

Assessing Recreation Facilities for Vermiculite Insulation

The Ontario Recreation Facilities Association Inc. (ORFA) regularly researches and writes about issues that could affect our members. These documents provide an opinion on key risk management issues but are not meant to provide any form of legal opinion or official interpretation. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation. All rights reserved. ©2014 Ontario Recreation Facilities Association Inc.

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Introduction

Vermiculite was used as cinderblock insulation in early recreation facility construction. This natural silver-gold mineral is flat and shiny as a raw material however when heated above 1000°C it expands much like popcorn creating pockets of air which enhanced its insulation factor. It also did not easily burn thus assisting in the meeting the expectations of the Building and Fire Codes specific to public buildings at that time. It is important to note that not all vermiculite is hazardous however, some product did contain trace amounts of asbestos that if disturbed creates an exposure issue by inhalation. As long as the vermiculite remains sealed within the walls and undisturbed it does not pose an inhalation hazard.

Note: Asbestos laced vermiculite was regularly used in construction from 1940-1984 it was no longer available after 1990.



Health Risks

The overall hazards from exposure to asbestos in bulk vermiculite that is left undisturbed are low however, the airborne percentages can increase if the material is aggressively moved. As Ontario's aging recreation infrastructure fails or retrofits occur asbestos laced vermiculite may be released into the facility or the environment. The breathing in of even a very small amount of airborne asbestos fibers creates a health risk as exposure through inhalation

has been associated with diseases such as asbestosis, mesothelioma and lung cancer.

Facility Assessment for Vermiculite

The Occupational Health and Safety Act (OHSA) states that all workers have the "right to know" about hazards in the workplace. Section 26(1) c of the OHSA requires all employers to "keep and maintain accurate records of the handling, storage, use and disposal of biological, chemical or physical agents as prescribed".

Asbestos is prescribed as a designated substance and has two designated substance regulations. [Regulation 490/09](#) is applicable to industrial and mining establishments and [Regulation 278/05](#) is applicable to construction projects and in building and repair operations.

A further requirement of a Project Owner is to know ahead of time if asbestos is present. This right and obligation allows facility workers to ask if in fact vermiculite insulation was used in the construction of a facility. Management who are unsure must research original construction files to help determine if vermiculite insulation was used or consider retaining a professional to conduct an assessment (The insulating materials used would normally be shown in sectional drawings and specs). If used a sample would need to be tested to determine if in fact the vermiculite used actually contains asbestos fiber.

Note: This guideline is a reminder to facility management of the importance of retaining original construction documents in a safe, dry location.

Regulation 278 states: Where an Employer, Lessee or Tenant has been informed by the owner of a facility that asbestos is present in the workplace, the Employer, Lessee or Tenant must:

- ✓ Advise the workers of the presence of asbestos
- ✓ Implement and maintain a program to provide sufficient training to the workers

who may disturb or work in close proximity to asbestos (Reg.278 Sec 8(3) (e).

Worker Training

The ORFA reminds its members of their obligation to provide training to all workers on any known or potential workplace hazard. Management may create policy that states that there is no expectation for any worker to handle identified asbestos in the facility so training in the safe and proper handling and disposal of asbestos is not required. This would be true however, it does not eliminate the responsibility of an employer to provide asbestos “awareness training” so that all workers are aware of the issue, what is expected when working near this material, the obligation to report the disturbing or discovery of the material that creates a possible worker exposure issue etc.

What to Do If Exposed

Asbestos related illnesses are usually associated with frequent and prolonged exposure to asbestos. The time it takes to develop a disease from exposure to asbestos can take decades. If contact is expected then the appropriate WSIB reporting forms must be completed and submitted. Speaking with a health care provider is also strongly recommended. Further exposure should be avoided. Scientific evidence has confirmed that smoking or exposure to tobacco smoke will increase the chances of developing more significant health conditions such as lung cancer.

Discovering Vermiculite in the Facility

If asbestos laced vermiculite is discovered as a construction material a professional opinion on how best to deal with it should be sought. Workers who find vermiculite should not attempt to remove or disturb the insulation as this may cause it to become airborne. There is no legal requirement to remove the material but as previously stated workers have the right to know that it exists and that every reasonable precaution has been taken to ensure worker safety. This may include ongoing inspection and documenting to ensure no breaches have occurred and/or taking proactive measures such as sealing areas to ensure the material remains in its encasement. Advising all current and future staff of the hazard and providing clear written direction and training on how to avoid contact or how to handle discovery is key to worker safety.

Informing the Public of Asbestos in the Facility

Facility management must consider when the general public should be advised of asbestos materials being present. Asbestos material that are properly contained within walls or piping may not need to be identified as being present with users. However any repairs, renovations or construction in the building will need to be properly signed for awareness to potential exposure.

Conclusion

ORFA ATAC member and Recreation Director for the Town of Renfrew Kevin Hill offers the following timely information on the topic:

Our community was recently issued an Order from the MOL to comply with the Asbestos Regulations. The fee of conducting Designated Substances Surveys (DSS) of six buildings was approximately \$19,000 with the removal of disturbed asbestos costing an additional \$50,000. Kevin encourages all ORFA members with recreation infrastructure constructed prior to the late 80’s to consider the benefits of conducting a DSS while developing an asbestos management plan to ensure both user and worker safety.

The ORFA strongly recommends that this Guideline be posted on the facilities health and safety board and be added to the next JHSC agenda for awareness and discussion on how best to ensure compliance is being met.

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