

11. The employer shall provide every worker who will enter the work area with a NIOSH approved respirator in accordance with Table 2 and the worker shall wear and use the respirator.
12. Protective clothing shall be provided by the employer and worn by every worker who enters the work area, and the protective clothing,
 - a. shall be made of a material that does not readily retain nor permit penetration of asbestos fibres,
 - b. shall consist of head covering and full body covering that fits snugly at the ankles, wrists and neck, in order to prevent asbestos fibres from reaching the garments and skin under the protective clothing,
 - c. shall include suitable footwear, and
 - d. shall be repaired or replaced if torn.
13. Compressed air shall not be used to clean up and remove dust from any surface.
14. Only persons wearing protective clothing and equipment shall enter a work area where there is an asbestos dust hazard.

Additional measures may also apply. Ensure to verify s. 15 through 18 of Ontario Regulation 278/05.

Type 3 Work Procedures (High Risk)

Type 3 operations (high risk) cover work where a known high level of airborne asbestos is produced by the disturbance / work. All type 3 work, whether maintenance, building renovation or demolition is carried out by specialized and certified contractors with specialized procedures. The Ministry of Labour shall also be notified of the Type 3 work. **Under no circumstances will University of Ottawa employees conduct Type 3 asbestos work.**

The same procedures for Type 2 apply, with the below noted additions (s. 18 of Ontario Regulation 278/05):

1. The work area shall be separated from the rest of the workplace by walls, the placing of barricades or fencing or other suitable means.
2. Subsection (2) applies to an operation mentioned in s. 12(4)(5)
3. Subsection (3) applies to an operation mentioned in s. 12(1),(2),(3), or (4) that is carried on outdoors.
4. Subsection (4) applies to an operation mentioned in s. 12(4) 1),(2),(3),(4), or (6) that is carried on indoors.

In the case of an operation mentioned in s. 12(4)(5), the following measures and procedures also apply:

1. The spread of dust from the work area shall be prevented by,
 - i. using enclosures of polyethylene or other suitable material that is impervious to asbestos (including, if the enclosure material is opaque, one or more transparent window areas to allow observation of the entire work area from outside the enclosure), if the work area is not enclosed by walls, and
 - ii. using curtains of polyethylene sheeting or other suitable material that is impervious to asbestos, fitted on each side of each entrance or exit from the work area.

2. Unless the operation is carried on outdoors, or inside a building that is to be demolished and will not be entered by any person except the workers involved in the operation and the workers involved in the demolition, the spread of dust from the work area shall also be prevented by,
 - i. creating and maintaining within the enclosed area, by installing a ventilation system equipped with a HEPA filtered exhaust unit, a negative air pressure of 0.02 inches of water, relative to the area outside the enclosed area,
 - ii. ensuring that replacement air is taken from outside the enclosed area and is free from contamination with any hazardous dust, vapour, smoke, fume, mist or gas, and
 - iii. using a device, at regular intervals, to measure the difference in air pressure between the enclosed area and the area outside it.
3. The ventilation system referred to in subparagraph 2 shall be inspected and maintained by a competent worker before each use to ensure that there is no air leakage, and if the filter is found to be damaged or defective, it shall be replaced before the ventilation system is used.
4. Before leaving the work area, a worker shall,
 - i. decontaminate his or her protective clothing by using a vacuum equipped with a HEPA filter, or by damp wiping, before removing the protective clothing, and
 - ii. if the protective clothing will not be reused, place it in a container as described in section 15(5).
5. Facilities for the washing of hands and face shall be made available to workers and shall be used by every worker when leaving the work area.

In the case of an operation mentioned in paragraph 1, 2, 3 or 4 of subsection 12 (4) that is carried on outdoors, the following measures and procedures also apply:

1. If practicable, any asbestos-containing material to be removed shall be thoroughly wetted before and during removal, unless wetting would create a hazard or cause damage.
2. Dust and waste shall not be permitted to fall freely from one work level to another.
3. If practicable, the work area shall be washed down with water after completion of the clean-up and removal described in paragraph 6 of section 15.
4. Temporary electrical power distribution systems for tools and equipment involved in wet removal operations shall be equipped with ground fault circuit interrupters.
5. A decontamination facility shall be located as close as practicable to the work area and shall consist of,
 - i. a room suitable for changing into protective clothing and for storing contaminated protective clothing and equipment,
 - ii. a shower room as described in paragraph 7 of subsection (4), and
 - iii. a room suitable for changing into street clothes and for storing clean clothing and equipment.
6. The rooms described in subparagraphs 5 i, ii and iii shall be arranged in sequence and constructed so that any person entering or leaving the work area must pass through each room.
7. When leaving the work area, a worker shall enter the decontamination facility and shall, in the following order,

- i. decontaminate his or her protective clothing by using a vacuum equipped with a HEPA filter, or by damp wiping, before removing the protective clothing,
- ii. if the protective clothing will not be reused, place it in a container as described in paragraph 5 of section 15,
- iii. shower, and
- iv. remove and clean the respirator.

In the case of an operation mentioned in paragraph 1, 2, 3, 4 or 6 of subsection 12 (4) that is carried on indoors, the following measures and procedures also apply:

1. Friable asbestos-containing material that is crumbled, pulverized or powdered and that is lying on any surface in the work area shall be cleaned up and removed using a vacuum equipped with a HEPA filter or by damp wiping and everything shall be removed from the work area or covered with polyethylene sheeting or other suitable material that is impervious to asbestos.
2. The spread of dust from the work area shall be prevented by an enclosure of polyethylene or other suitable material that is impervious to asbestos, if the work area is not enclosed by walls, and by a decontamination facility consisting of a series of interconnecting rooms including,
 - i. a room suitable for changing into protective clothing and for storing contaminated protective clothing and equipment,
 - ii. a shower room as described in paragraph 7,
 - iii. a room suitable for changing into street clothes and for storing clean clothing and equipment, and
 - iv. curtains of polyethylene sheeting or other suitable material that is impervious to asbestos, fitted to each side of the entrance or exit to each room.
3. The rooms described in subparagraphs 2 i, ii and iii shall be arranged in sequence and constructed so that any person entering or leaving the work area must pass through each room.
4. The mechanical ventilation system serving the work area shall be disabled and all openings or voids, including ventilation ducts to or from the work area, shall be sealed by tape or other appropriate means.
5. Unless the operation is carried on inside a building that is to be demolished and will not be entered by any person except the workers involved in the operation and the workers involved in the demolition, the spread of dust from the work area shall also be prevented by,
 - i. creating and maintaining within the enclosed area, by installing a ventilation system equipped with a HEPA filtered exhaust unit, a negative air pressure of 0.02 inches of water, relative to the area outside the enclosed area,
 - ii. ensuring that replacement air is taken from outside the enclosed area and is free from contamination with any hazardous dust, vapour, smoke, fume, mist or gas, and
 - iii. using a device, at regular intervals, to measure the difference in air pressure between the enclosed area and the area outside it.

