



## SUPERIOR-GREENSTONE DISTRICT SCHOOL BOARD

# Asbestos Management Program

## Introduction

Asbestos, a designated substance, is a natural fibre commonly used in the manufacture of building materials. The use of asbestos is generally classified into two groups: friable and non-friable. When dry, a friable material will crumble, pulverize or powder under hand pressure. Friable material may be found in pipe elbows, straight pipe insulation, as well as boiler and valve wrapping. If friable material is disturbed or damaged, fibres will become airborne. Although friable materials are banned as a construction material, it is still present in many buildings. Materials of non-friability include vinyl asbestos tile (VAT), ceiling tile, and transited cement.

Several diseases are associated with exposure to asbestos through the inhalation of fibres. These include asbestosis, mesothelioma, cancer of the lung and other asbestos related cancers. There is typically a latency period of more than ten years after the first exposure to asbestos and the onset of an asbestos related disease)

## Objective

Superior Greenstone District School Board shall provide a safe and healthy environment. The purpose of this plan is to provide information on procedures and accepted work practices in compliance to the current Ontario Acts and Regulations regarding Asbestos on Construction Projects or in Building and Repair Operations. To properly establish this program, staff must be aware of the program and the procedures to follow when conducting maintenance and other work that might disturb asbestos-containing material.

### ***Health and Safety Reference Manual for Accessible Asbestos Containing Materials (ACM)***

As part of the Asbestos Management Plan, it is mandatory to prepare and maintain a record of all buildings owned and occupied within the Superior Greenstone District School Board which contain asbestos materials. A building record will be established by means of a written report or electronic file with attached floor plans. The report and/or drawings will show the extent and condition of the accessible asbestos containing materials in the building, location of any samples taken, as well as the results of the analysis of the samples taken.

A copy of the Health and Safety Reference Manual, as well as the Asbestos Management Plan will be kept accessible in the Head Custodian's office or Plant

Department **Yellow Lockers** where it will be available for review. It will be used to direct employees or contractors in locating and being aware of asbestos containing material while they are performing work.

### ***Annual Re-assessment***

A yearly inspection will be arranged by the Maintenance/Safety Coordinator to update the condition of any accessible asbestos containing materials in the building. A copy of this inspection will be kept by the school with the Asbestos Management Plan.

### ***Sampling and Testing***

Representative samples will be arranged by the Health and Safety Department to determine if a suspect material contains asbestos. Analysis will determine if the material does or does not contain asbestos, the type, and the concentration.

### ***Asbestos Work Report***

All persons involved in Type II and Type III operations are required by the Ministry of Labour to produce an Asbestos Work Report "Form 1". Form 1 must be submitted to the Ministry of Labour once every 12 months, and immediately upon termination. The Asbestos Work Report will include the number of hours the worker has spent on a Type II or Type III operation. The Provincial Physician keeps track of the worker's accumulated exposure and will determine when a medical examination is required. It is the responsibility of the Maintenance Coordinator to quarterly submit exposure times of asbestos abatement workers to the Health and Safety Department.

## **Training Program**

### ***Regular Staff in the Vicinity of Contained Asbestos***

Awareness training is to be provided to Superior Greenstone District School Board workers who are working in close proximity to asbestos containing materials, and where there is a chance they may disturb the material over the normal course of performing their duties. This section does not apply to workers covered in the next section, who actually are involved in the removal of asbestos.

### ***Asbestos Abatement Workers***

Specific training is to be provided to Superior Greenstone District School Board workers who are working directly with asbestos containing material in repair/removal operations. The training will be arranged by the Maintenance/Safety Coordinator and designed to cover the following objectives as stated in Regulation 838 Section 15:

- the hazards of asbestos
- personal hygiene and work practices

- the use, disposal and cleaning of personal protective equipment (i.e. respirator training).

## **Responsibilities**

### **Manager of Plant Services**

#### ***Notification of Damaged ACM***

Any concerns regarding damaged/deteriorated asbestos materials are to be directed to the Plant Maintenance Department immediately. The Maintenance Department will evaluate the condition of the material and arrange for clean up and repair/ removal as appropriate.

