

Asbestos Control Program

Safety & Security Services

Revised March, 2004

ALGONQUIN
COLLEGE

PURPOSE

The purpose of the Algonquin College Asbestos Control Program is the prevention of worker exposure to airborne asbestos and subsequent occupational illness arising from exposure to airborne asbestos. The program outlines the required procedural controls, personal protective equipment requirements, specific work procedures and training requirements for College staff and contractors in the management of asbestos at the College. Asbestos is a designated substance under the Occupational Health & Safety Act of Ontario and the program ensure College compliance with O.Reg 837 and O.Reg 838 as amended by O.Reg 510/92.

SCOPE

The term "asbestos" refers to a family of naturally occurring fibrous hydrated silicates divided on the basis of mineralogical features into two groups: serpentine and amphibole. The important and distinguishing property of asbestos, compared with non-asbestiform minerals, is the presence of long, thin fibres that can be easily separated. Although, according to some definitions, there are as many as 30 varieties of asbestos, only six are of commercial importance. These six are listed in the asbestos definition in section 1 of the Ontario Regulation: actinolite, amosite, anthophyllite, chrysotile, crocidolite and tremolite.

Chrysotile is the only asbestiform member of the serpentine group of minerals. Although commonly termed "white asbestos", chrysotile fibres may also be green, grey, amber or pink in colour. Chrysotile fibres have high tensile strength, high resistance to alkalis, high flexibility and good spinnability. About 90 per cent of world asbestos production is chrysotile.

Amphibole asbestos fibres differ from the flexible, curly chrysotile fibres in that they are straight and needle-like. These fibre characteristics appear to give amphibole asbestos a greater tendency to become airborne, which is important to the control of exposure. Two type of amphibole asbestos have been widely used: crocidolite or "blue asbestos" and amosite or "brown asbestos". Anthophyllite, tremolite and actinolite asbestos have rarely been used commercially.

WHY ASBESTOS WAS USED

The ability of asbestos to withstand high temperatures, its strength, its resistance to many corrosive chemicals and its other properties have resulted in hundreds of applications for asbestos. As many as 3,000 separate uses have been identified. The construction industry has been, and continues to be, the biggest user of asbestos. Although the use of asbestos has dropped dramatically in recent years, its past widespread use, particularly as an insulating material in buildings, means that it

will continue to pose a potential hazard to the renovation and demolition sectors of the construction industry.

The largest single use of asbestos is as a reinforcing agent in cement products. Asbestos-cement products include flat and corrugated sheets, pipes and shingles. Another major use is friction materials, including linings for drum and disc brakes and clutch facings. Other asbestos-containing products are vinyl asbestos flooring, gaskets and packing, textile products such as welding blankets and theatre curtains, roofing felts, coatings and mastic, and asbestos paper products.

One use of asbestos of special note is its use as an insulating material. Asbestos is an effective insulator against heat, cold, electricity and noise. In the late 1960's and early 1970's insulation was the largest use of asbestos. Crocidolite was widely used in sprayed insulation and as fireproofing for steel structures. In some cases the insulation was exposed to provide a decorative architectural finish. Elsewhere, it doubled as acoustical insulation. Asbestos pipe and boiler insulation was used on heating systems in buildings, including homes, and in industrial processes. In 1973 the spray application of asbestos insulation ceased when new regulations were introduced under the Ontario Construction Safety Act. Also in 1973 the major Ontario suppliers of pipe and boiler insulation stopped using asbestos in their products. Both these asbestos applications are prohibited by the new asbestos regulation (O.Reg.654/85).

HEALTH HAZARDS ASSOCIATED WITH ASBESTOS

Several diseases are associated with exposure to asbestos such as, asbestosis, mesothelioma, cancer of the lung and other asbestos-related cancers. These are serious, debilitating diseases that often result in death.

To cause disease, asbestos fibres must be inhaled into the lungs. The lung is a system of branching airways that end in tiny air sacs, call alveoli. There are about 300 million of these in the lungs. It is from these air sacs that oxygen from inhaled air enters the bloodstream. This is also where inhaled asbestos fibres do their damage. However, only those fibres within a certain size range can gain access to the lung alveoli. Fibres with a diameter greater than three microns (one ten-thousandth of an inch) are too large and impact with the upper branches of the respiratory system and are then eliminated. Fibres that can enter the lung and cause disease are too small to be visible to the naked eye.

