



ASBESTOS MANAGEMENT PROGRAM

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NBCC Asbestos Management Program

Scope

NBCC's asbestos management program encompasses all work with asbestos-containing material ($\geq 1\%$ asbestos) under NBCC control, including buildings, equipment and grounds.

This program incorporates the requirements of "**A Code of Practice for Working with Materials Containing Asbestos in New Brunswick**". This **Code of Practice** is referenced in New Brunswick Regulation 92-106 under the Occupational Health and Safety Act. The program is reviewed by the NBCC Campus and Corporate Office's Joint Health and Safety Committees.

Purpose

Where it has been established by inspection and bulk sample analysis that material containing asbestos has been used in an NBCC building, NBCC shall ensure that an asbestos management program is developed in writing and maintained while the asbestos-containing materials remain in the workplace.

Asbestos is a general term which is used to describe a group of fibrous mineral silicates. The three main types of asbestos include: chrysotile (white asbestos), amosite (brown asbestos) and crocidolite (blue asbestos). A variety of lung diseases and cancer have been associated with exposure to airborne asbestos fibres. As a result, the use of asbestos has been restricted in many jurisdictions. Where asbestos products are still in use, a concerted effort has been made to minimize exposure of those employees handling the product and of the general public.

A **Code of Practice** was developed to provide safe handling procedures to minimize exposure to asbestos-containing materials.

Many different types of work activities can be undertaken when dealing with asbestos-containing materials. The potential exposure of employees to airborne asbestos fibres, and the risks involved, will vary greatly with the type of work done.

Thus, for the purposes of the **Code of Practice**, asbestos-related work has been classified under three different classes (Class 1, 2 and 3) depending on the degree of risk of exposure, and the controls that are required to keep the exposure as low as possible.

NBCC shall also take every precaution reasonable in the circumstances to ensure that every employee, and anyone who is not an employee of NBCC and who has access to the workplace, is protected. Every such employee shall comply with the requirements of this **Code of Practice**.

Definitions

Amended water

- water to which a wetting agent has been added.

Approved

- approved by an officer appointed under the *Occupational Health and Safety Act*;

Asbestos

- any of the following fibrous silicates: chrysotile, amosite, crocidolite, actinolite, anthophyllite, or tremolite.

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Asbestos-containing material

- material, including fireproofing, friction products, textiles, insulation or reinforcing materials, which contains 1% or more by volume of asbestos.

Building

-includes a structure, and without restricting the generality of the foregoing, includes electrical, plumbing, heating and air handling equipment, and rigid duct work;

Competent

- qualified, because of such factors as knowledge, training and experience to do assigned work in a manner that will ensure the health and safety of persons,
- knowledgeable about the provisions of the Act and the regulations that apply to the assigned work, and
- knowledgeable about potential or actual danger to health or safety connected with the assigned work.

Class 1, Class 2, or Class 3

- an operation and procedure described in sections later in this document.

Fibre

- a fibre of asbestos that is more than five micrometres in length and that has a length-to-width ratio of not less than three to one as viewed in a phase-contrast optical microscope at four to five hundred magnification.

Fibre/cm³

- fibres of asbestos per cubic centimetre of air.

Friable material

- material that, when dry, can be or has been crumbled, powdered or pulverized by hand pressure.

HEPA filter

- a High Efficiency Particulate Aerosol filter that is at least 99.97 per cent efficient in collecting a 0.3 micrometre aerosol.

NIOSH

- National Institute of Occupational Safety and Health of the U.S. Department of Health and Human Services.

Officer

- an occupational health and safety officer appointed under section 5 of the *Occupational Health and Safety Act*, Chapter O-0.2.

Waste material

- any removed asbestos-containing material not intended for reuse and asbestos-contaminated material that cannot be cleaned adequately for reuse, and includes disposable clothing and personal protective equipment.

Wetting agent

- any product that when added to water will lower the water viscosity and help to penetrate the asbestos material.

Inspection and Determination of Asbestos

The inspection, sampling and analysis of suspected asbestos-containing material is extremely important. Visual inspection and checking of the building's records may not be adequate to establish the presence of asbestos. Suspect material could contain glass fibres, cellulose or other non-asbestos mineral fibres.

It is critical, therefore, that bulk sampling of suspected materials in buildings be carried out properly, and that laboratory analyses are performed accurately.

Before performing the demolition, alteration or repair of machinery or equipment, or of a building, aircraft, locomotive, railway car, vehicle or ship, or any part known to contain, or suspected of containing, asbestos, NBCC employees shall inspect and carry out bulk sample analysis to establish whether or not any material that is likely to be handled, dealt with, disturbed or removed contains asbestos.