6. The ventilation system referred to in subparagraph 5 i shall be inspected and maintained by a competent worker before each use to ensure that there is no air leakage, and if the filter is found to be damaged or defective, it shall be replaced before the ventilation system is used.
7. The shower room in the decontamination facility shall,
 - i. be provided with hot and cold water or water of a constant temperature that is not less than 40° Celsius or more than 50° Celsius,
 - ii. have individual controls inside the room to regulate water flow and, if there is hot and cold water, individual controls inside the room to regulate temperature,
 - iii. be capable of providing adequate supplies of hot water to maintain a water temperature of at least 40° Celsius, and
 - iv. be provided with clean towels.
8. When leaving the work area, a worker shall enter the decontamination facility and shall, in the following order,
 - i. decontaminate his or her protective clothing by using a vacuum equipped with a HEPA filter, or by damp wiping, before removing the protective clothing,
 - ii. if the protective clothing will not be reused, place it in a container as described in paragraph 5 of section 15,
 - iii. shower, and
 - iv. remove and clean the respirator.
9. If practicable, existing electrical power distribution systems that are not water-tight shall be de-energized and locked out where wet removal operations are to be carried out.
10. Temporary electrical power distribution systems for tools and equipment involved in wet removal operations shall be equipped with ground fault circuit interrupters.
11. Friable asbestos-containing material shall be thoroughly wetted before and during removal, unless wetting would create a hazard or cause damage.
12. The work area shall be inspected by a competent worker for defects in the enclosure, barriers and decontamination facility,
 - i. at the beginning of each shift,
 - ii. at the end of a shift if there is no shift that begins immediately after the first-named shift, and
 - iii. at least once each day on days when there are no shifts.
13. Defects observed during an inspection under paragraph 12 shall be repaired immediately and no other work shall be carried out in the work area until the repair work is completed.
14. If practicable, dust and waste shall be kept wet.
15. On completion of the work,
 - i. negative air pressure shall be maintained if required by subparagraph 5 i,
 - ii. the inner surface of the enclosure and the work area inside the enclosure shall be cleaned by a thorough washing or by vacuuming with a vacuum equipped with a HEPA filter,
 - iii. equipment, tools and other items used in the work shall be cleaned with a damp cloth or by vacuuming with a vacuum equipped with a HEPA filter or they shall be placed in a

- container as described in paragraph 5 of section 15 before being removed from the enclosure, and
- iv. a visual inspection shall be conducted by a competent worker to ensure that the enclosure and the work area inside the enclosure are free from visible dust, debris or residue that may contain asbestos.
16. Once the work area inside the enclosure is dry after the steps set out in subparagraphs 15 ii, iii and iv have been completed, clearance air testing shall be conducted by a competent worker in accordance with subsection (5), unless the operation is carried on inside a building that is to be demolished and will not be entered by any person except the workers involved in the operation and the workers involved in the demolition.
17. The barriers, enclosure and decontamination facility shall not be removed or dismantled until,
- i. cleaning has been done as described in paragraph 15, and
 - ii. if clearance air testing is required, it has been completed and the work area inside the enclosure has passed the clearance air test. O. Reg. 278/05, s. 18 (4).

The following rules apply to clearance air testing:

1. Sample collection and analysis shall be done,
 - a. using the phase contrast microscopy method, in accordance with subsection (6), or
 - b. using the transmission electron microscopy method, in accordance with subsection (7).
2. If the work area inside the enclosure fails the clearance air test, the steps set out in subparagraphs 15 ii, iii and iv of subsection (4) shall be repeated and the work area shall be allowed to dry before a further test is carried out, unless paragraph 6 of subsection (6) applies.

Clearance air testing using the phase contrast microscopy method shall be carried out in accordance with U.S. National Institute of Occupational Safety and Health Manual of Analytical Methods, Method 7400, Issue 2: Asbestos and other Fibres by PCM (August 15, 1994), using the asbestos fibre counting rules, and shall comply with the following requirements:

1. Testing shall be based on samples taken inside the enclosure.
2. Forced air shall be used, both before and during the sampling process, to ensure that fibres are dislodged from all surfaces inside the enclosure before sampling begins and are kept airborne throughout the sampling process.
3. At least 2,400 litres of air shall be drawn through each sample filter, even though the standard mentioned above provides for a different amount.
4. The number of air samples to be collected shall be in accordance with Table 3.
5. The work area inside the enclosure passes the clearance air test only if every air sample collected has a concentration of fibres that does not exceed 0.01 fibres per cubic centimetres of air.
6. If the work area inside the enclosure fails a first test that is done using the phase contrast microscopy method, the samples may be subjected to a second analysis using transmission electron microscopy in accordance with the standard mentioned in subsection (7).
7. When a second analysis is done as described in paragraph 6, the work area inside the enclosure passes the clearance air test only if every air sample collected has a concentration of asbestos fibres that does not exceed 0.01 fibres per cubic centimetre of air.

Clearance air testing using the transmission electron microscopy method shall be carried out in accordance with U.S. National Institute of Occupational Safety and Health Manual of Analytical Methods, Method 7402, Issue 2: Asbestos by TEM (August 15, 1994), and shall comply with the following requirements:

1. Testing shall be based on samples taken inside the enclosure and samples taken outside the enclosure but inside the building.
2. Forced air shall be used inside the enclosure, both before and during the sampling process, to ensure that fibres are dislodged from all surfaces before sampling begins and are kept airborne throughout the sampling process.
3. At least 2,400 litres of air shall be drawn through each sample filter, even though the standard mentioned above provides for a different amount.
4. At least five air samples shall be taken inside each enclosure and at least five air samples shall be taken outside the enclosure but inside the building.
5. Sampling inside and outside the enclosure shall be conducted concurrently.
6. The work area inside the enclosure passes the clearance air test if the average concentration of asbestos fibres in the samples collected inside the enclosure is statistically less than the average concentration of asbestos fibres in the samples collected outside the enclosure, or if there is no statistical difference between the two average concentrations. O. Reg. 278/05, s. 18 (7).

Within 24 hours after the clearance air testing results are received,

- a. the owner and the employer shall post a copy of the results in a conspicuous place or places,
 - a. at the workplace, and
 - b. if the building contains other workplaces, in a common area of the building; and
- b. a copy shall be provided to the joint health and safety committee or the health and safety representative, if any, for the workplace and for the building.

The owner of the building shall keep a copy of the clearance air testing results for at least one year after receiving them.

Additional measures may also apply. Ensure to verify s. 15 through 18 of Ontario Regulation 278/05.