#### ***Maintenance of the Asbestos Management Plan***

A copy of the detailed Health and Safety Reference Manual – Asbestos section 1, as well as any repair/removal reports must be maintained at the school in the Head Custodian's office or the Plant Yellow Lockers (within the asbestos section), as well as the Maintenance/Safety Coordinator Master Asbestos Reports Binder. Any consultant/contractor or maintenance reports involving repair or removal must be forwarded to the Maintenance/Safety Coordinator.

#### ***School Notification***

It is the responsibility of the Manager of Plant Services to notify the school Principal/Vice-Principal prior to any asbestos repair/removal projects under said Supervisor control. Note: If the school Principal/Vice-Principal is not available for notification (i.e. summer hours), then the Head Custodian and/or Maintenance Working Foreman will be notified. Signage may also be used where appropriate.

#### ***Asbestos Abatement Workers***

Type I operations (Appendix 1) may be performed by the Maintenance Working Foreman. The Maintenance Department will provide supplies and equipment as required (Refer to Appendix 2: Procedures to Follow for Repair/Removal). All repair/removal operations will be documented and forwarded to the Health and Safety Department.

#### ***Type II and III Operations***

The Coordinator of Maintenance will be responsible for contracting and supervising a qualified consultant familiar with the Ontario Regulation respecting Asbestos on Construction Projects and in Building and Repair Operations.

### ***Maintenance Staff and Contractors***

Maintenance staff and contractors will be supplied with all documentation involving the location of all friable and non-friable asbestos, in chance of contact with or disturbance of the material. Notification to contractors will be supplied by a written statement on Purchase Order or Tender agreement.

Note: Maintenance Staff/Contractors must immediately cease work if they come across asbestos that must be disturbed or removed. Work may only resume after approval from the Manager of Plant Services, Maintenance/Safety Coordinator.

### ***School Notification***

It is the responsibility of the Manager of Plant Services to notify the school Principal/Vice-Principal prior to any asbestos repair/removal projects under said Supervisor's control. Note: If the Principal/Vice-Principal is not available for notification (i.e. summer hours), then notification will take place through the Head Custodian or Maintenance Working Foreman.

### ***Transportation and Disposal***

The Manager of Plant Services will arrange for proper disposal of asbestos waste as per the asbestos waste regulation made under the Environmental Protection Act.

The waste will be transported to a designated site for asbestos waste only.

### **Maintenance/Safety Coordinator**

#### ***Inspection for Construction Purposes***

In the event of renovation or demolition of a building, it is the responsibility of the Maintenance/Safety Coordinator to arrange for an inspection to non-accessible areas when necessary.

#### ***Type II and III Operations***

The Maintenance/Safety Coordinator and or Manager of Plant Services will be responsible for contracting and supervising a qualified consultant familiar with the Ontario Regulation respecting Asbestos on Construction Projects and in Building and Repair Operations.

### ***School Notification***

It is the responsibility of the Maintenance/Safety Coordinator and or Manager of Plant Services to notify the school Principal/Vice-Principal prior to any asbestos

repair/removal projects under said Maintenance/Safety Coordinators control. Note: If the Principal is not available for notification (i.e. summer hours), then notification will take place through the Head Custodian or Maintenance Working Foreman.

### ***Purchasing Services***

The Manager of Plant Services, in conjunction with the Maintenance/Safety Coordinator, will provide procurement services for Consultants and abatement of asbestos.

### **Asbestos Contact Person (Head Custodian)**

Head Custodians are designated as the Asbestos Site Contact Person and have the following responsibilities:

- Become familiar with all asbestos-containing materials that have been identified in their buildings, as described in the **Health and Safety Reference Manual - Asbestos section**.
- Keep written records of ALL asbestos-related work including re- inspections, fibre release episodes and removal or repair of any asbestos-containing materials.
- Ensure proper response to any disturbances of asbestos-containing materials (fibre release episodes).
- Annually re-inspect with Maintenance/Safety Coordinator of all identified asbestos-containing friable materials and suspected non-friable materials.

### **School Principals/ Vice-Principals**

#### ***Contractor Notification***

Ensure contractors review the detailed drawing of known Asbestos locations with the Head Custodian and or Maintenance Working Foreman prior to undertaking any work.