For the purposes of this **Code of Practice**, an acceptable procedure for establishing whether asbestos is present in material is as follows:

- a) One sample should be taken from each room or area containing the same material.
- b) Separate samples should be taken where there is a difference in the texture or color of the material.
- c) A small container should be used, such as a plastic 35 mm film canister, or a small wide-mouth glass jar with a screw-on lid. The container should be dried and cleaned.
- d) The material from which the sample is drawn should not be otherwise disturbed or damaged.
- e) The area around where the sample is collected should be sprayed with a light mist of water to prevent further damage and fibre release during collection.
- f) The open end of the container should be gently twisted into the material. A core of the material should fall into the container. A sample can also be taken by using a knife to cut out or scrape off a small piece of material, and then place it into the container. Be sure to penetrate any protective coating and all the layers of material.
- g) The sample container should be tightly closed. The exterior of the container should be wiped with a damp cloth to remove any material which may have adhered to it.
- h) The container lid should be taped to prevent the accidental opening of the container during shipment or handling.
- i) The sample container shall be labelled to identify the location and date the sample was taken, and bear a unique identification number.
- j) A written record of each sample shall be made by noting the date the sample was taken, the location of the material sampled, the area or room sampled, and the identification number.
- k) The bulk sample(s) obtained shall be analyzed in a laboratory which has the experience and training to conduct analyses with precision and accuracy.
- l) The request for analysis shall specify:
 - i. classification of the type of asbestos
 - ii. per cent composition by volume of asbestos in the sample

Where, upon inspection and bulk sampling, any material has been found to contain asbestos, NBCC shall prepare an inspection report in writing containing:

- a) the type and content of asbestos and,
- b) drawings, plans and specifications, as appropriate, to show the location of the asbestos material.

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NBCC shall:

- a) inform the Joint Health and Safety Committee of the findings
- b) ensure that the damaged asbestos-containing material is cleaned up and removed using the appropriate procedures detailed in sections on asbestos classifications
- c) repair, seal, remove or permanently enclose the asbestos-containing material where it is readily apparent that the material will continue to deteriorate
- d) prepare and maintain on the premises a record of the location of the asbestos material
- e) notify in writing any employers who may be at or adjacent to the location of the asbestos material
- f) ensure that employees who may be working close to the asbestos are warned not to disturb it
- g) identify where practicable the asbestos-containing material by the use of color coding, labels, placards or any other mode of identification
- h) inspect the asbestos material at reasonable intervals in order to determine its condition

NBCC shall also institute and maintain a program in consultation with the Joint Health and Safety Committee for the training and instruction of every worker employed in the building who is likely to work in close proximity to and may disturb the asbestos material. This training and instruction shall include, but not necessarily be limited to:

- a) the hazards of asbestos exposure,
- b) the use, care and maintenance of protective equipment and clothing to be used and worn,
- c) the work practices and procedures to be used in doing the work as prescribed by this Code of Practice,
- d) the disposal procedures for asbestos-contaminated materials; and
- e) personal hygiene.

CLASS 1 — Operations and Procedures

Class 1 — Operations

For the purposes of this **Code of Practice**, operations under Class 1 are:

- a) the installation or removal of manufactured products containing asbestos, including products such as vinyl or acoustic tiles, gaskets, seals, packing, friction products, or asbestos cement products,
- b) the cutting, drilling or shaping of a product mentioned in paragraph a) by the use of hand operated tools,
- c) the use of power tools having a dust collection device equipped with a HEPA filter to cut, grind, or abrade a product mentioned in paragraph a),
- d) the removal of drywall where asbestos joint-filling compounds have been used,
- e) the opening of ceiling tiles for inspection purposes,
- f) the clean-up of small quantities of friable asbestos debris that has detached from insulation,
- g) the opening of brake drums, and replacement or repair of brake pads; and
- h) repair or replacement of clutches.