EMERGENCY PROCEDURES

Emergency response operations may arise in the following circumstances:

- a. Water leak from, or affecting, piping with asbestos insulation.
- b. Need to enter ceiling space for emergency repair in buildings with sprayed asbestos.
- c. Other, situationally dependent emergency work.

In all cases, workers must use established procedures in accordance with Ontario legislation. Contact the Asbestos Coordinator for assistance. A specialized asbestos abatement and remediation contractor may be required.

In the event of a suspected or known asbestos-related emergency:

1. Clear local areas of all tenants and occupants. Area is to be considered as restricted space.

2. When possible, disable ventilation to area. Reduce the disturbance of asbestos-containing materials.
3. Identify the work area with clearly visible asbestos warning signs.
4. Don respirator on for all asbestos work. Use protective clothing.
5. Use drop sheets to control the spread of dust from the work area (where possible).
6. Perform emergency repair work with minimum disturbance of asbestos.
7. Perform thorough clean-up of area.
8. Arrange for asbestos air clearance testing before re-opening restricted area.

Due to the urgent nature of an accidental disturbance of asbestos fibers, and to ensure that anyone in or near the work area is not exposed to airborne asbestos fibers, the following must be done:

In the event of an accidental disturbance of asbestos fibers:

Stop all work and contact the Asbestos Coordinator and the Office of Risk Management via Protection Services at ext. 5411 or 613-562-5411. Provide Protection Services with as much information about the situation as possible, including:

1. Your name;
2. Location and extent (if known) of asbestos disturbance;
3. Contact number;
4. A brief description of the situation.

Clean up by trained worker(s) may be initiated before the Asbestos Coordinator / Office of Risk Management attend the scene.

1. Isolate the area and protect ALL persons. Ensure that people are not in the immediate area and do not allow anyone entry into the area until the Asbestos Coordinator / Office of Risk Management attends (unless qualified, trained asbestos clean-up team). Note that disturbed asbestos fibres can remain airborne for several hours.
2. The Asbestos Coordinator / Office of Risk Management will attend to assess the situation. Appropriate PPE, including a half-face HEPA filter respirator will be required to enter the area and perform the assessment.
3. During the assessment, Asbestos Coordinator / Office of Risk Management will assess exposure risk and determine the subsequent action / control required. If asbestos content or extent of situation is not known, the "worst case scenario" will be assumed.

Immediate action will be taken to correct the situation and restore to pre-incident status. An investigation will be conducted by the Asbestos Coordinator. A written investigation report will be provided to pertinent parties, including Office of Risk Management, Joint Health and Safety Committees and building occupants, in a timely fashion.

ASBESTOS REPORTS

In 2007-2008, an inventory of the asbestos on campus was completed inventorying asbestos and other designated substances on campus. Reports are available on individual CD-ROM's and

DocuShare, organized by address and building. This initiative includes all buildings that contain, or are highly probable to contain, asbestos materials. These reports, as well as subsequent abatements, are available in full from Facilities upon request. A summary table outlining the location of asbestos is found in Appendix 2. This table takes into account the areas where asbestos was found during the site investigations. **Consult the appropriate and complete asbestos report(s) from Facilities prior to commencing any work.**

Process for New Buildings

New buildings owned by uOttawa will be added to the asbestos program in the following fashion:

1. The Asbestos Coordinator will formally request, from the IPD Project Manager, written confirmation from the designer (architect or otherwise), confirming that materials containing asbestos were not used in the construction of the building. Formal communication on the matter will be included in the Asbestos Management Program files as record of the asbestos inventory (if any).
2. If item 1 does not satisfactorily address asbestos inventory concerns, Facilities will conduct an asbestos sampling campaign for the building(s) in question.

Process for Leased Buildings

Information related to the presence of asbestos in buildings leased to uOttawa will be requested on behalf of uOttawa by the Real Estate and Properties Specialist from Facilities. Information obtained from the leased building's owner will be forwarded to the Asbestos Coordinator and added to the Asbestos Management Program.

APPENDIX 1 – RESPIRATORS

Table 2 extracted from Regulation 278/05; last accessed August 8, 2016

Work Category		Required respirator
Type 1 Operations		
Worker requests that the employer provide a respirator to be used by the worker, as described in paragraph 12 of section 14		Air purifying half-mask respirator with N-100, R-100 or P-100 particulate filter
Type 2 Operations		
Work described in paragraph 1 of subsection 12 (3)		One of the following:
		- Air purifying full-facepiece respirator with N-100, R-100 or P-100 particulate filter
		- Powered air purifying respirator equipped with a tight-fitting facepiece (half or full-facepiece) and a high efficiency filter or N-100, P-100 or R-100 particulate filter
		- Negative pressure (demand) supplied air respirator equipped with a full-facepiece
		- Continuous flow supplied air respirator equipped with a tight fitting facepiece (half or full-facepiece)
Work described in paragraphs 2 to 7 and 9 to 11 of subsection 12 (3)		Air purifying half-mask respirator with N-100, R-100 or P-100 particulate filter
Breaking, cutting, drilling, abrading, grinding,	Material is not wetted	One of the following:
sanding or vibrating non-friable material containing asbestos by means of power tools, if the tool is		
attached to a dust collecting device equipped with a HEPA filter as described in paragraph 8 of subsection 12 (3)		- Air purifying full-facepiece respirator with N-100, R-100 or P-100 particulate filter
		- Powered air purifying respirator equipped with a tight-fitting facepiece (half or full-facepiece) and a high efficiency filter or N-100, P-100 or R-100 particulate filter
		- Negative pressure (demand) supplied air respirator equipped with a full-facepiece
		- Continuous flow supplied air respirator equipped with a tight fitting facepiece (half or full-facepiece)
	Material is wetted to control spread of fibre	Air purifying half-mask respirator with N-100, R-100 or P-100 particulate filter
Type 3 Operations		

Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable material containing	Material is not wetted	Pressure demand supplied air respirator equipped with a half mask
asbestos by means of power tools, if the tool is not attached to a dust collecting device equipped with a HEPA filter as described in paragraph 5 of	Material is wetted to control spread of fibre	One of the following:
subsection 12 (4)		- Air purifying full-facepiece respirator with N-100, R-100 or P-100 particulate filter
		- Powered air purifying respirator equipped with a tight-fitting facepiece (half or full-facepiece) and a high efficiency filter or N-100, P-100 or R-100 particulate filter
		- Negative pressure (demand) supplied air respirator equipped with a full-facepiece
		- Continuous flow supplied air respirator equipped with a tight fitting facepiece (half or full-facepiece)
Work with friable material containing asbestos, as described in paragraphs 1 to 4 and 6 of subsection 12 (4)	Material is not wetted	Pressure demand supplied air respirator equipped with a full facepiece
Work with friable material, as described in paragraphs 1 to 4 and 6 of subsection 12 (4), that contains a type of asbestos other than chrysotile	Material was applied or installed by spraying, and is	Pressure demand supplied air respirator equipped with a half mask
Work with friable material, as described in	wetted to control	One of the following:
paragraphs 1 to 4 and 6 of subsection 12 (4), that contains only chrysotile asbestos	spread of fibre	- Air purifying full-facepiece respirator with N-100, R-100 or P-100 particulate filter
		- Powered air purifying respirator equipped with a tight-fitting facepiece (half or full-facepiece) and a high efficiency filter or N-100, P-100 or R-100 particulate filter
		- Negative pressure (demand) supplied air respirator equipped with a full-facepiece
		- Continuous flow supplied air respirator equipped with a tight fitting facepiece (half or full-facepiece)
Work with friable material containing asbestos, as	Material was not	One of the following:
described in paragraphs 1 to 4 and 6 of subsection 12 (4)	applied or	- Air purifying full-facepiece