It is not clear how asbestos fibres cause disease after they enter the lung. For each disease there is a period of latency, usually more than ten years, between first exposure to asbestos and the appearance of the disease. It is this characteristic that makes asbestos disease so insidious; exposure can continue for many years without any outward evidence of harm while disease develops silently within.

Asbestosis: Asbestosis is characterized by a fibrosis (scarring) of the lung tissue, which makes breathing difficult. The most prominent symptom is breathlessness. Early detection of asbestosis is possible by X-ray examination and lung function testing. However, the disease is irreversible and will continue to progress even after exposure is stopped. Rarely a cause of death itself, asbestosis results in an appreciable reduction in life expectancy due to deaths from related illness.

Mesothelioma: This is a rare cancer arising from the cells of the pleura (lining of the chest cavity and lungs) and the peritoneum, which is characterized by a long latency period, usually at least 15 years and sometimes more than 40. There is no effective treatment for mesothelioma. A large proportion of mesothelioma patients die within a year of diagnosis; few survive longer than five years. Although asbestos was once thought to be responsible for all mesothelioma, other causes have now been identified. Still, the chance of getting mesothelioma in the absence of asbestos exposure is considered to be extremely remote.

Lung Cancer: Unlike asbestosis and mesothelioma, lung cancer is not associated only with asbestos exposure. Furthermore, there is no basic difference between lung cancer caused by asbestos and that due to other causes. In general, the risk of getting lung cancer increases with the extent of asbestos exposure, in terms of both intensity and duration. This risk is also greatly enhanced by smoking; most asbestos workers who develop lung cancer are smokers. The prognosis for a person diagnosed with lung cancer is poor. Only about one in twenty survives longer than five years after diagnosis.

Other Asbestos-Related Cancers: The relationship between asbestos exposure and asbestosis, mesothelioma and lung cancer has been clearly established and is beyond argument. Several other cancers should be noted. They are: gastrointestinal cancer affecting all sites in the gastrointestinal tract (oesophagus, stomach, colon and rectum) and cancer of the larynx.

Asbestos-Related Conditions: A number of less serious effects have been associated with asbestos exposure: pleural plaques, asbestos bodies and warts. Pleural plaques are areas of scarring of the pleural surfaces. In general, they are not associated with any functional abnormality and are merely an indicator of asbestos exposure. Occasionally, they can become so widespread that they restrict lung function. Asbestos bodies, also termed "ferruginous bodies", result when asbestos fibres become coated with a substance containing protein and iron. These asbestos bodies are not harmful, and like pleural plaques, serve as evidence of asbestos exposure. Asbestos warts are harmless skin growths that occur when asbestos fibres penetrate the skin.

RESPONSIBILITIES

General Asbestos Work Procedures

The following general procedures apply to all staff and contractors at Algonquin College and are to be followed in all cases of asbestos related work:

1. All staff / contractors are required to identify any work that may involve potential asbestos exposure to their supervisor and or College supervisor responsible for the contract work.
2. The supervisor for the work shall ensure that a work permit form is completed and forwarded to OHS. The work permit form includes the proposed method of work to be performed, procedures to follow, details regarding locations, work to be done, quantity, dates, etc. (See work permit for asbestos related work).
3. No work shall proceed until the permit has been reviewed and approved by OHS.
4. Upon approval, the work permit will be returned to the originating supervisor for their records and a copy shall be retained by OHS.
5. Upon commencement of any work, the appropriate checklist for the type of work being carried out will be utilized. Following completion of the job the checklist will be completed and a copy will be forwarded to OHS. (see attached checklists)The supervisor shall maintain the original completed checklist in their records.
6. Upon commencement of any work, the supervisor shall ensure that appropriate notifications of all occupants of the work area are made, that the area is blocked off and that appropriate signage is posted.
7. ANY changes or substitutions to the original job, must be approved and documented on the work permit by the supervisor.

TYPES OF ASBESTOS WORK & WORK PROCEDURES

Type I Asbestos Work

The following are examples of Type I asbestos work procedures:

(OHS should be contacted for questions surrounding the classification of asbestos work. Also, work procedures associated with the next highest type classification will be applied in all cases where there is any doubt regarding the type of work.)