Class 1 — Procedures

NBCC shall ensure compliance with the following procedures applying to Class 1 operations:

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- a) Before beginning work, visible dust is removed with a damp cloth or a vacuum equipped with a HEPA filter from any surface in the work area, including the surface to be worked on, if the dust on that surface is likely to be disturbed.
- b) The spread of asbestos dust from the immediate work area is controlled by measures appropriate to the work to be done, including the use of drop sheets of polyethylene or other suitable material.
- c) In the case of an operation mentioned in paragraphs (b), (c) and (d) under Operations, the product is to be wetted, unless wetting creates a hazard or causes damage.
- d) Frequently and at regular intervals during the work and immediately upon completion of the work:
 - i. dust and waste containing asbestos is cleaned up and removed using a vacuum equipped with a HEPA filter, or by damp mopping.
 - ii. drop sheets that will be re-used are cleaned using a vacuum equipped with a HEPA filter or by damp wiping.
- e) Compressed air hoses **are not used** to disperse the dust.
- f) NIOSH-approved disposable respirators suitable for asbestos (or better) are made available for the use of employees.
- g) Waste material is discarded according to the requirements of the New Brunswick Department of the Environment; and,
- h) Waste material is transported in accordance with the Transportation of Dangerous Goods Act.

CLASS 2 — Operations and Procedures

Class 2 — Operations

For the purposes of this **Code of Practice**, operations classified under Class 2 are:

- a) the removal of a false ceiling, or part of it, to obtain access to a work area, where a significant quantity of friable material containing asbestos is likely to be lying on the surface of the false ceiling,
- b) the minor removal or minor disturbance (less than 30 square feet of surface area) of friable material containing asbestos during the repair, alteration, maintenance or demolition of a building, aircraft, ship, locomotive, railway car or vehicle or any machinery or equipment, or part thereof, or where the minor removal or disturbance is not a Class 1 operation,
- c) the application of tape or a sealant or other covering to pipe or boiler insulation containing asbestos,
- d) the removal of pipe insulation containing friable asbestos with the help of a commercial containment bag (glove bag),
- e) the enclosure of asbestos-containing material,
- f) the use of a power tool not having a dust collection device equipped with a HEPA filter to cut, grind or abrade a product mentioned in (a); and
- g) any operation not mentioned in paragraphs a) to e) that may cause exposure of an employee to asbestos, and that is not classified as a Class 1 or a Class 3 operation.

Class 2 — Procedures

NBCC shall ensure that:

- a) amended water is used to control the spread of asbestos dust, unless wetting creates a hazard or causes damage.

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- b) eating, drinking, chewing or smoking is not permitted in the work area.
- c) only persons wearing protective clothing and proper respiratory protection enter a work area that has been designated as Class 2.
- d) every employee who enters the work area is provided with respiratory protective equipment, and that:
 - i. respirators are NIOSH approved, reusable, air purifying dust respirators (or better), for protection against asbestos.
 - ii. when not in use, reusable respirators are maintained and stored in a clean and sanitary location which is easily accessible.
 - iii. proper-fitting respirators are provided to the employee.
 - iv. where practicable, the respirator is assigned to workers for their exclusive use; and
 - v. respirators are cleaned, disinfected and inspected after each shift during which they are used, if issued for the exclusive use of one employee, or after each use when used by more than one employee.
- e) protective clothing is provided to every employee who enters the work area, and that:
 - i. the protective clothing consists of full body covering, including head covering, with snug-fitting cuffs at the wrists, ankles and neck, (disposable protective coveralls are strongly recommended), and footwear.
 - ii. it is repaired if torn.
 - iii. it is left inside the work area, or is decontaminated using a vacuum equipped with a HEPA filter before leaving the contaminated work area.
 - iv. it is discarded as asbestos-contaminated material, (or washed if reusable), upon completion of the removal project.
- f) facilities for washing hands and face are made available to an employee, and are used by every employee, when leaving the work area.
- g) the work area is identified by clearly visible signs warning of the asbestos-dust hazard.
- h) compressed air is not used to clean up or remove asbestos-dust from any surface.
- i) before commencing work that is likely to disturb friable material containing asbestos that is crumbled, pulverized or powdered, and that is lying on any surface, the friable material is cleaned up and removed by damp-wiping, or by using a vacuum equipped with a HEPA filter.
- j) the spread of asbestos-dust from the work area is prevented, where practicable, by:
 - i. an enclosure of polyethylene or other suitable material thick enough to withstand wear and tear where walls do not enclose the work area.
 - ii. the use of drop-sheets; or
 - iii. disabling the mechanical ventilation system serving the work area, and by sealing the ventilation ducts to and from the work area.
- k) frequently and regularly during the work, and immediately upon completion:
 - i. dust and waste containing asbestos is cleaned up and removed by damp-mopping and placed in a suitably lined container or a six mil polyethylene bag, or by using a vacuum equipped with a HEPA filter.
 - ii. drop sheets and barriers that are to be reused are thoroughly cleaned.
- l) drop sheets and barriers that are to be discarded are considered and treated as asbestos-contaminated material; and
- m) waste materials, including discarded polyethylene sheeting, sealing tape, cleaning materials, protective clothing, vacuum bags, and other contaminated materials, are:
 - i. placed in a six mil polyethylene bag, labelled as containing asbestos,
 - ii. secured against unauthorized removal or damage,
 - iii. transported in accordance with the Transportation of Dangerous Goods Act; and

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- iv. discarded according to the requirements of the New Brunswick Department of the Environment.