	installed by spraying, and is	respirator with N-100, R-100 or P-100 particulate filter
	wetted to control spread of fibre	- Powered air purifying respirator equipped with a tight-fitting facepiece (half or full-facepiece) and a high efficiency filter or N-100, P-100 or R-100 particulate filter
		- Negative pressure (demand) supplied air respirator equipped with a full-facepiece
		- Continuous flow supplied air respirator equipped with a tight fitting facepiece (half or full-facepiece)

APPENDIX 2 – LOCATION OF ASBESTOS

This section provides a brief summary for each building based on:

1. Visual and analytical assessments of ACM that was accessed and observed during the assessments conducted in 2007-2008
2. Information from renovation / construction projects related to sampling or removals of asbestos containing materials.

More details about the building asbestos studies, including laboratory results, are included in the individual reports; **consult the designated substances reports and relevant abatement records**. These reports are available from Facilities upon request.

NOTE: Where uncertainty exists regarding material, sampling activity is compulsory prior to the commencement of the project.

A summary table has been prepared and indicates whether asbestos is located in the named building. Additional information on the presence of asbestos is available from Facilities.

Building Name	Building Address	Asbestos Status	Building Notes
1 Nicholas	1 Nicholas	Does contain asbestos.	
1 Stewart	1 Stewart	Does not contain asbestos.	
100 Laurier	100 Laurier	Does contain asbestos.	
100 Marie-Curie	100 Marie-Curie	Does not contain asbestos.	
100 Thomas-More	100 Thomas-More	Does not contain asbestos.	
1000 Belfast	1000 Belfast	Not Available.	
102 Henderson	102 Henderson	Does contain asbestos.	
104 Henderson	104 Henderson	Does contain asbestos.	
109 Osgoode	109 Osgoode	Does contain asbestos.	
1100 Polytek	1100 Polytek	Not Available.	
112 Henderson	112 Henderson	Does contain asbestos.	
113 Osgoode	113 Osgoode	Does not contain asbestos.	
116 Henderson	116 Henderson	Does contain asbestos.	
118 Henderson	118 Henderson	Does not contain asbestos.	
120 Henderson	120 Henderson	Does contain asbestos.	
120 Osgoode	120 Osgoode	Does contain asbestos.	
122 Henderson	122 Henderson	Not Available.	
128 Henderson	128 Henderson	Does contain asbestos.	
132 Henderson	132 Henderson	Does contain asbestos.	
134 Henderson	134 Henderson	Does contain asbestos.	
129-139-141 Louis Pasteur	139-141 Louis Pasteur	Does contain asbestos.	
143 Séraphin-Marion	143 Séraphin-Marion	Does not contain asbestos.	
145 Séraphin-Marion	145 Séraphin-Marion	Does not contain asbestos.	
147 Séraphin-Marion	147 Séraphin-Marion	Does contain asbestos.	
15-17 Copernicus	15-17 Copernicus	Does not contain asbestos.	
15-17 Stewart	15-17 Stewart	Does contain asbestos.	
170 Waller	170 Waller	Not Available.	
180 Waller	180 Waller	Not Available.	
190 Laurier	190 Laurier	Does contain asbestos.	
192 Laurier	192 Laurier	Does contain asbestos.	Condemned.
19-21 Stewart	19-21 Stewart	Does contain asbestos.	
200 Lees	200 Lees	Does not contain asbestos.	
200 Wilbrod	200 Wilbrod	Does contain asbestos.	
240 Friel	240 Friel	Not Available.	
25 Stewart	25 Stewart	Does contain asbestos.	Condemned.
290 Rideau	290 Rideau	Not Available.	
30-32 Stewart	30-32 Stewart	Does contain asbestos.	
34-36 Stewart	34-36 Stewart	Does contain asbestos.	
38 Stewart	38 Stewart	Does contain asbestos.	
40 Stewart	40 Stewart	Does not contain asbestos.	
45 O'Connor	45 O'Connor	Not Available.	
52 University	52 University	Does contain asbestos.	
538-540 King Edward	538-540 King Edward	Does not contain asbestos.	
542 King Edward	542 King Edward	Does not contain asbestos.	
544 King Edward	544 King Edward	Does contain asbestos.	Condemned.
545 King Edward	545 King Edward	Does contain asbestos.	

Building Name	Building Address	Asbestos Status	Building Notes
546 King Edward	546 King Edward	Does contain asbestos.	Condemned.
548 King Edward	548 King Edward	Does contain asbestos.	
550 King Edward	550 King Edward	Does contain asbestos.	
554 King Edward	554 King Edward	Does contain asbestos.	
555 King Edward	555 King Edward	Does contain asbestos.	
556 King Edward	556 King Edward	Does contain asbestos.	
558 King Edward	558 King Edward	Does contain asbestos.	
559 King Edward	559 King Edward	Does contain asbestos.	
562 King Edward	562 King Edward	Does contain asbestos.	
575-577 King Edward	575-577 King Edward	Does contain asbestos.	Condemned.
585 King Edward	585 King Edward	Does contain asbestos.	
598 King Edward	598 King Edward	Does contain asbestos.	
599 King Edward	599 King Edward	Not Available.	
600 King Edward	600 King Edward	Does contain asbestos.	
600 Peter Morand	600 Peter Morand	Does contain asbestos.	
Café Nostalgica	601-603 Cumberland	Not Available.	
603 King Edward	603 King Edward	Does contain asbestos.	
613 King Edward	613 King Edward	Does not contain asbestos.	
615 King Edward	615 King Edward	Does not contain asbestos.	
62 Templeton	62 Templeton	Does contain asbestos.	
621 King Edward	621 King Edward	Does contain asbestos.	
631 King Edward	631 King Edward	Does contain asbestos.	
647 King Edward	647 King Edward	Does not contain asbestos.	
70 Templeton	70 Templeton	Does contain asbestos.	
72 Templeton	72 Templeton	Does contain asbestos.	Condemned.
74 Henderson	74 Henderson	Not Available.	
74 Templeton	74 Templeton	Does contain asbestos.	
76 Templeton	76 Templeton	Does not contain asbestos.	
78 Templeton	78 Templeton	Does contain asbestos.	
80 Templeton	80 Templeton	Does contain asbestos.	
850 Peter Morand	850 Peter Morand	Does not contain asbestos.	
94 Henderson	94 Henderson	Does contain asbestos.	
Academic Hall	133-135 Séraphin-Marion	Does contain asbestos.	
Alex Trebek	157 Séraphin-Marion	Not Available.	
ARC	25 Templeton	Not Available.	
Biosciences	30 Marie Curie	Does not contain asbestos.	
Brooks Residence	Various	Does not contain asbestos.	
Campus Tunnels	Campus Tunnels	Does contain asbestos.	
CAREG	20 Marie-Curie	Does contain asbestos.	
CARTU	110 University Pvt.	Does contain asbestos.	
Colonel By	161 Louis-Pasteur	Does contain asbestos.	
Cube	160 Louis-Pasteur	Does not contain asbestos.	
Desmarais	55 Laurier	Not Available.	
D'Iorio	10 Marie Curie	Does not contain asbestos.	
Fauteux	57 Louis-Pasteur	Does contain asbestos.	
FSS	120 University	Not Available.	
Gendron	30 Marie Curie	Does contain asbestos.	

