

PREVENTING OVEREXPOSURE TO HAZARDOUS SUBSTANCES THROUGH RESPIRATOR CERTIFICATION

WHAT IS THE PUBLIC HEALTH ISSUE?

- When engineering and other controls do not reduce exposures below hazardous levels, workers must rely on personal protective equipment. Industries that often require workers to use such equipment include mining, firefighting and other emergency response, healthcare, and agriculture.
- People who respond to hazardous incidents or terrorist activities need assurance that the protective equipment they use will perform to specifications and meet minimum performance standards.
- According to a recent study conducted jointly with the Bureau of Labor Statistics, about 3.3 million workers use CDC-certified respirators.

WHAT HAS CDC ACCOMPLISHED?

CDC conducts a respirator certification program that ensures respiratory protective equipment will perform with established standards. The program assesses the ability of the equipment's design to meet regulatory performance and quality standards.

Since 1972, CDC has issued more than 8,200 respirator approvals. In 2003, CDC processed 399 certification applications for respirators produced by 90 manufacturers in 102 sites located in 18 countries. Forty-one product audits were completed; 11 respirator manufacturing sites were audited, including 2 foreign sites. Twenty-three reports of problems with CDC-approved respirators were received and 18 related investigations were completed; 7 of these investigations led to product recalls or field retrofit actions. Five new policies were developed and implemented to assess new and innovative respirator designs.

Examples of Program in Action

- In early 2002, CDC certified the first self-contained breathing apparatus (SCBA) for chemical, biological, radiological, or nuclear (CBRN) exposures, which is the type of respirator most likely to be used by first responders to potential terrorist incidents.
- In 2003, CDC provided criteria for testing and certifying CBRN air-purifying respirators used by emergency responders.
- CDC initiated a CBRN SCBA retrofit certification program that allows existing SCBA to be upgraded to CBRN performance requirements, using a CDC-approved retrofit kit. This will enable responders to obtain CBRN protection without purchasing new equipment. The first retrofit kit was approved in September 2003.
- CDC developed and implemented a CBRN research and development test program to increase respirator manufacturers' ability to conduct research and development. Manufacturers can test the effectiveness of their respirators against chemical warfare agents at a U.S. Army chemical test laboratory, before submitting them for CDC certification testing.
- CDC created a computer program that can be used to accurately predict when a respirator's cartridge filter will lose its ability to protect the wearer from toxic air contaminants.

WHAT ARE THE NEXT STEPS?

CDC is updating its existing quality assurance standard to promote improved respirator quality and reliability. CDC also is developing standards for certifying self-contained, closed-circuit escape breathing apparatus such as the self-contained self-rescuers that are used in the mining industry.

For additional information on this or other CDC programs, visit www.cdc.gov/program

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