An employee shall:

- a) wear and use the equipment.
- b) cooperate in attaining an effective fit of the respirator, and be as clean shaven as is necessary to ensure an effective facial seal.
- c) perform qualitative fit-testing on his respirator, as described in the manufacturer's instructions, before each use.

CLASS 3 — Operations and Procedures

Class 3 — Operations

For the purposes of this **Code of Practice**, operations classified under Class 3 are:

- a) the removal, other than the minor removal, of material containing asbestos during the repair, alteration, maintenance or demolition of a building, aircraft, ship, locomotive, railway car or vehicle, or any machinery or equipment or part thereof,
- b) the spray application of a sealant to friable material containing asbestos,
- c) the cleaning or removal of air-handling equipment, including rigid ducting, in a building that has sprayed-fireproofing containing asbestos,
- d) an outdoor operation involving the removal or stripping of friable asbestos-containing materials; and,
- e) the repair, alteration or demolition of a kiln, metallurgical furnace or similar device or part thereof, made in part of refractory materials containing asbestos.

Class 3 — Procedures

Preparation

NBCC shall ensure that:

- a) signs are posted around the perimeter of the removal area to restrict access.
- b) the signs required in paragraph (a) are posted in sufficient numbers to warn of the hazard, and state in large clearly visible letters that:
 - i. there is an asbestos-dust hazard, and
 - ii. access to the work area is restricted to persons wearing protective clothing and respiratory protective equipment
- c) respiratory protection is worn by all employees on-site during the preparation of work areas for asbestos removal, where any disturbance of the material may occur.
- d) that the respiratory protection has a minimum protection factor of 10, and is approved by NIOSH for protection against asbestos.
- e) the protective device is fitted so that there is an effective seal between the respirator and the employee's face.
- f) where practicable, a respirator is assigned to an employee for the employee's exclusive use.
- g) respirators are used in accordance with the procedures specified by the equipment manufacturer.

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- h) reusable respirators are cleaned, disinfected and inspected after use, at least once each shift, when issued for the exclusive use of one employee, or after each use when used by more than one employee.
- i) when not in use, reusable respirators are maintained and stored in a clean and sanitary location.
- j) the mechanical ventilation system serving the work area is disabled to prevent contamination and fibre dispersal to other areas by:
 - i. switching off the system where possible, and
 - ii. sealing the ventilation ducts to and from the work area, or
 - iii. where the ventilation system cannot be switched off, blanking off the main ventilation duct to the area with rigid impervious material such as metal or wood.
- k) all moveable equipment and material is removed from the work area.
- l) floors, walls and any items remaining in the room are sealed with polyethylene sheeting, and that:
 - i. any damage to the polyethylene sheeting that occurs as the work proceeds is repaired immediately, and
 - ii. the polyethylene sheeting has a minimum thickness of six mil.
- m) drop-sheets are used during outdoor removal operations.
- n) every precaution is taken to avoid electric shock, including disconnection of electric power to permanent fixtures, except that temporary connections may be made for illumination purposes and for the operation of asbestos-removal equipment.
- o) the only electrical equipment used in wet removal operations is:
 - i. battery operated,
 - ii. double insulated,
 - iii. bonded to ground, extra low voltage, not exceeding 30 volts and 100 volt-amps, or
 - iv. bonded to ground, and equipped with a ground fault circuit interrupter of the Class A type, which is tested before each use.
- p) decontamination area is set up adjacent to the work area.
- q) the decontamination area consists of:
 - i. a clean changing room suitable for changing into clean protective clothing or street clothes, and for storing clean clothing and equipment.
 - ii. a shower room as described in paragraph (s).
 - iii. a room suitable for donning reusable protective clothing, and for storing contaminated protective clothing and equipment.
- r) "air lock doors" are provided and used between the different rooms, and that:
 - i. they consist of layers of polyethylene with at least a three foot overlap,
 - ii. these sheets are weighted at the bottom to keep the flaps closed,
 - iii. they are arranged in sequence, and
 - iv. they are constructed so as to prevent the spread of asbestos dust.
- s) the shower room in the decontamination facility:
 - i. is located between the contaminated change room and the clean change room,
 - ii. is provided with hot and cold water, or water of a constant temperature that is not less than 40° Celsius or more than 50° Celsius,
 - iii. has an individual control inside the room to regulate water flow, and, if there is hot and cold water, individual controls inside the room to regulate the temperature,
 - iv. is capable of providing adequate supplies of hot water to maintain a water temperature of at least 40° Celsius.
- t) is provided with clean towels.