#### ***Staff Notification***

It is the responsibility of the Principal/Vice-Principal to notify staff of the Asbestos Management Plan and Health and Asbestos reports. These documents are available for review in the **Health and Safety Reference Manual located in the mechanical room Plant Department Yellow Lockers or the Head Custodian's office**. As well, the asbestos information is available on the Board Website [www.sgdsb.on.ca](http://www.sgdsb.on.ca) (under the Plant Department section) within the **SGDSB Contractor & Sub-Contractor HEALTH AND SAFETY STANDARD OPERATING PROCEDURES HANDBOOK**.

Principals/Vice Principals will notify staff of the time and location of any asbestos work operation.

## **Appendix 1: Classification of Asbestos Work Operations**

Work is to be classified into three categories, according to the likely risk of exposure to asbestos that it presents.

### ***Type I***

May result in minimal exposure to asbestos fibres. Type I removal operations may involve the following:

- The installation or removal of non-friable material containing asbestos (i.e. ceiling tiles, vinyl tiles) if the material covers an area less than 7.5 square metres (24 sq.ft.) without being broken, cut, drilled, abraded, ground, sanded or vibrated.
- Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable material that contains asbestos if the material is wetted to control the dust or fibres.
- The use of non-powered hand tools to cut, grind asbestos containing materials.

### ***Type II***

Work performed results in greater airborne concentration of asbestos. For minor disturbances or removal of friable material the classification is: Type II removal operations may involve the following:

- Removal of all or part of a false ceiling where a significant amount of friable asbestos is likely to be lying on the surface of the false ceiling.
- Minor removal or disturbance of friable asbestos material during the repair, removal, maintenance or alteration of equipment.
- The enclosure or taping of pipe or boiler insulation containing asbestos.
- Drywall removal where asbestos filler compound has been used.
- Enclosing friable material containing asbestos.
- The installation or removal of products other than non-friable cement pipes containing asbestos (i.e. ceiling tiles) if the material covers an area of at least 7.5 square metres (24 sq.ft.)
- Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable material that contains asbestos if the material is not wetted to control the dust or fibres.
- Removing insulation containing asbestos from a pipe, duct or similar structure using a glove bag.

### ***Type III***

Will result in the highest asbestos fibre levels resulting in a high risk of health effects. All major removals of friable material are classified as Type III. For Type III operations

and asbestos of a type other than chrysotile, a powered air purifying dust respirator is required. If dry removal is performed, a positive pressure supplied air respirator must be used.

Type III removal operations may involve the following operations:

- Removal other than minor removal of friable material containing asbestos.
- Spray application of a sealant to friable asbestos.
- Cleaning or removal of air handling equipment that has sprayed fireproofing containing asbestos.
- Repair or demolition of a kiln, furnace or boiler made in part of refractory materials containing asbestos.
- Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable material that contains asbestos by means of power tools.
- Use of power tools not equipped with a HEPA filter used for the use of asbestos containing materials.

## **Appendix 2: Procedures to Follow For Repair/Removal**

The protective measures and the procedures to follow will depend on the classification of the particular work at hand.

### **Type I**

#### ***Preparation of work area:***

- Remove any visible dust from the surface of the work area with a damp cloth or a vacuum equipped with a HEPA filter.
- Use drop sheets where appropriate to control the spread of dust from the work area.

#### ***Removal process:***

- A wetting agent (amended water) must be applied to the material to be repaired or removed unless the use of water will create a hazard.

#### ***Personal protective equipment:***

- Protective equipment is required and will be supplied. In this case a NIOSH approved respirator in accordance with the Schedule "Work Category" is required and shall be fitted so that there is an effective seal between the respirator and the workers face.
- Type 1 operations require a NIOSH 10 with N-, R-, or P- series filter and 100 % efficiency.
- Disposable coveralls (i.e. Tyvek) that do not permit the penetration of asbestos fibres must be worn. The coverall must have a snug fit at the wrists, ankles and neck, and must contain a hood.
- Eating, drinking, chewing or smoking shall not be permitted in the work area.