Building Name	Building Address	Asbestos Status	Building Notes
Hagen	115 Séraphin-Marion	Does contain asbestos.	
Hamelin	70 Laurier	Does not contain asbestos.	
Henderson Residence	202 Henderson	Not Available.	
Hyman Soloway Residence	157 Laurier	Does not contain asbestos.	
Lamoureux	145 Jean-Jacques Lussier	Does not contain asbestos.	
Leblanc Residence	45 Louis-Pasteur	Does contain asbestos.	
MacDonald	150 Louis-Pasteur	Does contain asbestos.	
Marchand Residence	110 University Pvt.	Does contain asbestos.	
Marion	140 Louis-Pasteur	Does contain asbestos.	
Montpetit	125 University	Does contain asbestos.	
Morisset	65 University	Does contain asbestos.	
Perez	50 University	Does contain asbestos.	
Power Plant	720 King Edward	Does contain asbestos.	
Residential Complex	90 University	Does not contain asbestos.	
Roger Guindon	451 Smyth	Does contain asbestos.	
Sacré-Coeur	591 Cumberland	Not Available.	
Simard	60 University	Does contain asbestos.	
SITE	800 King Edward	Does not contain asbestos.	
Sports Complex	801 King Edward	Does not contain asbestos.	
Stanton Residence	100 University Pvt.	Does contain asbestos.	
Tabaret	550 Cumberland	Does contain asbestos.	
Thompson Residence	45 University	Does contain asbestos.	
University Centre	85 University	Does contain asbestos.	
Vanier	136 Jean-Jacques Lussier	Does contain asbestos.	

Current as of June 23, 2016

Does contain asbestos	73
Does not contain asbestos	27
Not Available	17
Total	117

APPENDIX 3 – BUILDING RELEATED DIRECTIVE

Building-Related Directive for Work Impacting Ceilings of Buildings Constructed pre-1983

This directive is written in accordance with the Ontario Occupational Health and Safety Act and its Regulations; specifically, Regulation 278/05 as well as with the University of Ottawa Policy 77.

Purpose

The purpose of the directive is to provide direction for all building-related work impacting ceilings in all buildings listed on Appendix A. Consult Appendix A, for the list of buildings for which this directive applies.

Background Information

Testing of the ceiling spaces at a number of buildings has shown the presence of asbestos fibres in the dust layer on top of some of the suspended ceiling tiles as well as in some ceiling tiles. Work on ceilings or in ceiling spaces could disrupt the dust making asbestos fibres airborne and available for inhalation. The directive was developed taken into consideration section 12(3) of Reg.278/05 where it states that Type 2 operation is required when removing all or part of a false ceiling to obtain access to a work area, if asbestos-containing material is likely to be lying on the surface of the suspended (false) ceiling.

Definitions

Asbestos

Asbestos means any of the fibrous silicates: actinolite, amosite, anthophyllite, chrysotile, crocidolite, tremolite.

Asbestos-Containing Material

A material is considered containing asbestos when it contains 0.5 per cent or more asbestos by dry weight.

Authorization and Work Permit

The Work Permit (Appendix B) will allow persons to access building-related work areas impacting ceiling as defined in this directive for buildings listed in Appendix A, under the conditions set by this directive.

Authorization and Work Permits will be issued by the Directors specified, or their delegated, competent authorities as defined, under conditions set by this directive. The authorization will be provided in writing using the approved Work Permit Form (Appendix B) and recorded in the Work

Permit Registry. Verbal authorization can be given in emergency situations but must be followed-up with a written authorization using the established Work Permits within 24 hours.

A work permit must be completed each time an authorization is provided for accessing ceilings for all building listed in Appendix A. The work permit must be presented upon request by a University representative. The permit must be posted in clear view of occupants near where the work will take place.

Building-related Work Impacting Ceilings

Any work that may involve disturbing ceiling tiles or material located in close proximity to the ceiling tiles, and any work occurring in ceiling spaces. This would include any destructive work on walls, ceilings or floors such as cutting holes, hammering, ventilation repair, or hanging items from the ceiling. If in doubt, please contact Facilities at 613-562-5800 extension 2222 or ext. 6992.

Ceiling Space

Ceiling Space is defined as any space between a suspended ceiling constructed of any material and the slab, roof or deck above it. The ceiling is considered the suspended ceiling above an occupied space. This includes ceilings in grey houses.

Competent Person

A competent person means a person who,

- a) Is qualified because of knowledge, training and experience to organize the work and its performance,
- b) Is familiar with the OHS Act and the regulations that apply to the work. In the context of this directive, this includes to have received proper training and certification on Regulation 278/05 as approved by the University of Ottawa or by the Ministry of Labour, and
- c) Has knowledge of any potential or actual danger to health or safety in the workplace.

Emergency

For the purposes of this directive, an emergency is defined as an unplanned incident or event that requires immediate access to, or interaction with, building-related work areas in order to protect the health and safety of persons, the University's assets, property, and environment.

Occupied Space

The space used to conduct normal activity to support the University's mandate, excluding building related works. This activity is normally conducted in a classroom area, office space area, laboratory, etc.

Persons

A person is anyone within University property regardless of their status within the University. This includes University workers, students, contractors, visitors, etc.

Type 2 or Type 3 Operations

Consult the uOttawa Asbestos Management Program for further information about different types of work or consult [Regulation 278/05](#) for detailed information.

