

NIOSH Issues New Rules for Testing, Certifying Closed-Circuit Escape Respirators

The National Institute for Occupational Safety and Health (NIOSH) announced final rules March 8 that revise and update the agency's requirements for testing and certification of closed-circuit escape respirators. The revised rules are designed to strengthen emergency respiratory protection for workers in escaping from toxic concentrations of fumes, gases, or smoke, or from confined areas where there is insufficient oxygen, posing immediate dangers to life or health.

The revised rules reflect experience gained from field observations and reports by NIOSH and stakeholders, including reports of widespread problems encountered with units in coal mine emergencies. The rules incorporate comments and suggestions that were offered by stakeholders during a public comment period and public meetings.

The rules were published in the Federal Register at www.federalregister.gov/articles/2012/03/08/2012-4691/approval-tests-and-standards-for-closed-circuit-escape-respirators. They will be formally codified in a new Subpart O of 42 CFR Part 84, Approval of Respiratory Protective Devices.

The rules will become effective in 30 days, at which time NIOSH will stop approving under the existing requirements. However, manufacturers can manufacture and sell, for three years, currently approved closed-circuit escape respirators. This will give manufacturers time to begin to meet the new requirements by modifying current product designs or developing new designs.

A closed-circuit escape respirator consists of a mouthpiece connected to a small container by a breathing hose. The container holds either a supply of compressed oxygen with a chemical system for removing carbon dioxide, or a store of chemicals that react to form oxygen and remove carbon dioxide when the device is activated. The respirator is either carried on a worker's belt or stored nearby for emergency use.

Known in the mining community as self-contained self rescuers, closed-circuit escape respirators provide breathable air to miners in emergencies, such as an escape from a smoke-filled mine in the event of a mine fire. Also known as emergency escape breathing devices, they are used by Navy and Coast Guard crews for emergency escape from confined work spaces below deck.

To a lesser extent of use, the devices also provide emergency escape protection to workers in other industries where work is performed underground or in confined spaces, such as tunneling operations in construction.

Under the Occupational Safety and Health Act of 1970, NIOSH tests and certifies respirators for workplace use. NIOSH and the Mine Safety and Health Administration jointly review and approve closed-circuit emergency respirators (self-contained self rescuers) for use by miners. More information about NIOSH's testing and certification program can be found at www.cdc.gov/niosh/npptl/.

The new requirements set by NIOSH for testing and certification of closed-circuit escape respirators include the following:

- Improved performance measures to ensure that closed-circuit escape respirators are reasonably rugged, because the devices are used in relatively