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- u) adequate toilet facilities exist in the work area, or that where such facilities do not exist in the work area, employees go through the proper decontamination sequence before going to the toilet facilities.

An employee shall ensure that:

- a) he cooperates in attaining an effective fit of the respirator, and is as clean shaven as is necessary to ensure an effective facial seal,
- b) fit tests and adjustments are made in the clean change room,
- c) respirators are cleaned, disinfected and inspected after use at least once on each shift, when issued for the exclusive use of one employee, or after each use when used by more than one employee, and
- d) when not in use, reusable respirators are maintained and stored in a clean and sanitary location.

Asbestos Removal

NBCC shall ensure that:

- a) negative air pressure is established inside the work area before removal of any asbestos-containing material is begun,
- b) the exhaust unit(s) are equipped with HEPA filters,
- c) they are operated on a 24-hour basis,
- d) a minimum of four air changes per hour is maintained in the removal area,
- e) where practicable, the air is exhausted to the outdoors.
- f) the integrity of the enclosure and the adequacy of the negative air pressure is maintained by:
 - i. conducting smoke tests, and
 - ii. a daily visual inspection of the enclosure.
- g) personal protective clothing:
 - i. is provided by the employer, and worn by every employee who enters the worksite.
 - ii. consists of full body covering, including head covering, with snug fitting cuffs at the wrists, ankles and neck, (disposable coveralls are strongly recommended).
 - iii. is replaced or repaired if torn.
 - iv. includes suitable footwear, which must not be taken from the work site unless covered adequately while on the work site.
 - v. is worn by all employees involved in, or watching, the asbestos stripping or clean-up.
 - vi. is donned in the clean changing room, and that street clothes are left in the clean changing room, preferably in individual lockers.
 - vii. is removed when leaving the work site and is stored, or discarded in the first change room, as defined in subparagraph [Class 3 – Preparation Section \(q\)\(iii\)](#).
- h) personal respiratory protection:
 - i. consists of Powered Air Purifying Respirators (PAPR) fitted with NIOSH approved cartridges for asbestos, or HEPA filters, for the wet removal of chrysotile, amosite or crocidolite.
 - ii. consists of a NIOSH approved airline respirator for any dry removal.
 - iii. is worn by all employees involved in, or watching, the asbestos stripping or clean-up.
 - iv. is worn in the manner described in the manufacturer's instructions.
 - v. filters are changed at least as frequently as the manufacturer recommends.
 - vi. is properly fitted on employees.
- i) special precautions are taken for employees inside the removal area, and that:

- i. eating, drinking or smoking inside the change room, shower room, hall ways, storage room(s) or removal area are strictly prohibited.
 - ii. complete decontamination is required prior to eating, drinking or smoking.
 - iii. respiratory protective equipment is not removed inside the asbestos removal area.
 - iv. employees take coffee breaks and have lunch in some area completely separate from the asbestos removal area.
- j) when an area is being stripped:
 - i. only authorized personnel are permitted to enter the area.
 - ii. wet methods are employed in all cases except where electrical conductors or electrical equipment cannot be de-energized, in which case permission must be obtained from an officer before proceeding with dry stripping.
 - iii. amended water is used for soaking asbestos-containing materials.
 - iv. amended water is sprayed with airless spray equipment, and with the equipment set at the lowest operable pressure.
 - v. asbestos-containing material is thoroughly sprayed with amended water, left untouched for several hours, and re-sprayed immediately prior to beginning removal, in order to assure that the material has been saturated, (fallen material should be wet enough that water can easily be squeezed from it by hand).
 - vi. removal is done in small sections, i.e. about 30 square feet, and that after stripping, fallen material is placed in a six mil (or thicker) polyethylene bag.
- k) after removal has begun, all persons leaving the work area, perform personal decontamination, and that:
 - i. work clothes are removed and left in the work area, or in the room between the work area and the shower room.
 - ii. after thorough showering the employee proceeds to the clean change room.
 - iii. where the protective clothing (including work boots) will be reused, it is decontaminated using a vacuum equipped with a HEPA filter or by damp wiping prior to removing.
 - iv. where the protective clothing will not be reused, it is discarded in the same manner as asbestos-contaminated material.