Work Authority

Work authority is when a person has authority over a worker (not only University personnel). This refers to a working hierarchy where a supervisor has authority over a worker. However, this also includes a working relationship where University personnel contracts for services and has charge of a workplace, coordinates or directs work to be conducted.

APPLICATION

This directive applies to all persons.

This most current version of this directive supersedes any previous directive, protocol, procedure, etc. associated with building-related work impacting ceilings in all buildings constructed pre 1983.

ROLES AND RESPONSIBILITIES

Deans and Directors

Deans and Directors must ensure the protection of health and safety within their respective faculty and service. They must ensure that this directive is provided to all concerned persons and that those under their authority are diligent in the application of their responsibilities, in particular in the application of this directive.

Deans and Directors will ensure that persons under their work authority have received the required training and notification of this directive; they will also ensure that non-conformances are appropriately investigated.

Only the Directors (or delegated authorities of same) of the following Services can issue an authorization and Work Permit (except for Type 3 Operations):

- Facilities;
- Office of Risk Management.

All Work Permit Registries or authorizations (Appendix B) provided must be sent to the Office of Risk Management and Facilities prior to work being conducted.

Only the Director of Facilities (or delegate(s)) can authorize a Type 3 operation or a glove bag removal.

Supervisor and Project Managers

Supervisors and Project Managers must provide this written directive to all persons under his/her work authority who may work in contact with, or in close proximity to the ceilings or ceiling spaces or other work area as defined by building-related work impacting ceilings.

Supervisors must also ensure that this procedure is followed and enforced.

All Persons

All persons as defined must follow this directive.

Protection Services

Protection Services will provide access to only those who have received an authorization and Work Permit. They will follow their call procedure for reporting non-conformances to the Office of Risk Management.

Office of Risk Management

In addition to the above, the Office of Risk Management will deliver information sessions on the hazards of asbestos.

Facilities

In addition to the above, Facilities will notify applicable faculties and services of this directive and will conduct appropriate investigations of non-conformance incidents, potential exposures, etc. The Asbestos Coordinator is responsible for coordinating these activities.

Health and Wellness; Human Resources

In addition to the above, the Health and Wellness Sector will receive health related concerns of employees, investigate such health related concerns and, when necessary, conduct and manage health surveillance programs for employees.

DIRECTIVE

It is strictly forbidden to disturb or move any ceiling tiles or to conduct any building-related work impacting ceilings for all buildings listed in Appendix A. This directive applies unless one of the following criteria is met:

- Results from sampling material demonstrate that any dust located on the ceiling tiles contains less than 0.5 % of asbestos by dry weight. Consult Appendix C for approved sampling procedures and analysis, as well as companies recognized by the University to conduct such sampling. Results must be forwarded to Facilities and the Office of Risk Management.
- Documentation on renovation projects demonstrating that the asbestos hazards were all changed / removed since 1983 (i.e. ceiling tiles, pipe insulation, etc.); or
- Applying a type 2 operation (with exception to glove bag procedures), unless a type 3 operation is required.
- Applying type 3 operation or type 2 glove bag removal. All type 3 operation and glove bag removal must be directed under the supervision of the Asbestos Coordinator or his / her delegates. Consult Appendix D for more detailed information on Type 3 operation.

This directive addresses settled dust on ceiling tiles that may contain asbestos for buildings listed in Appendix A. The University is required, in all aspects, to follow Regulation 278/05 for all building materials that have a potential to contain asbestos, e.g. ceiling tiles, drywall, insulation, etc. The University of Ottawa Asbestos Management Program has been reviewed to reflect the current legislative requirements (Regulation 278/05).

In case of an emergency, contact Protection Services (5411) immediately.

AWARENESS TRAINING

Concerned faculties and services must ensure that persons under their authority receive proper instruction on this directive. This may be achieved through an information session.

Any person, who because of their work activity related to asbestos or who supervise those who may come in contact with asbestos, are required to attend the information session related to this directive.

Concerned Faculties and Services will be notified by the Office of Risk Management of upcoming sessions. This does not preclude the responsibility of each Faculty and Service contacting the Office of Risk Management for additional training.

Faculties and Services must maintain the attendance list of those who have received the training.

Workers who will be conducting type 1 or 2 operations must be a competent worker as defined in this directive.

REPORTING

Health Concern

All health related concerns should be reported to the Health and Wellness Office in Human Resources via email at santerh@uottawa.ca or at extension 1473.

Non-conformance

Any person witnessing non-conformance to this directive must immediately report the incident to Protection Services at 5411.

Protection Services will immediately contact Facilities and the Office of Risk Management to advise them of any known non-conformances.

Facilities, in conjunction with the Office of Risk Management, will immediately investigate the situation and provide further direction, as necessary. Facilities will ensure that proper notification is conducted and remedial action taken.

DISCIPLINARY MEASURES

Any University employee who contravenes this directive is subject to disciplinary measures in accordance with Policy 2d (Disciplinary Measures for Reprehensible Acts) and collective agreements governing their work conditions.

Any other person is subject to relevant University Policy, or verbal or written contracts (when relevant). Persons contravening this directive will be requested to immediately leave the University Buildings and could be subject to legal action by the University.

EXCEPTION

No exception may be made to this directive without special authorization from Facilities and/or the Office of Risk Management.

EFFECTIVE

This directive is effective immediately, until further notice.

Prepared by:

Office of Risk Management

Reviewed by:

Facilities

Health and Wellness, Human Resources

Approved by:

Michael Histed,
Director, Office of Risk Management

Date

Appendix A – Application of Building Related Directive

List of buildings for which the directive currently applies.

Building Abbreviation	Building Name	Building Address	Year of Construction	Reason
300	Campus Tunnels	Campus Tunnels	1950-73-2001	DS report indicates asbestos present
113	94 Henderson	Henderson; 94	1920	rented space; unable to inspect
216	555 King Edward	King Edward; 555	1920	DS report indicates pipe insulation above ceiling
225	600 King Edward	King Edward; 600	1956	DS report indicates pipe insulation above ceiling
CTE	Power Plant	King Edward; 720	1972	DS report indicates asbestos present
LRR	100 Laurier	Laurier; 100	1893	DS report indicates asbestos present
236	190 Laurier	Laurier; 190	1920	DS report indicates asbestos present
MCD	Macdonald Hall	Louis Pasteur; 150	1965	DS report indicates asbestos present
LBC	Leblanc Residence	Louis Pasteur; 45	1965	DS report indicates asbestos present
FTX	Fauteux Hall	Louis Pasteur; 57	1973	DS report indicates asbestos present
162	120 Osgoode (Grocery Store)	Osgoode; 120	1920	DS report indicates asbestos present
262	15-17 Stewart	Stewart; 15-17	1930	DS report indicates asbestos present
263	19-21 Stewart	Stewart; 19-21	1930	DS report indicates asbestos present
266	74 Templeton	Templeton; 74	N/A	DS report indicates asbestos present
MRD	Marchand Residence	University; 110	1965	DS report indicates asbestos present
THN	Thompson Residence	University; 45	1972	DS report indicates asbestos present
SMD	Simard Hall	University; 60	1973	DS report indicates asbestos present
STN	Stanton Residence	University 90	1971	DS report indicates asbestos present

Appendix B – Sample Work Permit and Registry

The person responsible for authorization for access to ceiling spaces in the buildings covered by the directive must follow the criteria outlined in the directive. The person must complete the work permit as well as the work permit registry.

