

Standard Operating Procedures for the Control of Asbestos Fibres During Type 1 Operations

The Removal of Vinyl Asbestos Floor Tiles (Involves Breaking) (Includes Wetting and Only Non-Powered, Hand-Held Tools) ID# 1.13

Application

These procedures apply to work involving the removal of vinyl-asbestos floor tiles where many tiles cannot be removed intact (without breaking into smaller pieces), if the material is wetted and involves only the use of non-powered, hand-held tools. This activity may generate enough airborne asbestos to be classified as a Type 1 operation.

References

The procedures are in full compliance with the following:

- 1) Ontario Regulation 278/05, Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations, made under the Occupational Health and Safety Act of Ontario.
- 2) Ministry of Environment Regulations for the disposal of asbestos waste, including R.R.O. 1990, Regulation 347, and subsequent amendments.
- 3) Ministry of Transportation Regulation for the transport of asbestos waste.

Definitions

| <i>Term</i> | <i>Definition</i> |
|-------------|---|
| Work Areas | Where actual work activity involving asbestos takes place. |
| Damp-Wiping | A cleaning process for removing residual asbestos contamination using damp-cloths, sponges or mops. |
| HEPA Filter | A high efficiency particulate aerosol filter that is at least 99.97 % efficient in collecting a 0.3 micrometre aerosol. |

Personal Protection

Protective Clothing (not mandatory, but a worker may request it): Full body disposable clothing including suitable footwear and head covering. The covering must fit snugly at the ankles, wrists and neck in order to prevent asbestos fibres from reaching the garments and skin under the protective clothing and made of material that does not readily retain nor permit penetration of asbestos fibres.

Respiratory Protection (not mandatory, but a worker may request it): Air purifying half-mask respirator equipped with N-100, R-100 or P-100 particulate filter. The following shall apply to respiratory protection:

- Respirators shall be approved and labelled for protection against asbestos fibres, and shall be National Institute for Occupational Safety & Health (NIOSH) approved in accordance with Table 2 of Ontario Regulation 278/05.
- All respiratory equipment shall be individually assigned and identified.
- Prior to the use of a respirator, a worker must receive appropriate instruction in its selection, use and care.
- Respirators shall be fitted so that there is an effective seal between the respirator and the worker's face, unless the respirator is equipped with a hood or helmet.
- Respirators shall be used and maintained in accordance with written procedures that are consistent with the manufacturer's specifications.
- Respirators shall be cleaned, disinfected and inspected after use on each shift, or more often if necessary.
- Respirators shall have damaged or deteriorated parts replaced prior to being used by a worker.
- When not in use, respirators shall be stored in a convenient, clean and sanitary location.
- No supervisor or worker shall have facial hair which affects the respirator-to-face seal.

Materials and Equipment

- *HEPA Vacuum*: Vacuum cleaner equipped with a high efficiency particulate aerosol filter, fitted with appropriate tools. The vacuum equipment shall have a filtering system that is at least 99.97 % efficient in collecting a 0.3 micrometre aerosol.
- *Amended Water*: Water with wetting agent added for the purpose of reducing surface tension to allow thorough wetting of the asbestos-containing material.
- *Sprayer*: Garden reservoir type, low velocity, capable of producing mist or fine spray.
- *Small Tools*: Sponge(s), cloth(s), bucket(s), adjustable knife, scraper, etc.
- *Adhesive Tape*: Reinforced duct tape or double-sided tape suitable for sealing polyethylene bags and/or sealing polyethylene to all surfaces to be covered. As appropriate, other adhesive tapes or spray adhesives may also be used.
- *Asbestos Waste Containers/Bags*: Containers that are dust-tight, impervious to asbestos fibres and identified as containing asbestos. Normally, the containers consist of 6 mil., yellow, polyethylene bags, identified as containing asbestos and sealable with adhesive tape.
- *Signage*: Caution/Warning of hazard at the entrance to the work area and that entry into the area is restricted to authorized personnel only. Note: it is not mandatory to post signs, but it is good practice to prevent others from entering the immediate vicinity of the work area.

Safe Work Practices

General

- Workers shall not eat, drink, smoke or chew while in contaminated work areas.
- Compressed air shall not be used to clean up and remove dust from any surface.

Facilities

- Facilities for washing hands and face (washroom) shall be available to all workers and shall be used by every worker after leaving asbestos work areas.

Work Area Exit

- Workers must clean shoes by HEPA vacuuming or damp wiping prior to leaving the work area.
- If used, respirators/protective clothing must be decontaminated by HEPA vacuuming and/or damp wiping and removed prior to leaving the work area.
- Leave the work area in street clothes and proceed to the nearest washroom to wash exposed skin and respirator (if used) with soap and water.

Procedure

Preparation of Work Area

1. While it is not mandatory to post signs for a Type 1 operation, it is a good practice to prevent others from entering the immediate vicinity of the work area
2. Before beginning work, remove any visible dust from the work area or the surfaces of non-friable asbestos-containing materials by HEPA vacuuming or damp wiping.

Execution

1. Use amended water to thoroughly wet the vinyl asbestos- containing tiles to be removed.
2. Start removal by wedging a heavy-duty scraper in the seam of two adjoining tiles and gradually forcing the edge of one tile up and away from floor.
3. Continue removal of tiles using hand tools and amended water and placing whole and broken tiles directly into the asbestos waste containers. When the adhesive is spread heavily or is quite hard, force the scraper through these areas by striking its handle with a hammer and using blows of moderate force. Adhesive scrapings must also be deposited into the asbestos waste containers. Double-bag all waste as described in 3.1 and HEPA vacuum and/or damp-wipe the second container immediately prior to passing it from the work area.
4. Frequently and at regular intervals during the doing of work and immediately upon completion of the work, remove dust and waste from the workplace by HEPA vacuuming or damp-wiping.
5. Clean all reusable tools/equipment by HEPA vacuuming or damp-wiping. If used, protective clothing/respirators must be decontaminated as described in Safe Work Practices -- "Work Area Exit". Dispose of protective clothing as asbestos waste.
6. Leave the work area in street clothes and proceed to the nearest washroom to wash exposed skin and respirator with soap and water.

Waste Transport and Disposal

1. Place waste into asbestos waste receptors: Two separate containers (identified as containing asbestos) --- the first container consists of a 6 mil. (minimum thickness) polyethylene bag, sealable with adhesive tape. The second (outer) container may be a second 6 mil. sealable polyethylene bag; the container shall be selected to prevent any perforating rips or tears in the container during filling, transport and



disposal. As appropriate, seal the outer container with adhesive tape. HEPA vacuum or damp wipe the outer container to remove any surface contamination.

2. *Sealed container(s) are picked up by Fibrecon Insulation (asbestos abatement contractor) and transported to their storage site at the Stone Road Storage Compound for subsequent disposal in accordance with University of Guelph asbestos waste disposal procedures.

* Note: Other external contractors/consultants must arrange their own transport and disposal; these must be done in accordance with applicable municipal and provincial by-laws and/or regulations.