#### ***Clean-up:***

- Discard waste in a 6-mil polyethylene disposable bag, identified as containing asbestos waste, and seal with tape. Place this bag in a second clean, labelled bag and seal with tape.
- Frequent clean up must be done at regular intervals by use of HEPA Vacuum, or damp mopping, or by wet sweeping.
- Wet and fold any contaminated drop sheets and coveralls used at the completion of work that are to be discarded and placed in a container.
- Workers must use the washing facilities at a nearby rest room.



## **Type II and Glove Bag**

### **Type II:**

**Board employees will not undertake Type II work. This will be contracted out to contractors experienced in this field. The work area will be designed so that there will be no need for Board employees to require access to the work-site except in emergency situations or to inspect work.**

**The employer of a worker working in a Type 2 shall complete an asbestos work report in Form 1 for each worker at least once in each twelve month period and forward the work report to the Provincial Physician with the Ministry of Labour.**

### ***Preparation of work area:***

- Use drop sheets to control the spread of dust.
- Before work is initiated any friable material that is likely to be disturbed and that is lying on the surface of the work area must be removed and cleaned up by damp wiping.
- Visible warning signs indicating an asbestos project must be posted.
- Mechanical ventilation to the immediate work area must be disabled, and when possible, vents should be sealed off.
- Installation of a ventilation system equipped with a HEPA filtered exhaust unit that creates and maintains a negative air pressure of 0.02 inches of water. Provides at least four air exchanges per hour in the work area and uses a device to measure the negative air pressure within the enclosed area
- If the work area is not enclosed by walls, it is necessary to build an enclosure of polyethylene.

### ***Removal process:***

- Unless wetting will create a hazard, amended water must be used to control dust.
- When removing friable material, or when working above a false ceiling, an enclosure surrounding the work area must be constructed where practicable.

### ***Personal protective equipment:***

- For Type II operations a non-powered reusable or replaceable air purifying dust respirator suitable for asbestos is required. Type 2 operations require a NIOSH 50 with N-, R-, or P-, series filter and 100 % efficiency or 50 with a Hepa filter.
- Disposable coveralls (i.e. Tyvek) that do not permit the penetration of asbestos fibres must be worn by all workers in the work area. The coveralls must have a snug fit at the wrists, ankles and neck, and must contain a hood.

### ***Clean-up:***

- Discard waste in a 6 mil polyethylene disposable bag, identified as containing asbestos waste, and seal with tape. Place this bag in a second clean, labelled bag and seal with tape.
- Frequent clean-up must be done at regular intervals by use of a HEPA vacuum, by damp mopping, or by wet sweeping.
- Discard any drop sheets, barriers and protective clothing as asbestos waste at the completion of work.
- Clean and disinfect respirator. Workers may use the washing facilities at a nearby rest room.

### **Glove Bag:**

Glove bags may be used for Type II operations involving the minor removal of pipe insulation when appropriate.

An inappropriate circumstance for glove bag use includes:

- Pipe temperature exceeding 65°C (cannot be used on hot water or steam lines).
- Pipe jacketing made of aluminum of thickness exceeding 0.51 mm (24 gauge) or a jacketing made of steel.

Glove bags may be used to remove pipe insulation that has a jacketing made of aluminum of thickness less than 0.51 mm (24 gauge) so long as the following conditions are satisfied:

- The length of each section of the jacketing shall not exceed the length of the glove bag.
- The jacketing shall only be removed after the glove bag has been attached to the pipe and sealed.
- Any jagged or sharp edges that have been produced in the removal of the jacketing shall be handled in such a way as to minimize the possibility of ripping or puncturing the glove bag.

The following procedures are to be followed for use of a glove bag:

### ***Preparation of Work Area:***

- Separate the work area from the rest of the building if walls are not present and post asbestos warning signs.
- Disable ventilation and seal off any ducts and use a drop sheet under area of removal.
- Use a vacuum equipped with a HEPA filter or damp wipe any fallen dust from the pipe insulation prior to attaching the glove bag.

