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## Condo Renovations And Upgrades: Don't Forget Hazardous Materials!

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**Written by:** Jerry Botti / Pinchin Ltd.

When we hear the term “hazardous materials” it usually conjures images of people in full body spacesuits and respirators, arriving on the scene of a tanker truck collision or industrial emergency involving dangerous waste materials or pathogens. The fact is, however, that there are plenty of substances and products that were used in building construction that fall under the hazardous material classification as well, and all too often these hazards are overlooked when planning a renovation or demolition project. Hazardous materials are defined as asbestos, lead or any other toxic materials such as PCBs or mould.

### Regulatory Requirements

In British Columbia, hazardous materials are regulated by WorkSafe BC, and renovations and demolition of hazardous materials are regulated in Part 20 of the regulation, specifically Section 20.112. This section stipulates that prior to renovating or demolishing a building or a structure, that an assessment for hazardous materials be conducted by a *qualified person*. A *qualified person*, means a person with sufficient experience, education and training to carry out the task in a competent manner. The assessment is the responsibility of the Owner or Employer (e.g. Contractor) responsible for the work.

### Where to Find Hazardous Materials in a Building Asbestos

Generally speaking asbestos materials can potentially be found in buildings constructed in 1990 or older (although there are exceptions and some asbestos products can be found in newer construction). The most common examples of household materials

that were manufactured with asbestos include vinyl flooring, texture ceiling spray, vermiculite, mechanical insulation, plaster finishes and drywall walls applied with drywall joint compound. There are many more products that may contain asbestos but these are the most typically products impacted by general renovations.

Asbestos is a fibre that when disturbed can release microscopic particles into the air. These particles can become airborne, and if inhaled, it can cause respiratory ailments and cancer.

Does this mean that you are in danger by walking on your flooring or living in a home with asbestos materials? The answer is no. Asbestos in good condition and undisturbed does not readily release fibres in the air and asbestos typically only becomes a problem if it's disturbed during a construction project or other disruptive event.

### Lead paint

Lead paint is another hazardous material that can be found in older buildings. Lead has been commonly used in paints and coatings and it can still be found in many homes. Lead imparts a sweet taste to substances it's mixed with, and peeling paint chips often tempt toddlers and teething babies who tend to put anything and everything into their mouths. Removing lead-based paint, or demolishing walls coated with it, can release lead dust into the air. Pulverized lead-based paint - again, usually from disruptive construction projects - can become airborne in the form of dust, and cause lead poisoning in adults, as well.

### **Polychlorinated biphenyls (PCBs)**

The commercial production of PCBs started in 1929 but their use has been banned or severely restricted in Canada since the late 1970s and early 1980s because of the possible risks to human health and the environment.

As PCBs are resistant to acids and bases as well as to heat, they have been used as an insulating material in electric equipment, such as transformers and capacitors (which can be found in fluorescent light ballasts). PCBs have also been used in wide range of products such as caulking, putty and paint as a plasticizer.

### **Mould**

The word mould is a common term referring to fungi that can grow on building materials in homes or other buildings. Damp conditions and mould growth in homes increases the risk of respiratory allergy symptoms and exacerbate asthma in mould-sensitive individuals.

The level of concern depends on the extent of mould, how long it has been present and the sensitivity and overall health of the residents. Some people are more susceptible than others. For example, infants, children, the elderly and those with health problems such as breathing difficulties are more at risk from mould and dampness.

Mould growth can be hidden. Mould can grow behind walls or above ceilings, so it is important to check for the presence of mould anywhere that is damp and especially where water damage has occurred. If there is visible mould, it needs to be removed. The best way to reduce your health risk from mould is to identify and remove the moisture source and clean up the mould.

### **Other Regulated Hazardous Material**

Other regulated hazardous materials that require identification prior to renovations could include:

- Mercury- often as a liquid in thermostats, or gaseous in fluorescent light tubes
- Ozone Depleting Substances (ODS) - present in refrigerators, or heating, ventilation and air conditioning (HVAC) equipment as Chlorofluorocarbons.
- Toxic or Flammable materials found in many chemicals, cleaners and paints.

### **Budget Impact**

Starting a project before identifying hazardous material can lead to unplanned costs in the thousands of dollars and project delays that could be weeks or months long, notwithstanding potential fines or stop work action from regulatory officers. For hazardous materials the key to avoiding the harm they can cause is knowing they're there and dealing with them properly. When designing your renovation project, the first step should include a hazardous material testing and assessment by a qualified person as defined by the regulation.

### **Abatement and Monitoring**

If hazardous materials are identified and require abatement (i.e. removal) your qualified professional can assist you in developing budgets and provide project management to ensure the process proceeds on budget and on schedule. The level of controls required for the abatement will be dependent on the type of material identified and may be as little as a designated work area or as complex as full containments and decontamination chambers. Most projects involving hazardous material removal require air monitoring and inspections. The air monitoring and inspections services should be conducted by a third party who is not employed by the abatement contractor. This ensures there is no conflict of interest and provides a record of the project and confirmation that all materials were removed properly with no impact to the building occupants. The written confirmation that the hazardous materials have been safely contained or removed properly is a regulated requirement.

### **Resources to Help**

When you have a project that may involve disturbance of hazardous materials, consult your qualified professional (QP) for assistance. For more information on how to hire qualified companies to safely test for and remove hazardous materials, please see the following publication by WorkSafe BC:

Asbestos: Frequently Asked Questions (For Homeowners),  
<https://www.worksafebc.com/en/resources/health-safety/information-sheets/asbestos-frequently-asked-questions?lang=en>