- Installation or removal of manufactured products containing asbestos such as vinyl or acoustic tile, gaskets, seals packing asbestos cement products, etc.
- Cutting and shaping of asbestos products with hand tools
- Cutting, grinding or abrading asbestos product with a power tool equipped with a dust collection device fitted with a HEPA filter
- Removal of drywall where asbestos joint filling compound has been used

The Ontario Ministry of Labour (Construction Safety Branch) has defined installing cable above false ceilings where a significant quantity of friable material containing asbestos is likely to be lying as a Type II operation. Where there is no friable material containing asbestos lying on the ceiling tile, no asbestos procedures are required.

Type I Work Procedures

- Remove visible dust using HEPA vacuum or wet cloth
- Cover furniture and carpet with 4.0-mil poly sheeting
- Asbestos products are wetted where practical
- Clean work area with soap and water or a HEPA vacuum
- Non-friable asbestos will be put into Asbestos waste bags and disposed of in accordance with the hazardous waste program guidelines

Work Procedures for Ceiling Spaces Containing Asbestos

Equipment

The following equipment must be available:

1. Asbestos warning signs.
2. HEPA Vacuum.
3. Personal Protective Equipment:
 - A half mask cartridge respirator with a HEPA filter cartridge (approved for asbestos work) is to be worn
 - Tyvek suit (or equivalent) with hood
 - Eye protection
 - Rubber gloves
4. Facilities for washing of hands and face shall be made available to a worker and shall be used by every worker when leaving the work area.

Approvals

1. Obtain approval for ceiling entry and work from Physical Resources.
2. Obtain approval from Physical Resources and Faculty/building administration controlling department to block access to room or corridor.

Procedures

1. Prevent authorized access to the area. Lock doors and place asbestos warning placards at either end of the corridor or the entrances to the room where the work is taking place.
2. Only persons wearing protective clothing and equipment shall enter a work area where there is an asbestos dust hazard.
3. Cover furniture and carpet with 4.0-mil poly sheeting.
4. Remove first ceiling tile without spilling any loose material, place on sheet of 4.0 mil poly and vacuum off surface using HEPA vacuum cleaner. If large quantities of asbestos are present, **STOP WORK**, inform your supervisor and call OHS.
5. Vacuum ceiling tiles adjacent to entry and remove if necessary.
6. Complete work without disturbing asbestos in ceiling space above.
7. Reinstall ceiling tiles.

Decontamination

1. Clean area below work area with soap and water or a HEPA vacuum.
2. Clean Tyvek suit with HEPA vacuum or damp cloth and place in plastic bag with gloves for disposal.
3. Remove respirator, clean and wash hands.

Type II Asbestos Work

The following are examples of Type II asbestos work:

(OHS should be contacted for questions surrounding the classification of asbestos work. Also, work procedures associated with the next highest type classification will be applied in all cases where there is any doubt regarding the type of work.)

- Removal of a false ceiling where there is a significant quantity of material containing friable asbestos
- Minor removal or disturbance of material containing friable asbestos. Guidelines from the Ontario Ministry of Labour indicate that a minor removal reflects a removal that is less than 9 sq. ft. of wet asbestos.
- The Ontario Ministry of Labour has restricted the removal of asbestos from pipes using a glove bag technique to no more than 21 linear feet depending on diameter of the pipe. Pipe diameters and maximum length that may be cleaned is listed on next page.

Diameter of Pipe (inches)	Maximum Length of Pipe for Asbestos Removal (feet)
0 - 1.6	21.0
2	17.0
4	9.0
6	6.0
8	4.5
10	3.5
12	3.0
14	2.5
16 - 20	2.0
22 - 26	1.5
26 - 30	1.0

Type II Work Procedures

Notification of Type II Work

Prior to the work the following shall be notified of the project:

1. Occupants of the building via Faculty/building administration.
2. OHS.
3. If a college employee is doing the removal OHS shall be notified and supplied with the following information:
 - Worker performing work
 - Number of hours doing work
 - Location

Equipment

The following equipment must be available:

1. A sprayer containing water and a wetting agent (Liquid Soap).
2. Asbestos warning placards.
3. Polyethylene sheeting (6 mil).
4. HEPA Vacuum.
5. Personal Protective Equipment:
 - a. A half mask cartridge respirator with a HEPA filter cartridge is to be worn
 - b. Tyvek suit with hood
 - c. Rubber gloves
 - d. Eye protection
6. Facilities for the washing of hands and face.