NOTE: In the case of serious injury to a person in the work area, and in this case only, decontamination procedures may be waived in the interests of obtaining medical aid.

Cleanup of Removal Area

NBCC shall ensure that

- a) following removal of asbestos, the entire area, including the decontamination area, is wet cleaned and vacuumed with HEPA filters to remove all visible residue.
- b) the equipment used during the removal is:
 - i. wet wiped,
 - ii. washed and wrapped in polyethylene, or
 - iii. placed in plastic bags, and
 - iv. that brooms are discarded or sealed in plastic bags.
- c) a sealant is then applied to the entire area and to the remaining plastic, and that:
 - i. the sealant is sprayed-on using an airless spray which is used in accordance with the manufacturer's recommendations, and
 - ii. a negative pressure is maintained inside the enclosure during this process.

- d) employees involved in clean-up use personal protective equipment and respiratory protection.
- e) employees involved in the cleanup follow the same personal decontamination procedure.
- f) the showers are dismantled and removed last, in order that they can be used by employees engaged in the clean-up procedures.
- g) waste materials, including discarded polyethylene sheeting, sealing tape, cleaning materials, protective clothing, vacuum bags, and other contaminated materials, are:
 - i. placed in a six mil polyethylene bag, labelled as containing asbestos,
 - ii. secured against unauthorized removal or damage,
 - iii. transported in accordance with the Transportation of Dangerous Goods Act, and
 - iv. discarded according to the requirements of the New Brunswick Department of the Environment.

Clearance Sampling

- a) Clearance sampling is compulsory for all class 3 projects where the project site is to be re-occupied (except for outdoor operations).
- b) A guideline value for clearance sampling is 0.05 fibre/cm³.

Encapsulation

NBCC shall ensure that:

- a) the preparation of a work area is conducted as for the removal of asbestos-containing material (Class 3),
- b) personal protective clothing is used,
- c) personal respiratory protective equipment is used,
- d) the special precautions are taken during these procedures,
- e) the personal decontamination procedures are used,
- f) encapsulant (either the bridging or the penetrating type) is applied over the surface of the asbestos-containing material using airless spray equipment at low pressure setting,
- g) the clean-up procedures are as described, and
- h) a liquid sealant or encapsulant is not applied to friable material that contains asbestos, if the friable material has deteriorated, or if there is insufficient strength and adhesion to support the weight of the sealant and the friable materials.

Instruction and Training

NBCC shall ensure that:

- a) instruction and training is provided by a competent person to every employee working in a Class 1, Class 2, or Class 3 operation:
 - i. in the hazards of asbestos exposure,
 - ii. in personal hygiene and work practices and,
 - iii. in the use, cleaning and disposal of respirators and protective clothing.
- b) the instruction and training related to respirators addresses:
 - i. the limitations of the equipment,
 - ii. the inspection and maintenance of the equipment,
 - iii. the fitting of the equipment, and

- iv. the disinfecting of the equipment.

Notification of Class 2 or Class 3 Projects

- a) Before commencing any Class 2 or Class 3 project, the contractor, in the case of a project, and NBCC, in any other case, shall notify an officer at the nearest office of the Occupational Health and Safety Commission.
- b) The contractor or NBCC shall supply the following information:
 - i. the name, address and telephone number of the person giving the notice,
 - ii. the name, address and telephone number of the owner of the place where the work will be carried out,
 - iii. the municipal address or other description of the place where the work will be carried out,
 - iv. a description of the work that will be carried out,
 - v. the starting date and expected duration of the work,
 - vi. the name and telephone number of the supervisor in charge of the work
 - vii. the total number of employees involved in the removal of asbestos.

Prohibitions

- a) No person shall apply, or install by spraying, any material which contains more than one per cent by volume of asbestos that can become friable.
- b) No person shall apply or install, as pipe or boiler insulation, material which contains more than one per cent by volume of asbestos that can become friable.

Appendix A: Notifications

To ensure that workers and occupants of buildings as well as contractors are not over exposed to asbestos, various notification procedures are required.