- Thoroughly wet any friable material that is to be disturbed or removed before the glove bag is attached.
- Inspect the glove bag for any defects before commencing work.
- Place the necessary tools inside the glove bag (knife with a retractable blade, flexible wire type saw, stiff brush, cutters).
- Zip the glove bag onto the pipe and seal each end with straps. Insert the nozzle of the spray pump into the elasticized valve.

**Removal Process:**

- With the worker's hands inserted in the sleeves, wet the insulation before and during removal. If the pipe is covered by an aluminum jacket, use wire cutters to cut the bands and tin snips to remove the aluminum. Fold any sharp edges to prevent tearing the bag.
- Use a saw or knife to cut the insulation at each end of the section to be removed.
- Slit the section of pipe from end to end using a utility knife (it is ideal to make this slit on the underside of the pipe).
- Lift the insulation off and place at the bottom of the bag.
- Clean the pipe using water and a brush. Sealant or tape should be applied to any remaining exposed insulation after the glove bag has been removed.
- If an adjacent area of pipe is to be removed, wash the bag down, loosen shoulder sleeves, slide the bag along the pipe, and re-tighten straps. The tools remain inside the bag.
- If the bag is to be used for another pipe, place the tools in the lower section, wash down the top section of the bag, close the interior zipper and move the bag to the new location.

**Note:** If the glove bag is ripped, cut or opened in any way, cease work immediately. Clean up the work area by using a HEPA vacuum or damp wiping. If the opening is small enough use tape to repair. Work may continue once repairs are made. If the opening is not small enough to repair, then every worker in the vicinity must don the prescribed protective clothing (see below section on Personal Protective Equipment).

**Clean-up:**

- Prior to disposal of the bag, the tools inside the glove bag must be washed and retrieved.
- Wash down the inside of the glove bag so that any fibres adhering to the inside of the bag will be contained in the lower portion of the glove bag.
- Remove the air inside the bag using a vacuum equipped with a HEPA filter.
- Seal the lower portion of the bag by using the closure strip or by twisting and taping in an effective way to contain the asbestos waste.
- Place the glove bag in an asbestos waste bag while still attached to pipe.
- Remove the glove bag from the pipe and seal the asbestos waste bag with tape.
- Place this bag in a second clean, labelled bag and seal with tape.

### ***Personal Protective Equipment:***

- Every worker entering the work area must wear a non-powered reusable or replaceable air purifying dust respirator suitable for protection against asbestos. Disposable coveralls (i.e. Tyvek) that do not permit the penetration of asbestos fibres must be worn. The coverall must have a snug fit at the wrists, ankles and neck, and must contain a hood.
- Discard any contaminated protective clothing as asbestos waste. Clean and disinfect respirator after use.

### **Type III**

**Superior Greenstone District School Board employees will not undertake Type III work.** This will be contracted out to contractors experienced in this field. The work area will be designed so that there will be no need for Superior Greenstone District School Board employees to require access to the work-site except in emergency situations or to inspect work.

The employer of a worker working in a Type 2 or 3 shall complete an asbestos work report in Form 1 for each worker at least once in each twelve month period and forward the work report to the Provincial Physician with the Ministry of Labour.

## **Appendix 3: Health and Safety Reference Manual**

### ***Introduction***

The Health and Safety Reference Manual has been prepared to facilitate asbestos management in all building owned by Superior Greenstone District School Board. It is to be used as a guide by all Maintenance Working Foreman and or Head Custodian in order to ease their respective asbestos management duties.

### ***Responsibilities***

The responsibilities of the Maintenance/Safety Coordinator, Maintenance Working Foreman and Head Custodian are as follows:

- Become familiar with all asbestos-containing materials that have been identified in their buildings, as described in the **SGDSB Contractor & Sub-Contractor HEALTH AND SAFETY STANDARD OPERATING PROCEDURES HANDBOOK and on-site binders** that are stored in the yellow safety lockers in each school affected.
- Keep written records of all asbestos-related work including re-inspections, fibre release episodes and removal or repair of any asbestos-containing materials.
- Ensure proper response to any disturbances of asbestos-containing materials (fibre release episodes).
- Periodically re-inspect all identified asbestos-containing friable materials and suspected non-friable materials.