Approvals

Obtain approval for removal from Physical Resources.

Obtain approval from Plant Operations and Faculty/building administration to block access to room or corridor.

Removal Procedures

1. Any existing disturbed asbestos is to be cleaned up with a HEPA vacuum prior to starting the removal.
2. The work area is to be clearly marked with asbestos warning placards.
3. Areas shall be enclosed in polyethylene sheeting.
4. Shutdown and seal ventilation system if exhaust or supply diffusers are in enclosure.
5. Eating, drinking, chewing or smoking shall not be permitted in the work area.
6. Friable material containing asbestos that is to be removed must be wetted with water containing a wetting agent.
7. Compressed air shall not be used to clean up and remove asbestos dust from any surface.
8. Only persons wearing protective clothing and equipment shall enter a work area where there is an asbestos dust hazard.
9. Frequently during the removal work and immediately upon completion of the work, dust and waste containing asbestos shall be cleaned up and placed in an asbestos disposal bag.

Decontamination

1. Clean work area with HEPA vacuum.
2. Polyethylene enclosure is to be cleaned and wetted prior to disposal.
3. Clean Tyvek suit with HEPA vacuum or damp cloth and place in plastic bag with gloves for disposal.
4. Remove respirator and clean.
5. Wash hands.

Glove Bag Removal Procedures

1. Manufacturer's procedures must be followed.
2. Any existing disturbed asbestos is to be cleaned up with a HEPA vacuum prior to starting the removal.
3. The work area is to be clearly marked with asbestos warning placards.
4. Work area must be separated from other areas by walls or suitable barricades.
5. Glove bags must be inspected prior to use.
6. Equipment used inside glove bag:
 - a. Knives must have a retractable blade
 - b. Saws must be a flexible wire type
 - c. Brushes may not have metal bristles
7. The work area is to be clearly marked with asbestos warning placards.
8. A half mask cartridge respirator with a HEPA filter cartridge is to be worn.

9. Glove bags may not be used on pipe exceeding 65°C.
10. Glove bags may not be used on pipe jacketed with steel.
11. Glove bags may be used on pipes jacketed with aluminum not exceeding 24 gauge.
12. Each section of jacketing shall not exceed 36 inches.
13. The jacketing shall be removed inside the glove bag.
14. Jagged or sharp edges produced by the removal shall be protected by tape.
15. If the bag is ripped and no material escapes and the glove bag can be repaired, work may proceed after the glove bag is repaired.
16. If material escapes, a tyvek suit with hood, rubber gloves and a respirator are to be worn. The glove bag and contents are to be placed in an asbestos disposal bag. The area is to be cleaned with a HEPA vacuum cleaner.
17. Friable material containing asbestos that is to be removed must be wetted with water containing a wetting agent.
18. Tools are to be cleaned with water before removal from glove bag.

TYPE III Asbestos Work

Type III asbestos work is considered as the removal of friable asbestos in an amount that is not considered minor. The following are examples of Type III asbestos work procedures:

(OHS should be contacted for questions surrounding the classification of asbestos work. Also, work procedures associated with the next highest type classification will be applied in all cases where there is any doubt regarding the type of work.)

- Spray applications of sealant to friable asbestos containing material.
- Cleaning or removal of air-handling equipment in a building that has sprayed fireproofing containing asbestos.
- Repair, alteration or demolition of a kiln or furnace made in part, of asbestos-containing refractory materials.
- Cutting, grinding or abrading an asbestos product with a power tool not equipped with a dust collection device and HEPA filter.
- Repair, alteration or demolition of a building in which asbestos products are manufactured.

Type III Work Procedures

Notification of Type III Work

Prior to the work the following shall be notified of the project:

1. The local Ministry of Labour office.
2. Occupants of the immediate area.
3. OHS for submission to the Joint Health and Safety Committee.

4. After removal a copy of the air monitoring report shall be forwarded to OHS for submission to the Joint Health and Safety Committee.

Work Procedures

1. No type III work will be conducted by College staff.
2. In all cases of type III removals the work will be carried out by outside professional asbestos removal firms and monitored through the OHS office and the supervisor responsible for the work area.