Notification to building occupants and workers

- Every entrance to locations containing friable asbestos material shall be posted with readily visible warning sign stating:

Example: Notice: This is to remind you that asbestos may be present in the ceiling. When working in the ceiling area, adhere to the “A Code of Practice for Working with Materials Containing Asbestos in New Brunswick”

Example: NBCC buildings may contain asbestos and therefore caution must be exercised prior to doing any work that may disturb asbestos containing material.

Example: Asbestos awareness training session for all workers who may work with or in proximity to materials that are (or are presumed to be) friable or non-friable asbestos.

- Supervisors shall advise their workers of asbestos locations when the workers are working in close proximity to friable or non-friable asbestos containing material.
- In the event of discovery of suspected asbestos-containing material not on the inventory, a worker shall notify his/her supervisor immediately.

Notification of Class 2 or 3 Projects

- NBCC or the contractor must notify the Occupational Health and safety Commission prior to any Class 2 or 3 projects are undertaken.

Notification to contractors/sub-contractors

- The Regional Operations Manager or designate must inform their contractor/sub-contractor of the location of friable or non-friable asbestos containing material that is in close proximity and may be disturbed by the work.
- The Regional Operations Manager or designate contracting work is responsible for ensuring that the contractor/sub-contractor follow work procedures under A Code of Practice for Working with Materials Containing Asbestos in New Brunswick and NBCC’s Asbestos Management Program.
- If the type of friable asbestos is not known, it shall be treated as though it contained a type of asbestos other than chrysotile.

Appendix B: Discovery of Suspected Asbestos

If any unexpected discovery of suspected asbestos-containing material is made during the course of work:

- The worker shall report the discovery immediately to the Facilities Supervisor or Regional Operations Manager.
- The Facilities Supervisor shall stop any work that may disturb the suspected asbestos-containing material.
- The Facilities Supervisor shall notify WorkSafe NB, the campus JHSC and the Regional Operations Manager.
- The Regional Operations Manager will notify the Director, Facilities and Ancillary Services.
- The Facilities Supervisor will arrange collection and analysis of bulk samples as well as communication of results to the Regional Operations Manager.
- No work will be performed unless it is determined that the material is not asbestos or, the work is performed as though the material is asbestos or in the case of sprayed on material, as though it contained a type of asbestos other than chrysotile.

Suspected Exposure to Asbestos

- If a worker believes they have had an inhalation exposure to asbestos in the course of employment, the worker should:
 - Report the suspected exposure to the Facilities Supervisor.
 - Complete the campus *Injury Incident Report and Investigation Form* and *Form 67 WorkSafe NB report of Accident or Occupational Disease*

Appendix C: Asbestos Hazards

Suspected Exposure to Asbestos

- If a worker believes they have had an inhalation exposure to asbestos in the course of employment, the worker should:
 - Report the suspected exposure to the Facilities Supervisor.
 - Complete the campus Injury Incident Report and Investigation Form and Form 67 WorkSafe NB report of Accident or Occupational Disease

Occupational Exposure

Asbestos fibres can have serious health effects when inhaled. As exposure increases and more fibres are inhaled, so does the risk of developing an asbestos related disease. To lower the risk of developing disease, measures must be in place to minimize exposure and accumulation of fibres in the lungs.

Asbestos related diseases are generally associated with exposure to high levels of asbestos over an extended period of time. Studies on workers in mines, factories and shipyards have shown that heavy exposures to asbestos can lead to three serious diseases:

- Asbestosis (scarring of lung tissue)
- Lung cancer
- Mesothelioma (a rare form of cancer affecting the lining of the lungs)

These diseases may not appear for as much as 20-40 years after exposure to asbestos. Although the evidence is less clear, there is some suggestion that cancers of the gastrointestinal tract may be associated with asbestos exposure.

Studies have also shown that smoking increases the risk of disease, with smokers exposed to high levels of asbestos having a much greater chance of developing lung cancer than nonsmokers. Exposure to asbestos can result in other benign conditions such as pleural fibrosis (thickening of the lining of the lungs), pleural plaques or skin warts.

Asbestos specific diseases are almost always a result of occupational exposure to asbestos. Non occupational exposures resulting in disease have been seen in spouses or other family members living with an asbestos worker, or those who have lived in the neighbourhood of asbestos plants.

Asbestos fibres are naturally occurring and result in a natural background present in our environment. This, combined with the widespread use of asbestos in products such as automotive brake linings, means that we are all exposed to very small amounts of asbestos in our daily lives. It is not this very low level of exposure that results in asbestos disease but the higher levels of occupational exposure that are of concern to most authorities. Studies have not shown any evidence of asbestos specific diseases in individuals who breathe asbestos in the outdoor air or who inhale asbestos as occupants of asbestos containing buildings. Regardless, proper measures for preventing or minimizing exposure to asbestos must always be in place.

