

## Periodic Background Air Sampling

As part of an Operations and Maintenance program, a carefully designed air monitoring program to detect airborne asbestos fibers in the building may provide useful supplemental information when conducted along with a comprehensive visual and physical ACM inspection and reinspection program. For employees who are, or may reasonably be expected to be exposed to airborne concentrations of asbestos fibers above the permissible limits set by the Occupational Safety and Health Administration (OSHA), regulations require that the employer conduct both initial and periodic air sampling.

If the ACM is in good condition, increases in asbestos fiber levels at some later time may provide an early warning of deterioration or disturbance of material. In that way, supplemental background air monitoring can be a useful tool. It also documents the absence of asbestos as part of the due diligence and record keeping aspects of an asbestos control program.

For example, it can be difficult to detect shedding from spray on insulation. Eventually, visible pieces of the material will be visible beneath the product but initially only small fibres or perhaps bundles of fibers are shed which can be impossible to see.

This air monitoring should be used to supplement but not replace the visual inspection process. Visual inspection can recognize and anticipate future exposure (signs of water damage or damage to outer non-asbestos layer) whereas air monitoring can only detect asbestos once it is in the air.

### How Many Samples Should I Take?

It is recommended that an air sample be taken on every floor and in every identifiable area that is different in terms of its asbestos content. For example, if you have spray on insulation in the hallway and pipe insulation in the mechanical room, a sample should be taken in both areas.

A sample should be taken in representative locations. Mechanical rooms and areas with spray on insulation are the most common locations. For large homogeneous areas, a sample should be taken every 25,000 square feet of floor space. This is a common guideline used in LEEDs testing.

### How Often Should Background Air Samples be taken?

This is not a legal requirement under Manitoba Legislation but periodic air testing is recommended by the Environmental Protection Agency (EPA). EPA recommends an in-house visual inspection of asbestos material every 6 months. Also, EPA

recommends that an outside accredited inspector inspect the building for damage to ACM at least once every three years. These inspectors would normally perform air testing as part of their inspection. As air sampling is considered a supplemental assessment tool, the upper limit of the outside reinspection frequency of 3 years is recommended.