ASBESTOS CLEAN-UP & DISPOSAL

Area Clean Up:

- Prompt clean up must be conducted at the completion of asbestos related work, or in cases where there is fallen/disturbed asbestos containing material.
- The clean up procedure includes:

While still wearing the protective equipment prescribed for the type of work being performed,

1. HEPA vacuum inside of enclosure, where applicable
2. HEPA vacuum or wet wipes for footwear, clothing, ladder etc. before leaving the enclosure or work area.
3. Wet clean (e.g. by damp mopping or water mist spraying) inside of enclosure and contaminated area.
4. OHS will ensure that appropriate air sampling is conducted to assure airborne levels of asbestos are below hazardous exposure levels.

Personnel Clean Up:

1. Hands and face to be wiped with wet toweling. Dispose of used towel as asbestos waste.
2. Remove protective clothing and dispose of the clothing as asbestos waste.
3. Respirator must be washed, wiped dry and inspected after each use.

Asbestos Waste Disposal Procedure:

1. All Asbestos containing materials, or suspected materials must be placed into a 6 ml Polyethylene yellow asbestos waste bag
2. Bags are to be sealed with duct tape or other approved fastening device

3. Clean outside of the disposal bag. Insert into second asbestos waste bag
4. Bags are already labeled Asbestos waste
5. Notify OHS who will ensure the waste is disposed of in accordance with appropriate hazardous waste guidelines.

LOCATIONS OF ASBESTOS

1. Physical Resources maintains a list of all locations where friable asbestos has been identified, as part of the College asbestos inventory, conducted by Bovar-Concord Environmental Ltd.
2. Every entrance to locations containing friable asbestos shall be posted with readily visible warning sign stating:

Notice: Asbestos is present in this area. When working in this area, follow all applicable work procedures and regulations.

Notification to Workers

1. Signs posted at the entrances to locations containing friable asbestos.
2. Supervisors are responsible for notifying workers to the presence of friable asbestos when the work puts workers in close proximity to friable asbestos.

Notification to Contractors/Sub-Contractors

1. Departments who hire a contractor/sub-contractor must inform them of the presence of friable asbestos in the area in which the work is to be done.
2. The department contracting the work is responsible for ensuring that the contractor follows applicable work procedures outlined in the Asbestos Control Program and that alternate procedures afford equivalent or greater worker protection than those outlined in the Asbestos Control Program..

Worker Registration

1. OHS is to be notified of all Algonquin College workers involved in a Type II or III asbestos removal project.

Training

1. Supervisors are responsible to ensure that all workers who may work in close proximity or may disturb friable asbestos receive training and that such training is documented.
2. The training shall include the following topics:

- Hazards of Asbestos
- Work Procedures
- Respirator Use and Fit Testing
- Location of Asbestos
- HEPA Vacuum

3. OHS will coordinate appropriate training as required.

Inspection

1. Physical Resources will inspect areas containing friable asbestos at least every 5 years for the following conditions:
 - a. Dislodged asbestos
 - b. Large cracks
 - c. Water damage
2. Physical Resources will replace any damaged or missing asbestos warning signs
3. Areas containing friable asbestos will be inspected immediately if conditions are noted that may affect the stability of the asbestos (ie. water leaks, extensive renovations, etc.)
4. The inspection report will be maintained with the inventory records. A copy of the inspection report will be forwarded to OHS for submission to the JOHSC

Corrective Action

1. Deteriorated asbestos shall be repaired or removed as soon as possible.
2. A report of corrective actions will be forwarded to OHS for submission to the JOHSC

HOW TO DEAL WITH ASBESTOS FLOORING

Stripping Operations:

When stripping floors becomes necessary, the machine used for stripping the finish should be equipped with the least abrasive pad as possible (black pads are usually the most abrasive and the white pads the least abrasive). Consult with your floor tile and floor finish product manufacturer for recommendations on which pad to use on a particular floor covering. Incorporate the manufacturer's recommendations into your floor maintenance work procedures.

The machine used to remove the wax or finish coat should be run at a low rate of speed (i.e., ranging between 175-300 rpm) during the stripping operation. There is a direct correlation between machine speeds and the release of asbestos fibers from asbestos containing floor coverings. The higher the machine speed the greater the probability of asbestos fiber release.