Control of Respiratory Hazards

To control the airborne asbestos respiratory hazard to persons working with or in close proximity to asbestos is prescribed by **A Code of Practice for Working with Materials Containing Asbestos in New Brunswick**.

Appendix D: Instruction and Training

NBCC shall ensure that:

- Instruction and training is provided by a competent person to every employee working in Class 1, Class 2 or Class 3 operation
 - In the hazard of asbestos exposure,
 - In personal hygiene and work practices and,
 - In the use, cleaning and disposal of respirators and protective clothing;
- The instruction and training related to respirators addresses
 - The limitations of the equipment
 - The inspection and maintenance of the equipment
 - The fitting of the equipment, and
 - The disinfecting of the equipment.
- The campus JHSC is told about the training and where it will be held.

Appendix E: Roles and Responsibilities

Senior Managers

President, Vice-Presidents, Directors including Director, Facilities and Ancillary Services, Dean, Regional Operations Manager, Academic Chairs :

- Provide direction and resources required to support and maintain the NBCC Asbestos management program
- Enforcement of the program and confirm that occupants are notified of the NBCC Asbestos Management Program

Facility Staff

Regional Operations Manager and Facilities Supervisor:

- Prepare detailed plans and specifications showing the locations of all asbestos materials
- Hire asbestos abatement contractors with proper training, experience, certifications and adequate insurance and maintain a record of approved contractors
- Notify Director, Facilities and Ancillary Services, Academic Chairs, Occupational Health and Safety Commission and the campus JHSC of all projects that involve direct and/or potential contact with ACM
- All asbestos abatement work involving repairs, removals, renovations and demolition to be documented in order to keep the asbestos record (inventory) current
- Arrange inspection and air monitoring by a 3rd party and to have the JHSC attend the sampling if required
- Inform employees about planned asbestos abatement
- Share inspection/air monitoring results with 3rd party, required by the Asbestos Management Program for final clearance of type 3 work
- Ensure the Occupational Health and Safety Commission is advised in writing of all projects involving required Class 2 and all Class 3 operations
- Provide notification to workers and contractors who may work in close proximity and could disturb the asbestos and;
- Submit analysis of ACM [Reg. 278/05 - Table 3] results to Administrative Assistant to VP Finance and Administration for filing
- Maintain the NBCC Asbestos Management Program
- Prepare a record containing both friable and non-friable asbestos for all NBCC-owned buildings, updating when new information is made available
- Conduct annual asbestos inspections to evaluate the condition of ACM
- Provide notification to building occupiers of asbestos in the area(s) they occupy
- Provide Asbestos Awareness training and;
- Arrange for Asbestos Worker (Type 1 and 2) training

Maintenance Staff

Responsibilities include repair and removal of asbestos excluding Type 3 asbestos operations (to be performed by an approved 3rd party asbestos abatement contractor):

- Asbestos is to be maintained in good condition
- Ensure all work procedures are compliant under the NBCC Asbestos Management Program
- Provide notification to workers and contractors who may work in close proximity and could disturb the asbestos
- All asbestos abatement work involving repairs, removals, renovations and demolition to be documented and forwarded to the Safety Office in order to keep the asbestos record (inventory) current
- Adhere to asbestos waste containment and disposal procedures
- Follow task-specific standard operating procedures (SOP's) that address both the hazards and the necessary controls required to perform the requested work
- Inform supervisor of any discovery of suspected asbestos and any asbestos containing material that requires repair or removal
- Complete asbestos training as required for specific work duties.
- Personal protective equipment- cleaning and maintenance of equipment as required
- Performing repairs or removals of asbestos containing material (ACM) must be documented for the supervisor in order for to maintain the asbestos record
- Ensure that supervisor is made aware of any repairs and removals that would affect the inventory for proper record keeping.

Support Staff and Faculty

- Notify workers who may be affected by asbestos work and;
- Adhere to the requirements of the Asbestos Management Program prior to any repair, modification or renovation of buildings.

Joint Health and Safety Committee

- Review the NBCC Asbestos Management Program on a scheduled basis
- Review asbestos record on an annual basis and;
- Review and participate in air clearance testing for Type 3 operations.

Contractors/Subcontractors:

- Work in compliance with NBCC Asbestos Management Program and Regulation 92-106 under the Occupational Health and Safety Act.