



## THE DURHAM DISTRICT SCHOOL BOARD

### ASBESTOS MANAGEMENT PLAN

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## **1.0 INTRODUCTION**

Asbestos 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 transite 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 (Designated Substances in the Workplace: A Guide to the Regulation Respecting Asbestos on Construction Projects and in Buildings and Repair Operations, Ontario Ministry of Labour, 1997).

### **1.1 Objective**

The Durham 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 Regulation regarding *Asbestos on Construction Projects and 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.

## **2.0 ASSIGNED RESPONSIBILITIES**

### **2.1 Responsibilities Assigned to the Manager of Health and Safety**

#### **2.1.1 *Detailed Survey 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 school district 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 detailed survey, as well as the Asbestos Management Plan will be kept in the Chief Custodian's office where it will be available for review. It will be used to direct employees or contractors in locating asbestos containing material while they are performing work.

### **2.1.2 Annual Reassessment**

A yearly inspection (on the anniversary date of the initial inspection) will be conducted by the Occupational Health and Safety Department 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.

### **2.1.3 Bulk Samples**

Representative bulk samples will be taken by the Occupational 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.

### **2.1.4 Medical Surveillance**

#### **Pre-placement Examination**

It is mandatory that all Board employees engaging in asbestos work receive a pre-placement medical by a qualified physician. The medical will include a series of tests including a pulmonary function test and a chest x-ray. Employee Services will maintain all pertinent documentation with supporting confidentiality.

#### **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 Supervisor to *quarterly* submit exposure times of asbestos abatement workers to the Occupational Health and Safety Department.

### **2.1.5 Training Program**

#### **Asbestos Abatement Workers**

Training is to be provided to those workers who are working directly with asbestos containing material in repair/removal operations. The training will be arranged by the Occupational Health and Safety Department and designed to cover the following objectives:

- the hazards of asbestos;
- personal hygiene and work practices;
- the use, disposal and cleaning of personal protective equipment (i.e. respirator training).

### **Custodial/Maintenance Staff**

The Occupational Health and Safety Department will co-ordinate annual training for all new Custodians and Maintenance staff. Those individuals requiring training will be identified by the Facilities Services Department.

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

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

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

A copy of the Detailed Survey, Intrusive Inspection, the Annual Reassessment, as well as any repair/removal reports must be maintained at the school in the Chief Custodian's office (within the asbestos binder), as well as the Occupational Health and Safety Department. **Any consultant/contractor or maintenance reports involving repair or removal must be forwarded to the Occupational Health and Safety Department.**

#### **2.1.8 School Notification**

It is the responsibility of the Manager of Health and Safety to verbally notify the school Principal prior to any asbestos repair/removal projects under said Manager's control. *Note: If the school Principal is not available for notification (i.e. summer hours), then the Custodial Supervisor will be notified.*

### **2.2 Responsibilities Assigned to the Manager of Maintenance/Custodial Services**

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

Type I and Type II operations (Appendix 1) will be performed by the Maintenance Department under the direction of the Manager of Maintenance/Custodial Services. 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 Occational Health and Safety Department. Maintenance workers will undergo asbestos training prior to engaging in asbestos work.

### **2.2.2 Type III Operations**

The Manager of Maintenance/Custodial 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*.

### **2.2.3 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 Health and Safety, or Manager of Construction, or Manager of Maintenance/Custodial Services.**

### **2.2.4 School Notification**

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

### **2.2.5 Transportation and Disposal**

The Manager of Maintenance/Custodial 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 the Central Maintenance transfer site. This site will be designated for asbestos waste only.

## **2.3 Responsibilities Assigned to the Manager of Construction**

### **2.3.1 Intrusive Inspection for Construction Purposes**

In the event of renovation or demolition of a building, it is the responsibility of the Manager of Construction to arrange for an intrusive inspection to non-accessible areas when necessary.

### **2.3.2 Type III Operations**

The Manager of Construction 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*.

### **2.3.3 School Notification**

It is the responsibility of the Manager of Construction to verbally notify the school Principal prior to any asbestos repair/removal projects under said Manager's control. *Note: If the Principal is not available for notification (i.e. summer hours), then notification will take place through the Custodial Supervisor.*

## **2.4 Responsibilities Assigned to Manager of Purchasing**

### **2.4.1 Purchasing Services**

The Manager of Purchasing, in conjunction with Facilities Services, will provide procurement services for asbestos operation requirements, including written documentation of the location of friable and non-friable asbestos.

## **2.5 Responsibilities Assigned to School Principals/Building Managers**

### **2.5.1 Contractor Notification**

Ensure maintenance staff as well as contractors review the Detailed Survey with the Chief Custodian prior to undertaking any work.

### **2.5.2 Staff Notification**

It is the responsibility of the Principal to notify staff of the Asbestos Management Plan and Detailed Survey. These documents are available for review in the Chief Custodian's office.

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

**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 but should present almost no risk of disease. Type I removal operations may involve the following:

- the installation or removal of manufactured products containing asbestos (i.e ceiling tiles).
- the cutting, drilling, or shaping of manufactured products containing asbestos
- drywall removal where asbestos filler compound has been used
- the use of power tools *equipped with a HEPA filter* 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. Type II removal operations may involve the following:

- removal 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

***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:

- the removal other than minor removal of friable material containing asbestos
- the spray application of a sealant to friable asbestos
- the cleaning or removal of air handling equipment that has sprayed fireproofing containing asbestos
- the repair or demolition of a kiln, furnace or boiler made in part of refractory materials containing asbestos
- the use of power tools *not equipped with a HEPA filter* used for the use of asbestos containing materials
- the repair or demolition of any part of a building containing asbestos, unless the asbestos was cleaned up and removed

**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 HEPA vacuum.
- 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/removed unless the use of water will create a hazard.

**Personal protective equipment:**

- Protective equipment is not necessary, but will be supplied if requested by the worker. In this case a non-powered reusable or replaceable air purifying dust respirator suitable for asbestos is required.

**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 contaminated drop sheets and coveralls used at the completion of work. Workers must use the washing facilities at a nearby rest room.

***Type II and Glove Bag***

**Type II:**

**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 or HEPA vacuuming.
- 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.
- 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. 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***

**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 Board employees to require access to the work-site except in emergency situations or to inspect work.**