Never perform dry stripping. Always strip floors while wet. Do not operate a floor machine with an abrasive pad on unwaxed or unfinished floor containing-asbestos materials.

Consult with floor tile and floor finish product manufacturers concerning specific or unique problem(s) on the maintenance of your floors

After Stripping:

After stripping and before application of a high solids floor finish, the floor should be thoroughly cleaned, while wet, preferably with a Wet-Vac HEPA filtration vacuum system.

FINISHING OF VINYL ASBESTOS FLOOR COVERINGS

Use of Sealer and Solids Finish

Prior to applying a finish coat to a vinyl asbestos floor covering, apply 2 to 3 coats of sealer. Continue to finish the floor with a high percentage solids finish.

It is an industry recommendation to apply several thin coats of a high percentage solid finish to obtain a good sealing of the floor's surface, thereby minimizing the release of asbestos fibers during finishing work.

Spray-Buffering Floors

When spray-buffering floors, always operate the floor machine at the lowest rates of speed possible and equip the floor machine with the least abrasive pad as possible. A recent EPA study indicated that spray-buffering with high-speed floor machines resulted in significantly higher airborne asbestos fiber concentrations than spray-buffering with low speed machines.

Burnishing Floors

When dry-burnishing floors, always operate the floor machine at the lowest rate of speed possible to accomplish the task (i.e., 1200-1750 rpms), and equip the floor machine with the least abrasive pad as possible.

Cleaning After Stripping & Sealing Floors

After stripping a floor and applying a new coat of sealer and finish, use a wet mop for routine cleaning whenever possible. When dry mopping, a petroleum-based mop treatment is not recommended for use.

UNEXPECTED DISCOVERY OF ASBESTOS

As per Regulation 838 (Regulation respecting Asbestos on Construction Projects and in Buildings and Repair operations), sec.7 (5), for any unexpected discovery of friable material during any work, the employer or constructor shall forthwith report the discovery, orally and in writing to the MOL inspector nearest the workplace.

Reporting Procedure

1. Worker/contractor reports discovery to immediate supervisor. Supervisor then reports it to OHS immediately
2. OHS will make arrangements for bulk samples and send them for lab analysis
3. If there is risk of exposure, the area will be blocked off until lab analysis has been received
4. If there is an immediate need to use the area or proceed with work in the area, OHS will ensure that the appropriate procedures for the apparent type of removal are followed.
5. Any discovery of friable Material, whether confirmed asbestos or not, the college must verbally and in writing notify immediately:
 - The JOHSC
 - Employees in the area
 - MOL inspector

References

York University - Asbestos Management Program
University of Waterloo - Asbestos Control Program
McMaster University - Asbestos Control Program

Asbestos (Type 1) Work Procedure Checklist

Date of Work: _____ Start Time: _____ Permit #: _____

Location of Job: _____

Name of Workers/Contractor: _____

PREPARATION OF THE WORK AREA

Y N/AP

1. Clean visible dust which may be disturbed (HEPA vacuum or wet).
2. Control the spread of dust (i.e. drop sheets).
3. The area to be worked on is to be wetted to control dust unless wetting creates a hazard.
4. No eating, drinking, smoking or chewing in the area.
5. Provide non-powered respirator if requested by worker

AT THE COMPLETION OF WORK PROCEDURE

1. Clean area using HEPA vacuum or wet.
2. Drop sheets:
 - To be reused: vacuumed or damp wiped.
 - To be disposed: wetted and folded to contain dust.
3. Waste Disposal of dust and waste containing asbestos:
 - the disposal bag is identified as Asbestos Waste.
 - Call OHS and alert them to the ASBESTOS WASTE.
4. Hands and face are to be wiped with wet towel before leaving.
5. Clean visible contamination off clothing with HEPA vacuum.

