

Development Of Requirements for the Special Application CBRN as part of the ISO Respiratory Protection Standard

Simon J. Smith

3M Canada Company, 1360 California Avenue, P.O. Box 665, Brockville, Ontario, Canada K6V 5V8.

The International Organisation for Standardisation (ISO) exists to facilitate the international coordination and unification of industrial standards. A sub-committee to create a standard for respiratory protection was created in 2002, and the final standard is expected to be published in 2016. The principal approach taken in organisation of this standard is the definition of requirements to match human performance factors, instead of formulation around established equipment designs. Extensive focus has therefore been applied to human factor studies, which has resulted in the publication of technical specifications which form the basis of development of the rest of the standard.

The respiratory protection device standard will address respiratory protective devices in two sections covering supplied breathable gas devices and filtering devices, with a further document defining a standard connector. Requirements for Chemical-Biological-Radiological-Nuclear (CBRN) systems are included as a special application. In recognition of the complexity of CBRN requirements, a dedicated Task Group was formed in 2012 within the ISO Working Group structure to define the specific performance requirements for CBRN-capable respiratory protective devices. This Group is working to incorporate the best current knowledge on human factors, protection requirements, operational needs and compatibility with other equipment into definition of performance criteria.

The primary target user community comprises first responders in the police, fire service, emergency medical, primary health care (first receiver), search and rescue, sampling and detection teams, and trained workers needed for specific roles during response such as for utility, transportation and service continuity. Military personnel, the general civilian population and collective protection systems are out of scope.

The result of the Task Group activity will be the definition of performance criteria for CBRN-capable respiratory protective devices and for CBRN-Escape systems for incorporation into the ISO Respiratory Protective Device Standard.

A New Work Item Proposal to develop a Draft Technical Specification for this subject area was released for National Body ballot in June 2014.