

# Respirator Standards and Regulation - Canada

A.L. Riegert, M.A.

Director, Research and Standards Department  
Workers' Compensation Board of British Columbia

When speaking about regulations respecting occupational safety and health in Canada, one has to deal with thirteen separate entities: the federal government, ten provincial governments, and two territorial governments. In Canada, occupational safety and health is not covered by federal legislation but rather by separate legislation in each of the thirteen jurisdictions. Not only is the legislation separate but each is uniquely shaped by the governments in each jurisdiction and its peculiar style of administration.

The sharing of occupational safety and health information is facilitated by a federal-provincial committee of persons administering the legislation. This group is known as the Occupational Safety and Health Committee of the Canadian Association of Administrators of Labour Legislation, the latter being an association of provincial deputy ministers of labour, or the senior administrator of occupational safety and health in a jurisdiction where the administrator is not a deputy minister of labour. The occupational safety and health committee shares experiences, regulations and programs. It also undertakes projects which benefit all jurisdictions. The net effect is gradual process towards more uniform regulations, policies, procedures and programs across Canada.

Another factor assisting the process towards more uniform regulations is the existence of independent, non-governmental organizations devoted to the preparation of standards. In the field of occupational safety and health the Canadian Standards Association (CSA) plays a pre-eminent role. *\*Presented at the International Society for Respiratory Protection 1987*

*Conference in Toronto, Canada, 18-23 October as part of panel discussions on respirator standards and regulations.* The aforementioned occupational safety and health committee of the Canadian Association of Administrators of Labour Legislation acts as the Advisory Council to CSA on occupational safety and health standards. CSA standards are under constant review with the aim of publishing an up-to-date version at least once every five years.

It is in this setting that I wish to comment on respirator standards and regulations in Canada.

The two standards which form the basis for most of the regulations on respirators in each jurisdiction are the Canadian Standards Association standards on selection, care and use of respirators, and on compressed breathing air and systems.

The CSA Standard z94.4M1982 "**Selection, Care and Use of Respirators**" sets out requirements for the proper selection, care, use, maintenance and fitting of respirators and for the administration of an effective respiratory **protection** program. This standard does not apply to underwater breathing devices, aircraft oxygen systems, military masks, and **inhalators** and **resuscitators**. The contents of the standard fall under the following headings:

- Program administration
- Hazard identification
- Selection of the appropriate respirator
- Respirator facial fit
- Training
- Use of respirators
- Cleaning, maintenance and storage of respirators
- Health surveillance of respirator wearers
- Program evaluation

The CSA Standard **CAN3-zz 180.1-M85 "Compressed Breathing Air and Systems"** sets out minimum requirements for the purity of compressed breathing air supplied to the breathing **zone**, and for breathing air systems in the following **applications**:

- Air-supplied respirators, hoods or suits
- Self-contained breathing apparatus
- Diving equipment for use in depths of less than 75 meters
- Industrial equipment requiring a supply **of breathing air**

In **addition**, the standard sets out the requirements applicable to the construction, testing, operation and maintenance of compressors, cylinders, receivers and systems supplying compressed breathing air.

In Canada there is no agency which tests and approves respirators. What is and what is not acceptable is **left** to each jurisdiction to decide. Since the National Institute for Occupational Safety and Health (**NIOSH**) in the United States is an agency for such testing and approving and since most of the respirators used in Canada are of American manufacture, all thirteen jurisdictions stipulate that respirators must be approved by NIOSH. Most of these jurisdictions also have a provision in their regulations for accepting **non-NIOSH** approved respirators. However, only five of the thirteen jurisdictions exercise that authority and those that do, give only limited acceptance and then usually for a specific application.

The specifying, in regulation, as to what respirator to use is most often covered by the terms **"suitable"** or **"appropriate."** The exceptions to this are the specific requirements for firefighting, oxygen deficiency, and entry into conditions which are immediately dangerous to life or health. There are three jurisdictions who reference the CSA Standard **z94.4-M1982 "Selection, Care and Use of Respirators"** in their regulations. This standard includes the procedures by which the appropriate respirator is selected. The other jurisdictions may order the use of a specific respirator during on-site inspections, or inform respirator users through education programs, or have the respirator users rely on advice of vendors of safety equipment, or a combination of these.

The **same** can be said for fit testing. For those three jurisdictions who have referenced the CSA standard in their regulations, they also have mandated specific fit testing of respirators. Other jurisdictions usually have a regulation that the respirator must be properly fitted and some specifically state **that** nothing must interfere with the seal of the facepiece to facial skin, especially facial hair and cotton facepiece coverings.

It would seem that the CSA standard on the selection, care and use of respirators is not used. To the contrary, every jurisdiction but one uses the standard as a guide for educational programs, as a guide to what is **"suitable"** or "appropriate," and is included in orders cited on worksite inspections as to how to establish and maintain a respirator program.

The other CSA standard on compressed breathing air and systems is more widely referenced in regulations. All thirteen jurisdictions reference the standard in their regulations with respect to self-contained breathing apparatus. However, only six jurisdictions reference it also for **air-supplied** respirators and hoods or suits. The other jurisdictions in this respect, use it as a guide and one specifies that occupational exposure limits apply to air supplied to hoods, suits, or air-supplied respirators provided there is neither an oxygen deficient atmosphere **nor** an immediately dangerous to life or health situation.

Perhaps the area of greatest confusion is that of protection factors, variously called fit factors, use factors, etc. It is also the area of greatest need in that fit factors go a long way to tell respirator users what is an "appropriate" or **"suitable"** respirator.

Of current interest is the selection of respirators based on fit factors for asbestos removal work. To reduce the degree of variation, most jurisdictions are taking guidance from the American National Institute for Occupational Safety and Health and the Occupational Safety and Health **Administration's** regulations and policies.

It is hoped that information provided in this conference will assist in strengthening our regulations and standards and lead to a more uniform approach to the selection, care and use of respirators.