

## Air Cleaning Systems and Local Exhaust Ventilation in Public Entertainment Facilities

### Air Cleaning Systems

Air cleaning systems are contemplated by the Regulation. However, the Regulation contains specific requirements if they are being considered.

An air cleaning system must meet a minimum standard of 95% operating efficiency at 0.3 micrometer particle size. The air cleaning system must remove 95% of the particles that are 0.3 micrometers or larger. The Regulation also requires that an air cleaning system be tested by the manufacturer to ensure it can consistently remove 95% of the 0.3 micrometer (and larger) particles. The air cleaner should be tested following ASHRAE Standard 52.2-1999 *Method of Testing General Ventilation Air Cleaning Devices for Removal Efficiency by Particle Size*.

At this time the Board is not aware of an air cleaning system that is able, on its own, to meet all of the tests the regulation requires. These are:

The flow of air must be from the non-smoking areas to the designated room.  
The air flows in the designated room at a minimum ventilation rate of 35 CFM per person.  
The air must only discharge in a manner that prevents re-circulation or transfer from a designated room into the non-smoking area.

If an air cleaning system is being considered, the employer is advised to make sure that documentation is provided to verify that their system has met these performance requirements, as well as the operating efficiency requirements. Where there are concerns regarding the ability of an air cleaning system to meet the regulatory tests, the Board can provide advice through its Engineering Section.

### Air Cleaning System Maintenance

Air cleaners require routine maintenance to keep them performing as intended. Contaminants build up on the filters and eventually the filters must be cleaned or replaced. An air cleaner must be installed, operated and maintained following manufacturers' instructions.

An inspection and maintenance record for the air cleaner must be kept on site as per Section 4.9 of the WCB *Occupational Health & Safety Regulation*. These records **should** demonstrate compliance with the inspection and maintenance requirements in Section 4.78 of the Regulation, including provisions for:

- ♦ Regular inspection of air cleaning systems,
- ♦ Correction of deficiencies found during those inspections, and
- ♦ An effective preventative maintenance program to maintain the minimum performance requirements



## **Local Exhaust Ventilation (LEV)**

Local exhaust ventilation systems capture ETS at or near the source before it spreads through the room. These systems require low airflow resulting in low operating costs compared to high flow rate general exhaust systems.

The viability of the use of this option to meet the requirements of the Regulation, depends on the co-operation of smokers to keep burning cigarettes and exhaled smoke within the capture zone of the LEV system. Examples of LEV systems include wall vents beside the table, an exhaust hood over the smoker or ventilated ashtrays.