These documents must be provided to the Office of Risk Management and Facilities before the coming into force of the work permit.

Work Permit Registry

Authorization #	Effective Date		Building	Name of the company or of the person authorized	Reason for authorization	Name of the person who authorized the access	Signature
	Beginning	End					

Authorization to ceiling spaces in buildings listed in Appendix A is restricted unless:

1. Results from sampling material demonstrates that dust located on the ceilings tiles contains less than 0.5 % of asbestos by dry weight. All test results must be forwarded to Facilities and Office of Risk Management;
2. Documentation on renovation projects clearly demonstrates that the ceilings tiles were all changed since 1983;
3. The work will be carried out in accordance with the procedure for type 2 operations (exception to globe bag removal);
4. The work will be carried out in accordance with the procedure for type 2 glove bag removal or a type 3 operation.



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Authorization #

Work Permit for Working in the Ceiling Spaces

Building:

Name of the Company or the person authorized:

Effective from _____ to _____

uOttawa Representative

Date

Appendix C – Approved Sampling Procedures, Analysis of Sampling and Consultants

The method and procedures for establishing whether material is asbestos-containing material and for establishing its asbestos content and the type of asbestos shall be in accordance with the following standard:

U.S. Environmental Protection Agency. Test Method EPA/600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials. June 1993.

The testing procedures required shall be carried out on bulk material samples that are randomly collected by a competent worker and are representative of each area of homogeneous material. The minimum number of bulk material samples to be collected from an area of homogeneous material is set out in table below (Bulk Material Samples).

If analysis establishes that a bulk material sample contains 0.5% or more asbestos by dry weight,

- a) it is not necessary to analyze other bulk material samples taken from the same area of homogeneous material (positive stop); and
- b) the entire area of homogeneous material from which the bulk material sample was taken is deemed to be asbestos-containing material

BULK MATERIAL SAMPLES

Item	Type of material	Size of homogeneous material area	Minimum number of bulk material samples
1.	Surfacing material, including without limitation material that is applied to surfaces by spraying, by troweling or otherwise, such as acoustical plaster on ceilings and fireproofing materials on structural members	Less than 90 square metres	3
		90 or more square metres, but less than 450 square metres	5
		450 or more square metres	7
2.	Thermal insulation, except as described in item 3	Any size	3
3.	Thermal insulation patch	Less than 2 linear metres or 0.5 square metres	1
4.	Other material	Any size	3

Approved consultants to conduct sampling and report on the results are:

- EHS Partnerships (EHSp)
- CM3, or
- A competent company recognized by the University of Ottawa. Contact Facilities or Office of Risk Management for detailed information.

To note that, once the sampling has been conducted, results turnaround time is normally 7-10 days. If a rush turn-around-time is applied, the results from the lab can be obtained within 1 day following the sampling. Rush costs will likely be applied.

All reports on asbestos sampling / analysis must be sent to the Office of Risk Management and Facilities.

APPENDIX 4 – 200 LEES CRAWLSPACE PROCEDURE

200 Lees Avenue Crawlspace Procedure

Purpose

The purpose of the procedure is to ensure that people who will be accessing the crawlspaces located at 200 Lees are fully informed and fully protected for the work required.

Application

This procedure applies solely to the 200 Lees Avenue Campus, located at the University of Ottawa. Blocks A, B, C and Dare impacted by this procedure. All persons (including workers, contractors, etc.) are impacted by this procedure. For clarification on any item in this document, or if this document applies to a specific location, please contact Facilities and/or the Office of Risk Management.

This procedure is to be read in conjunction with:

- the uOttawa Asbestos Management Program;
- the Risk Management Health & Safety Plan (RMHS Plan), revised February 2012,
- the Ontario Occupational Health & Safety Act and its regulations; particularly Regulation 278/05.

Procedure Statement

Due to age of the buildings and the possibility of asbestos containing materials present in crawlspaces (and potentially damaged asbestos on the surface soil), and considering Regulation 278/05 section 8 (10) (a), **it is therefore prohibited to enter any of these spaces until an extensive sampling campaign is completed, with supported written documentation. Entry is permitted if the following conditions are met:**

- it is determined that a particular block in the crawlspace does not contain asbestos containing materials;
- it is determined that exposed, damaged, or freely disturbed asbestos containing materials are removed and supporting documentation is provided;
- entry must be conducted under an exceptional circumstance. If this is required, contact the Facilities Health, Safety and Risk Manager, or the Office of Risk Management;
- the access purpose is for conducting sampling; or
- the access purpose is for conducting asbestos abatement and / or removing the soil.

Identification / Locations of crawlspaces

Crawlspaces exist throughout the 200 Lees Avenue campus. Most spaces are identifiable by their square shaped cover, located at floor level. The covers measure approximately 1m². There are also entry points accessible from the wall (in the mechanical rooms) in Blocks A and C. The total numbers of crawlspaces are as follows:

- Block A: 6

- Block B: 2
- Block C: 5 (three horizontal entry points in the mechanical room in Block C)
- Block D: 1
- Block E: 0

A map of the crawlspace locations is included as Appendix A for reference.

Requirements and Conditions to Enter the Crawlspace

Once sampling has determined what potential hazards are present, there may be requirements to remove soil. If such a requirement is necessary due to the sample results, the only work permitted to be conducted within the crawlspace is that related to the removal of existing or potentially asbestos containing materials.

Written confirmation or approval

The purposes to enter the crawlspaces will vary. Prior to any work, the project or work order must be approved by Facilities. All requests to perform work / enter crawlspaces are to be logged and recorded through 2222 and a copy of the work request forwarded to the Health, Safety and Risk Manager at Facilities. All requests are to receive written approval from Facilities prior to the work commencing.

Confined Space Program

As part of the University of Ottawa Confined Space Program, the crawlspaces were assessed to determine if these spaces met the definition of a confined space as defined in Ontario Regulation 632/05. Site visits were conducted and the spaces assessed. It was determined that these spaces did not meet the definition of a confined space, but were identified as a “potentially hazardous space”, in accordance with uOttawa Confined Space Program, due to the possibility of hazardous atmospheres created by work conducted within. While the spaces were not considered confined spaces, there exists precautions to abide by prior to entering any crawlspace. These precautions are detailed in the uOttawa Confined Space Program, available from Facilities and the Office of Risk Management.

