coast mountain college

Asbestos Abatement Exposure Control Plan

2020

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Asbestos General Information

What is asbestos?

Asbestos is a naturally occurring fibrous material that was a popular building material from the early 20th century until the 1980s. It was used extensively due to its physical properties which include electrical and fire insulation, high tensile strength, flexibility and resistance to chemical erosion.

Asbestos is common in numerous building materials. Some of the most common materials that contain asbestos include:

- Vinyl sheet flooring;
- Vinyl floor tiles;
- Drywall joint compound;
- Acoustic texture coat;
- Vermiculite insulation;
- Mechanical insulation;
- Parging cement;
- Asbestos pipes;
- Roofing materials; and
- Cement board.

How might Coast Mountain College workers be potentially exposed to asbestos?

Asbestos is a component of many common construction materials. While it would not be anticipated on new construction projects, projects that disturb building materials that were installed prior to 1990, such as renovation, remediation, or repair work, could result in exposure to asbestos.

Performing work on building materials that have not been adequately identified, or without taking proper precautions can result in potentially harmful exposures to asbestos fibres.

Asbestos abatement work will be limited to the following tasks:

- Removal of less than 10 square feet of drywall wall board applied with asbestos-containing drywall joint compound;
- Minor repairs of asbestos-containing flooring;
- Installing or removing screws into drywall wall board applied with asbestos-containing drywall joint compound;
- Installing or removing screws into asbestos-containing plaster walls; and
- Accessing ceiling spaces above asbestos-containing acoustic ceiling tiles.

Health Hazards from Asbestos Exposure

Exposure to any type of asbestos increases the risk of cancer of the lung, larynx, and ovary, as well as mesothelioma (cancer of the lining around the outside of the lungs), and non-malignant lung and pleural disorders, including asbestosis, pleural plaques and pleural effusions.[1] There have also been positive associations between asbestos exposure and cancer of the pharynx, stomach, and colorectum.[2] Asbestos has been labelled a Group 1 carcinogen, a known human carcinogen, by the International Agency for Research on Cancer.[2]

Exposure occurs when asbestos fibres become airborne and workers inhale those fibres. Asbestos fibres are commonly small enough to be inhaled deep into the lungs. It is known that cutting, breaking, drilling, or abrading asbestos-containing drywall mud or texture coating can release asbestos fibres into the air.

When exposure to asbestos is combined with cigarette smoking, it presents a much greater risk of developing lung cancer.

Purpose and Responsibilities

This document describes the steps to be taken in order to minimize the potential exposure to asbestos, and to ensure that workers are aware of, and adequately protected from, the risks associated with asbestos exposure on the job. Specific Safe Work Procedures are located in Appendix A of this document.

Roles and responsibilities of the personnel (by job title) related to this Exposure Control Plan (ECP) are provided below.

This ECP must be reviewed annually by Coast Mountain College to assess the company's compliance with the program, as required by the BC Occupational Health and Safety Regulation, Section 5.54.

Facilities Foreman

The employer is responsible for:

- Ensuring that the materials (e.g., tools, equipment, personal protective equipment) and other resources (i.e., worker training materials) required to fully implement and maintain this ECP are readily available and used where and when they are required.
- Conducting a periodic review (at least annually or more often if conditions change) of the effectiveness of the ECP.
- Ensure that risk assessments and work procedures are in place for the specific work being done. If the nature of the work changes, or if asbestos-containing material is found unexpectedly during renovations, the work must not proceed until a risk assessment is completed for the new work processes.
- Ensuring supervisors and workers are educated and trained in the hazards of asbestos exposure and trained to an acceptable level of competency to work safely with asbestos and to identify potential asbestos-containing materials.
- Maintaining records of training, fit-test results, staff meetings, and inspections of equipment (e.g.- efficiency test results), personal protective equipment, (PPE) work methods and practices.