Completed by: _____ Supervisor: _____

Asbestos (Type 2) Work Procedure Checklist

Date of Work: _____ Start Time: _____ Permit #: _____

Location of Job: _____

Name of Workers/Contractor: _____

PREPARATION OF THE WORK AREA

Y N/AP

1. Work Permit obtained from OHS.
2. Manager in work area notified of pending work (date and time frame)
3. Warning signs posted.
4. Ventilation system serving the area disabled.
5. Ventilation ducts sealed off.
6. Enclosure:
 - Work area enclosed by walls or polyethylene.
 - Floor covered and taped beyond enclosure (6 ml)
 - Overlap door constructed.
7. Take water spray device into enclosure.
8. Vacuuming:
 - HEPA vacuum used.
 - One or two vacuum hoses inside of enclosure, depending on the size of the enclosure.
 - Friable material removed by vacuuming.
9. Personal Protective Equipment:
 - Respirator fit checked.
 - Tyvek suit with hood worn.
 - Proper gloves.
 - Protective footwear (optional)
10. Wet all asbestos to be disturbed.
11. Absolutely NO eating, drinking, smoking or chewing gum allowed in area.

AT THE COMPLETION OF WORK PROCEDURE

* Coordinate air sampling with OHS

1. Vacuum inside of enclosure (where applicable)
2. Vacuum footwear, clothing, ladder, etc., before leaving enclosure and work area
3. Wet clean (e.g. by damp mopping, or water mist spraying) inside enclosure and work area.
4. Waste Disposal:
 - Dispose of all single use items as Asbestos Waste in specially labeled garbage bags. Seal bags with duct tape.
 - Clean outside of disposal bags. Insert into a second bag or Cardboard Box. Seal and label outer bag/box "ASBESTOS WASTE".
 - Call OHS immediately for prompt removal, Asbestos is NOT to be left in work areas.
5. Hands and face are wiped with a wet towel before leaving.
6. Warning signs are removed .
7. Respirator is to be washed, wiped dry and inspected after each use.

Time of Completion: _____ **Completed By:** _____



Asbestos Work Permit

WORK PERMIT # _____ DATE OF APPLICATION: _____
YY/MMM/##

Work Location	Work To Be Completed By	Date Of Work:	
Building:	College Staff Contractor	Start:	Time:
Room #:		Completion:	Time:
Project Co-coordinator / Supervisor:			Ext:
Project No:	WO No:	Asbestos Removal Type:	Type I Type II Type III
Names of Workers Conducting the Work			
1.		2.	
3.		4.	
5.		6.	
Describe In Detail The Work To Be Completed:			
Describe Personal Protective Equipment to be Used by Worker(s)		Describe Additional Controls (Ventilation, Wet Process, HEPA Vac)	
What Actions Will Be Taken To Alert Area Occupants?			
OHS Notes			

Occupational Health & Safety

Date: _____

1. White – Originator

2. Yellow – OHS

3. Pink – Central File

ASBESTOS WORK REPORT

1. Worker Identification

Surname: _____
Given Names: _____
Address: _____
Date of Birth: _____
Social Insurance Number: _____

2. Employer Identification

Name: _____
Address: _____

3. This report covers the period beginning _____ and ending _____.

4. Set out the number of hours of exposure during the reporting period for each category of exposure (see below):

Category of exposure	Hours
A	_____
B	_____
C	_____
D	_____
E	_____
F	_____
G	_____
H	_____
I	_____
Other – Explain: _____	

The Categories of Exposure are:

A. The removal of a false ceiling or part thereof 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 removal 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.

- C. The enclosure of friable material containing asbestos.
- D. The application of a sealant or other covering to pipe or boiler insulation containing asbestos.
- E. The spray application of a sealant to friable material containing asbestos.
- F. The cleaning or removal of air-handling equipment including rigid ducting in a building that has sprayed fireproofing containing asbestos.
- G. The repair, alteration or demolition of a kiln, metallurgical furnace or similar device made in part of refractory materials containing asbestos.
- H. The use of power tools not equipped with a dust collection device equipped with a HEPA filter to grind, cut or abrade a manufactured product containing asbestos including vinyl or acoustic tiles, gaskets, seals, packings, friction products or asbestos cement products.
- I. The repair, alteration or demolition of any building or part thereof, in which asbestos is or was used in the manufacture of a product, unless the asbestos was cleaned up and removed before this regulation came into force.

Other: Being work not described in categories A to I.

5. Name of worker's Physician: _____
 Address: _____

6. Date: _____

 Signature

To be completed by employer and returned to:

Provincial Physician
 Occupational Health and Safety Branch
 Ministry of Labour
 400 University Avenue
 Toronto, Ontario
 M7A 1T7

Copy to Worker