



Controlling Exposures to prevent occupational lung disease in the construction industry

Asbestos Removal Worker

HAZARDS AND RISKS

Asbestos removal work is typically required on demolition, renovation and/or maintenance projects where asbestos containing materials (ACMs) such as boiler and pipe insulation, sprayed coatings and asbestos insulating boards (AIB) may need to be disturbed or removed. ACMs may also need to be disturbed during ancillary works such as scaffold erection.

Note: in some jurisdictions, asbestos removal workers are licensed. In all jurisdictions, specialty training is required for large scale asbestos abatement.

Asbestos

Asbestos is classified as a category 1 carcinogen. When materials that contain asbestos are disturbed or damaged, fibres are released into the air which, when inhaled, can cause mesothelioma, asbestos-related lung cancer, asbestosis, and pleural thickening - all fatal or serious and incurable diseases which take many years to manifest.

CONTROL OPTIONS

Enclosures

- Depending on the regulatory jurisdiction and quantity of asbestos to be removed, an enclosure that is maintained under negative pressure and connected to a decontamination unit (DCU) by an airtight system may be required.

PPE

- For asbestos work, specific PPE as described by OH&S regulations (e.g. disposable coveralls, gloves, and foot protection) should be worn and disposed of as asbestos waste.
- PPE such as respiratory protective equipment (RPE) may be necessary while undertaking tasks involving wood dust, silica dust or solder fume. Use RPE selected in accordance with CSA Z94.4-11 *Selection, Use and Care of Respirators*.

Safe & controlled working methods

- Control asbestos dust at source using local exhaust ventilation (LEV) or controlled wetting techniques, eg airless or low-pressure spraying (use dielectric fluids on or near electrical equipment).
- Avoid dry asbestos stripping techniques. Otherwise, control asbestos fibre release by methods such as the use of "glovebags", or vacuum transfer of ACMs.
- Choose methods that avoid abrasion, sanding, machining or cutting of ACMs – for example; remove an item intact, instead of breaking it, or wrap and cut off insulated pipes at flange joints, rather than disturb the insulation.

Decontamination units (DCUs)

- Provision of a DCU to prevent the spread of asbestos fibres from the enclosure may be required for all major asbestos work. The DCU should be on site before any work starts and be the last thing to leave site at the end of the job. DCUs can be mobile, modular or vehicular.

Controlled working procedures

- Comply with the decontamination procedures set out by the applicable OHS regulatory authority.
- Consider removing ACMs before major work (such as refurbishment) begins.
- Pre-clean the work area and thereafter clear up at regular intervals, using HEPA vacuum-cleaning equipment.
- Ensure asbestos waste is safely and regularly disposed of from site.
- Re-route cables away from ACMs and protect ACMs from damage if working nearby.
- Minimise the number of site staff who might be exposed to asbestos during the work.

MANAGING THE RISK

The applicable OHS regulatory authority typically have project notification requirements for certain types of asbestos related work. A plan of work - explaining what the job involves, the work procedures, and what controls to use - should be prepared and available on site. All asbestos work must comply with the applicable OHS regulatory authority.

Supervision

Strong supervision to ensure compliance with all work procedures, including decontamination, is required.

Air monitoring

Periodic air monitoring using a method approved by the applicable OHS regulatory authority is required for certain types of asbestos related activities (e.g. to confirm that the enclosure, airtights and LEV equipment are working effectively).

Maintenance & testing of controls

RPE should be selected in accordance with CSA Z94.4-11 *Selection, Use and Care of Respirators*. All RPE wearers should be subject to RPE face fit testing. The LEV systems must be thoroughly examined and tested at by a trained and competent person. A thorough visual inspection of enclosures is required at the start of each shift. Enclosure testing with smoke tracers or differential pressure monitors is required at frequent intervals (e.g. daily where the enclosure is located in an occupied building).

Health surveillance

Asbestos workers may be subject to regular medical surveillance for as long as they are at risk of exposure to asbestos.

Training requirements

Asbestos workers must not start work without having received the appropriate level of training, including practical training in decontamination procedures, RPE fit testing and maintenance, effective work techniques, construction of enclosures and airtights, and the maintenance of plant and equipment. Workers should understand the health hazards and their likely exposure risks. A training strategy must be in place.