Site Specific Risk Management Plan

The Risk Management Health and Safety Plan, dated Feb 2012, must be fully implemented.

Independent Third Party Consultation and Supporting Documentation

Prior to conducting the requested project / operation, the University will engage an independent third party to assist in planning the specific task, overseeing the work to ensure that any project-related tasks are conducted in accordance with the applicable legislation, and report, in writing, to the University of Ottawa the results of the work and contraventions, if applicable. The independent third party will notify the University immediately of any contraventions.

Buddy System

When conducting work that involves entering the crawlspaces at 200 Lees Avenue, it is strongly recommended to conduct the work using the “buddy system” by working in pairs. Due to the limited need to enter these spaces, emergency care may not be available for medical emergencies, or potential injuries that may produce or limit cognizance to an injured worker. For these reasons, two workers are recommended for all tasks in the crawlspace(s) – one worker to perform the work, and one worker to monitor the first worker. The person not conducting the work, the spotter, will maintain visual contact with the entrant where possible to do so. Where this is not feasible, voice communication will be used (i.e. verbal communication, radio communication (i.e. two-way radio) etc.

Training

All entrants will, at minimum, be trained in the following:

- All [mandatory health and safety training](#)
- WHMIS
- Basic Asbestos Awareness and Operational training (in areas of asbestos containing materials)
- Site specific training; provided by the supervisor of the project / work (this is to include emergency procedures / contacts, potential hazards of the work environment, etc.)
- Orientation to the work area (such as drawings, plans, visual tours (where possible) etc.)
- Fall Prevention / Basics of Ladder Safety
- Use of personal protective equipment required for their work (including fit testing for respiratory protection)
- Training on the site specific Risk Management Health & Safety Plan for 200 Lees Ave.

Entrants may be asked to provide proof of valid training prior to working in these spaces.

Personal Protective Equipment (PPE)

Table 3-1 in the 200 Lees Risk Management Health & Safety Plan indicates the PPE required to be worn when entering the crawlspaces at 200 Lees Avenue. Table 3-1 lists Level C protection as appropriate for work in the crawlspaces. These precautions include, but are not limited to:

- A minimum of a NIOSH-approved P-100 mask and high efficiency particulate filter
- Safety glasses or chemical splash goggles (as required)
- Hooded chemical-resistant clothing (overalls; two-piece chemical-splash suit; disposable chemical-resistant overalls)
- Gloves, outer, chemical-resistant
- Gloves, inner, chemical-resistant
- Boots (outer), chemical-resistant steel toe and shank (as required)
- Hard hat (as required)

All personal protective equipment requires the user to be instructed on its use and limitations. For respirators, fit testing is mandatory.

Entry, Egress and Decontamination Procedures to Implement

Classification of the Task

Due to the potential presence of asbestos in the crawlspaces, and the uncontrollable nature of the environment, any entries will be classified as a Type 2, with additional Type 3 precautions. These precautions include, but are not limited to, a decontamination unit required for each entrance during each project / work order (in areas with multiple entrances, make inaccessible one or more of the entrances to provide a single point on entry / exit).

Entry locations will be restricted using a physical barrier at all approaches with signage posted on the barriers indicating that the asbestos work is being performed. Signage will conform to Ontario Regulation 278/05.

Decontamination

A typical decontamination unit functions similar to that of the following:

- The worker(s) enters a clean room and changes into their required personal protective equipment
- The worker(s) passes through the shower and into the dirty side of the change room and into the work area
- Planned work is conducted in the asbestos environment
- The worker(s) prepare to exit the area and into the “dirty side” of the decontamination unit
- The worker(s) then proceed into the shower area where they clean themselves and their respiratory protection
- The worker(s) proceed to the clean side and change to their street clothes

The external third party contracted as part of the work oversight will be able to confirm the requirements for entry and exit dependent on the work being planned. A site specific entry, exit and decontamination procedure will be issued for each project and / or work order.

Ladders and Tools

Where entry is required from the floor, due to the nature and configuration of the crawlspaces, they must be accessed using a ladder. The ladder must be adequate length to provide an extension of 3 feet over and above the crawlspace entrance. Ensure that the ladder is firmly supplanted in the crawlspace prior to descending. Due to the ladder's presence in the crawlspace, this means that the ladder, along with other items brought into the crawlspaces must be adequately decontaminated prior to exiting the space, or disposed of as asbestos waste prior to removing them from the work area.

At this time, Facilities is assessing the possibility of installing fixed access ladders in certain crawlspaces to provide access. At this time, this is simply a proposal. No fixed ladders have been installed.

Entry Tools

In order to access the crawlspaces, a special tool is required to remove the covers located at floor level. The tool is a large “T-bar”, threaded at the lower portion of the “T”. The threaded part of the T-bar is inserted and screwed into a hole in the cover. The upper part of the T-bar is then used as a

lever to lift and shimmy the cover out of place. The covers for the crawlspaces are heavy, exercise caution when removing and re-securing the covers. To access this tool, speak with the Health, Safety and Risk Manager at Facilities (ext. 6992).

Waste / Garbage

All items entering the crawlspaces that cannot be decontaminated must be disposed of as asbestos waste in accordance [with applicable regulations](#). This includes any tools, protective clothing, equipment, debris, etc. The waste is the responsibility of the person, or persons, who contracted the work, and / or generated it.

Signage

To ensure that entrants, and / or perspective entrants are aware that the crawlspaces are asbestos containing, it is proposed that signage be installed at all entry points to indicate the following:

- That the soil is asbestos containing with a reference to the Asbestos Management Plan and the Ontario Regulation 278/05
- Reference to the 200 Lees Risk Management Health & Safety Plan (revised February 2012)
- List of the appropriate personal protective equipment required to enter
- Perspective entrants must obtain written approval prior to accessing any of the spaces

Partial Sampling Campaign

A partial sampling campaign at 200 Lees has been completed. The following Blocks at 200 Lees were sampled at varying times during 2012. Sample results for each block can be obtained from Facilities.

Block A

Following sampling, asbestos was observed within the soil. Prior to building demolition and construction that occurred in 2012, soil was “vecloaded” and removed from the crawlspace in Block A. Precautions for heavy metals remain in place.

Block B

Following sampling, asbestos was not observed within the soil. Precautions for heavy metals remain in place.

Block C

Following sampling, asbestos was not observed within the soil. Precautions for heavy metals remain in place.

Block D

Sampling has yet to be conducted in this Block. Until further notice, it is assumed that Block D contains asbestos within the soil. All precautions detailed within this procedure remain in place. Precautions for heavy metals remain in place.

Questions, comments or and Concerns

Any questions, comments, or additional concerns may be brought to the attention of the Health, Safety, and Risk Manager for Facilities, or the Office of Risk Management.