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11 Environmental and Health Concerns

A regular Home Inspection does not cover environmental or health concerns.

Certain conditions may exist in a home that may require further evaluation by a specialist such as material or air quality testing.

11.1 Mould

Mould is essentially a fungus that grows on damp surfaces. It can be visible or invisible and can have a musty odour. Some people are more prone to mould than others especially those with weaker immune systems.

Since mould can grow on anything that is damp preventing and/or removing these conditions is the best approach.

- prevent moisture from penetrating the house
- properly remove moist air from inside the house

If small to moderate areas of mould are suspected cleaning is possible with regular household supplies and personal safety gear.

If extensive areas of mould are suspected a specialist is required for testing and remediation.

11.2 Asbestos

Asbestos was very commonly used as an insulating material and fire retardant. Normally asbestos is not a hazard if undisturbed. However if disturbed or deteriorating the material becomes friable (crumbles easily) and therefore can become airborne. Airborne asbestos fibres may cause a number of health complications. The use of asbestos has mostly been eliminated from commercial use since the 1970's.

Home built before the 1980's may have materials that contain asbestos in some form.

Often the best approach is to not disturb the material or to encapsulate (seal). If intending to renovate then it is advisable to retain a specialist to extract and test the materials that will be prone to disturbance.

Proper removal or encapsulation should be done by a qualified specialist.

11.3 Radon

Radon is a naturally occurring radioactive gas that is emitted from the decay of uranium deep below the earth's surface. Radon gas is invisible, odourless and tasteless. Radon released in the atmosphere is diluted and not a health concern.

As a gas radon can move freely through soil and seep may into homes through the basement. Homes built over areas with bedrock and soil that contain uranium are more prone.

All homes have a certain level of radon. When radon is confined or enclosed in poorly ventilated areas it can accumulate to high levels.

Testing is required to determine the level of radon in a home.

Do-it-yourself testing kits are available.

If the radon level exceeds the average annual concentration of 200 Bq/m³ (becquerels per cubic meter) then measures should be taken to reduce its presence. The most common method is to install an exhaust pipe below the basement slab with an extraction fan. This is done by a certified radon professional

11.4 UFFI (Urea-formaldehyde Foam Insulation)

Urea Formaldehyde Foam Insulation (**UFFI** - pronounced *u-fee*) is a type of insulation that was widely used in the 1970's for insulating and retrofitting buildings.

The process involved drilling holes in walls and ceilings and then forcing *expanding foam* into the cavity. The foam cures and hardens.

It was discovered afterwards that during the curing process formaldehyde gas was being released. There was concern for the health of people exposed to high levels of formaldehyde.

Formaldehyde emissions decrease over time. Homes that have UFFI are likely not a health concern however the stigma remains. Removal of UFFI is expensive and in our opinion often not necessary.

It should be understood that many products are presently sold that emit formaldehyde gas.

11.5 Lead

Exposure to lead can cause a health problems with children being most vulnerable.

In homes built prior to the 1950's it is common to find a lead water-main (the source of water to the home). Upgrading this pipe is advisable.

The use of lead based paints was phased out around 1976. Therefore any home built prior up to the mid 1970's may have lead paint. Ingestion of lead is possible from hand to mouth where the paint is deteriorated or during renovations.

Prior to removal or renovating of painted areas lead testing is recommended.

11.6 Air-quality

Older homes typically have a high degree of air leaking. Therefore the air inside the house is replaced with outside fresh air more regularly.

In the past we were not too concerned about heat loss (or gain) since energy costs were low in the past.

When energy costs rose dramatically during the 1970's it became necessary to build homes that were *tighter* (less air leaks). For homes built since about the 1980's building materials included vapour and air barriers to lower the air exchange.

However this resulted in lower air quality sometimes referred to as *sick building syndrome* affecting the occupants health.

The quickest and simplest approach is to open windows to allow for adequate air exchange.

The best approach is to provide proper mechanical ventilation in bathrooms and kitchens.

Specialized ventilation systems such as an HRV (Heat Recovery Ventilation) are also available.

Air quality testing kits are available though retaining a specialist is recommended.

11.7 UST (Underground Storage Tank)

An underground storage tank is used to store fuel oil typically. Since they are underground they are difficult to detect.

UST's are an insurance issue.

If a UST is suspected further evaluation is required by a specialist for confirmation and then environmental testing to identify contamination.

Removal of the UST will be required and remediation if the site is contaminated. Remediation is typically very expensive.