[1] Canadian Centre for Occupational Health and Safety. Asbestos: Health Effects. 2012. Available from: http://www.ccohs.ca/oshanswers/chemicals/asbestos/effects.html

[2] International Agency for Research on Cancer. Monograph 100C: Asbestos (Chrysotile, amosite, crocidolite, tremolite, actinolite, and anthophyllite). 2012. Available from: http://monographs.iarc.fr/ENG/Monographs/vol100C/mono100C-11.pdf

Workers (Removing Asbestos-Containing Materials)

The worker is responsible for:

- Knowing the hazards of asbestos exposure.
- Having a basic understanding on identifying potentially asbestos-containing materials (e.g. vermiculite, piping, insulation and flooring) and reporting it to the exposure control plan administrator when identified.
- Using the assigned protective equipment, and other controls, in an effective and safe manner when required.
- Following established work procedures as directed by the exposure control plan administrator.
- Reporting any unsafe conditions or acts to the exposure control plan administrator.
- Knowing how and when to report exposure incidents, and promptly reporting to the employer any exposure incidents or any signs or symptoms of asbestos illness.

Exposure limit

- The 8-hour occupational exposure limit (EL) for asbestos (all forms) is 0.1 fibres per millilitre (fibres/cc).
- As asbestos exposure is linked to cancer, the ALARA principle also applies, and workplace exposures must be reduced to levels ***a****s* ***l****ow* ***a****s* ***r****easonably* ***a****chievable*.

Asbestos Exposure Controls: General Requirements

- The Regulation requires employers to select asbestos exposure controls based on the following hierarchy:
    - **Elimination/substitution**
    - **Engineering controls**
    - **Administrative controls**
    - **Personal protective equipment**

Risk Control Options

Coast Mountain College is committed to developing knowledge and expertise about these controls, and to establishing policies/procedures to protect workers from harmful exposure and to minimize the reliance on respirators by using higher level controls. Effective engineering controls such as HEPA filters for mechanical machinery and wetting methods, which control asbestos at its source, are readily available in B.C. These controls have been proven to reduce airborne fibre levels significantly when selected and operated in accordance with best practices. Engineering controls alone may not reduce airborne asbestos to safe levels; therefore, in most cases additional control measures, including respiratory protection, are required.

Specific procedures for each designated task are included in Appendix A. All of the controls identified in those specific procedures will be followed in an effort to minimize exposures to asbestos fibres.

Elimination and substitution

Reasonable efforts must be taken to eliminate or substitute asbestos-containing materials with less hazardous products. When performing work in older buildings, this will often not be possible. In such cases, efforts must be taken to avoid unnecessary disturbance of asbestos-containing materials.

Means used to avoid exposure to asbestos include:

- Ensuring that a hazardous building materials survey is conducted before any renovation or demolition project takes place, and that workers understand the locations of any identified hazardous materials, including asbestos.
- Educating workers in the identification of potentially asbestos-containing materials to ensure that asbestos-containing materials are not accidentally disturbed, or that asbestos-containing materials in areas inaccessible during a hazardous building materials survey are not encountered.

Engineering controls

HEPA Filtration

Clean-up and decontamination will require the use of a HEPA vacuum. The filtration of the HEPA vacuum must be efficiency tested on an annual basis, and records kept by Coast Mountain College.

Wet methods for dust control—safe work practices

Wetting is an effective measure to reduce fibre release at the source while cutting and removing building materials. The surface of the asbestos-containing materials will be wetted to minimize the release of fibres from the material, and the air may be misted to assist the settling of airborne fibres. It must be noted, however, that this method of fibre control does not collect or remove the fibres, and the wetted fibres may again become airborne once dried.

Designated Work Areas

Designated work areas are used to restrict access, keeping unprotected workers out of any area where levels of asbestos could potentially be above the occupational exposure limit. Signage will be erected to notify workers that entry to such areas is not permitted unless they are adequately protected.

It is also critical to ensure that the work area will not impact any surrounding areas where unprotected workers may be located. For example, where there is a ventilation intake located within a work area, it must be sealed off to avoid the dispersion of fibres through the ventilation system and into adjoining rooms.

Administrative Controls

Administrative controls involve activities that are not directly related to the actual physical work, but are important strategies to support the exposure control plan and ensure that all workers are protected from exposure to asbestos. Examples of administrative controls include:

- Posting warning signs.
- Relocating unprotected workers away from work areas.

