

FIRE FIGHTERS GUIDANCE NOTE # 4-9

ISSUE: RESPIRATORY PROTECTION PROGRAM

Firefighters (as defined by the *Fire Protection and Prevention Act*), as a condition of their work, may be exposed to dust, mist, fumes, gas, vapour and smoke. The employer should make every effort to prevent exposure to such hazards by means of technical controls. When exposure to respiratory hazards cannot be avoided or effectively controlled, workers should use appropriate respirators.

The Ministry of Labour recommended in a letter dated February 4, 1987, and sent to fire services across the province that positive pressure (pressure demand) respirators should be used by firefighters for their protection as demand respirators may not provide adequate protection due to the hazardous fumes and gases that can enter the respirator in certain circumstances. The letter indicated that demand (negative pressure) respirators should be converted or replaced. The CSA Z94.4 and NFPA 1981 standards both require that positive pressure respirators are used for structural firefighting.

CSA Standard Z94.4 Section 6.3.2.4.1 requires that for structural firefighting, pressure-demand SCBA with a rated service time of 30 minutes or more shall be used (the requirements of NFPA 1981 should be consulted for additional performance requirements for SCBAs for firefighting).

The employer should develop a respiratory protection program covering the following:

- program administration (note that a Fire Department should post the name of the Respiratory Protection Program Administrator). It is recommended that Program Administrators take the CSA course "Quality Breathing Air – A One Day Training Program for Respiratory Protection Program Administrators in the Fire Service"
- written records documenting the respiratory protection program
- proper training in the selection and use of respirators, including the proper use of Rapid Intervention/Universal Air Connections
- maintenance, storage, inspection and limitations of respirators
- protective clothing or other safety device that has been worn next to the skin shall be cleaned and disinfected prior to being worn by another worker
- protective equipment assigned exclusively to a worker shall be cleaned and disinfected by the worker following each use

- fit testing of workers to ensure an effective seal will be conducted prior to initial use, and at least every 2 years; however, it is recommended that fit tests be conducted annually (per Section 7.1.3 of CSA Z94.4) or whenever work conditions necessitate a change in the type of respirator worn, with periodic review during the worker's career to ensure proper fit
- a process to certify any used personal protective equipment that is obtained. This equipment should be certified to the manufacturer's specifications (at date of manufacture) by the manufacturer or authorized agent, prior to being put into service
- quality of compressed air used in SCBA cylinders (reference CSA Standard Z180.1)
Note: It is recommended that air quality tests be conducted prior to filter change and following major service work, modifications or extensive repairs
- under what conditions a respirator must be worn, such as:
 - when an unknown atmosphere is suspected of being hazardous
 - when the atmosphere is known to be hazardous (i.e. overhaul)
 - when the atmosphere may rapidly become hazardous (e.g. wind change)
 - when employees are working below ground level or inside a confined space (unless the safety of the atmosphere can be established by testing and continuous monitoring)
 - when an employee may be exposed to biological hazards
- Fire Departments may want to consider longer duration SCBA cylinders based on risk assessment of larger and/or complex structures
- program evaluation.

The employer and workers are encouraged to work together to develop and maintain a voluntary physical fitness program designed to improve the cardiovascular fitness of firefighters – reference material for developing a physical fitness program is available in NFPA 1500.

Further information regarding Respiratory Protection is available by referencing CSA Standards Z94.4 and Z180.1 and NFPA 1981.