### ***Records of Location***

Locations of all identified friable asbestos-containing materials have been identified on drawings in the **SGDSB Contractor & Sub-Contractor HEALTH AND SAFETY STANDARD OPERATING PROCEDURES HANDBOOK and in the binders that are stored in the yellow safety lockers in each school affected.** The Maintenance Working Foreman and Head Custodian must become familiar with the locations of all identified asbestos in his/her building.

## **Appendix 4 Asbestos Condition Report**

The keeping of complete and accurate records is absolutely vital to an Asbestos Management Program. The Health and Safety Reference Manual (Asbestos-section 1) has been prepared for this purpose.

It is to be filled out when any of the following situations occur:

- Fibre release episode (asbestos-containing material is damaged).
- Periodic re-inspection of asbestos-containing materials conducted by the Plant Department (condition may or may not have changed).
- Asbestos-containing material has been removed or repaired following proper procedures by the a professional contractor.

Subsequent to the completion of a Condition Report (Asbestos-containing Materials) or any of the above-mentioned situations, the Maintenance Working Foreman and Head Custodian are responsible to ensure that:

- One copy is submitted to the Maintenance/Safety Coordinator;
- And the original report is filed in back of Section 1 of the Health and Safety Reference Manual (Asbestos Section 1) that is maintained by the Head Custodian.

### ***Emergency Response Procedures***

Asbestos-containing materials that are present in the schools will be damaged from time to time, through such causes as natural deterioration, water damage, accidental contact or vandalism. These incidents will create fibre release episodes. Emergency response procedures must be applied to minimize the release and spread of asbestos fibres.

The following emergency response procedures should be performed if a release episode has occurred:

- Immediately shut off any air handling units that affect the area.
- Isolate the area by sealing any openings, posting "warning" signs at the entrance to the area and installing locks to prevent unauthorized access, in the case of a minor disturbance (less than 3 ft<sup>2</sup> or 3 linear ft. of asbestos-containing material).
- Contact the Maintenance Coordinator 1-807-229-5205 or Manager of Plant Services 1-807-229-7379.
- Document the episode by completing a Condition Report (Asbestos-containing Materials).

- The Maintenance Working Foreman and or Head Custodian shall ensure that the affected air conditioning and ventilation filters are changed by a professional contractor trained in asbestos removal.

### ***Periodic Asbestos Re-Inspections***

Re-inspections are to be conducted annually by the Maintenance/Safety Coordinator, as long as any potentially friable asbestos-containing materials remain in a facility. A Condition Report (Asbestos-containing Materials) is to be filled out for each material so that any deterioration or damage is noted and acted upon before a dangerous situation develops.

#### **The following information shall be included:**

- Location of asbestos-containing material.
- Type of asbestos-containing material.
- Assessment (evidence of damage, accessibility, degree of activity near material and other observations).
- Recommended action (Maintenance/Safety Coordinator, Manager of Plant Services).
- Date of re-inspection and signature of Maintenance/Safety Coordinator, Maintenance Working Foreman and Head Custodian).

Non-friable materials such as floor tiles, linoleum and cement board, which have been assumed to contain asbestos in a particular building should also be re-inspected. The reason for this is that normally non-friable materials may become friable once they are damaged, and fibres may be released if they are disturbed. The Maintenance Working Foreman and Head Custodian should also ensure that sawing, sanding or drilling is not performed on any of these materials by their staff, other Superior Greenstone District School Board employees or outside contractors.

**Note:** Any suspect materials that have not been previously identified as asbestos-containing or any non-friable materials that have been assumed to contain asbestos should be sampled prior to planned disturbances such as demolition or any other type or renovation. When in doubt, the Maintenance Working Foreman and or Head Custodian must contact the Maintenance/Safety Coordinator 1-807-229-5205 and or the Manager or Plant Services 1-807-229-7379.

### ***Documentation of Asbestos Removal***

Superior Greenstone District School Board has been on an asbestos removal program since 1990 and all of their buildings shall be free of identified friable asbestos-containing materials (not including materials enclosed in fixed ceilings or walls) in the near future. As stated previously, the Maintenance Working Foreman and or Head Custodian are to fill out a Condition Report (Asbestos-containing Materials) in order to document the removal of any such materials in their respective buildings.