Coast Mountain College will:

- Ensure that requirements of the exposure control plan and the site risk assessment/work plans are understood, and followed, by workers
- Establish procedures for housekeeping, restricting work areas, personal hygiene, worker training, and supervision.
- Post signs to warn workers about the hazards of asbestos and specify any protective equipment required (for example, respirators).
- Ensure that the locations of asbestos-containing materials are adequately identified and their locations labelled, or otherwise made known to workers.
- Ensure that asbestos-containing materials are properly contained and disposed of, once removed.

Personal Protective Equipment (PPE)

Respirators

- All workers required to wear Respiratory Protective Equipment (RPE) will do so in adherence with the company's respiratory protection program.
- Respiratory protection will be selected based upon the task-specific risk assessment.
- Only NIOSH-approved respirators with P-100 filters will be used for asbestos work.
- Workers who wear fitted respirators must be clean-shaven as per regulatory requirements.
- All workers required to wear respirators shall be fit-tested when first provided and at least annually thereafter.
- Respirator filters should be changed if the worker notices resistance to breathing, or if the filter gets wet.
- Workers will be properly trained in the use of respirators, and a high standard of supervision, inspection, and maintenance will be followed.
- Respirators should not be relied on as a primary means of preventing or minimizing exposure to asbestos.
- Selection of appropriate respiratory equipment may be modified based upon results of air sampling program.

Protective Clothing and Hygiene

- All disposable work clothing will be properly disposed of as asbestos waste prior to leaving the work area.
- Prior to each break, and at the end of each shift, workers will be required to thoroughly wash hands and face with soap and water.

Education and Training for Asbestos Exposure

- Training will be performed by the employer or the employer's designate.
- Records of attendance, dates of training, and training material will be documented and retained.
- Additional training or reference material on asbestos exposure will be made available to employees upon request.
- Training topics will include:
  - Asbestos recognition;
  - Health hazards of asbestos exposure;
  - Operations and materials that can produce asbestos exposure;
  - Engineering controls and safe work practices used to protect workers;
  - The importance of proper equipment control and maintenance;
  - Proper use of respirators and the respirator program;
  - Personal hygiene procedures to reduce exposure; and
  - The details of the ECP for asbestos.

Safe work procedures

Task-specific, written work procedures and risk assessments for controlling the risk of exposure to asbestos are provided in Appendix A.

Health Surveillance

Workers will report any incidents of potential asbestos exposure or symptoms of asbestos exposure to the employer as soon as possible.

If anyone is exposed to harmful asbestos fibres they may be entitled to compensation as set out under section 6 of the Workers Compensation Act if an occupational disease develops due to the exposure – now or in the future. Please refer to the Occupational Diseases page on WorkSafeBC.com for more details.

If the exposure to harmful asbestos has resulted in medical treatment or time loss from work an Employee Incident Report Form must be completed and submitted to your supervisor who will submit it to the Health and Safety Department immediately.

Due to the latency and long period of exposure required for the onset of some occupational diseases, WorkSafeBC has developed an Exposure Registry Program as a way for workers, employers and others to register a worker's exposure to a harmful substance at work.

The information obtained through the registry will be kept as a permanent record of a worker's exposure and will assist WorkSafeBC in the adjudication of any future claim for occupational disease caused by the workplace exposure. The information will also help with future efforts to identify and prevent occupational diseases.

A worker should also report an exposure online through the Exposure Registry Program by going onto the Occupational Diseases page on WorkSafeBC.com or by contacting Coast Mountain College for assistance in completing the online information.

Documentation

A Notice of Project for asbestos (NOPA) will be submitted to WorkSafeBC at least 48-hours prior to beginning any moderate or high-risk asbestos work. The NOPA will be submitted by the qualified third-party consulting company. The administrator/supervisor will ensure the NOPA is received by Coast Mountain College and posted onsite prior to asbestos work activities commencing.

All documentation that is related to the training, instruction and written work procedures must be maintained for a minimum of 3 years. Records of asbestos containing material inventories, risk assessments, inspections and air monitoring results must be maintained for at least 10 years.

Periodic Review

This ECP will be reviewed at least annually and updated as necessary by the employer, in consultation with the workplace health and safety committee or the worker health and safety representative.

List of Appendixes

Appendix A: Asbestos Work Procedures

Appendix B: Asbestos Air Monitoring and HEPA Filter Sampling Results