

- ※ Provide personal CO monitors with audible alarms if potential exposure to CO exists.
- ※ Test air regularly in areas where CO may be present, including confined spaces. See *Title 29 of the Code of Federal Regulations (CFR) 1910.146*.
- ※ Install CO monitors with audible alarms.
- ※ Use a full-facepiece pressure-demand self-contained breathing apparatus (SCBA) certified by the National Institute for Occupational Safety and Health (NIOSH), or a combination full-facepiece pressure demand supplied-air respirator with auxiliary self-contained air supply in areas with high CO concentrations, i.e., those immediately dangerous to life and health atmospheres. (See *29 CFR 1910.134*.)
- ※ Use respirators with appropriate canisters for short periods under certain circumstances where CO levels are not exceedingly high.
- ※ Educate workers about the sources and conditions that may result in CO poisoning as well as the symptoms and control of CO exposure.

In addition, if your employees are working in confined spaces where the presence of CO is suspected, you must ensure that workers test for oxygen sufficiency before entering.

What can employees do to help prevent CO poisoning?

Employees should do the following to reduce the chances of CO poisoning in the workplace:

- ※ Report any situation to your employer that might cause CO to accumulate.
- ※ Be alert to ventilation problems—especially in enclosed areas where gases of burning fuels may be released.
- ※ Report promptly complaints of dizziness, drowsiness, or nausea.
- ※ Avoid overexertion if you suspect CO poisoning and leave the contaminated area.
- ※ Tell your doctor that you may have been exposed to CO if you get sick.
- ※ Avoid the use of gas-powered engines, such as those in powered washers as well as heaters and forklifts, while working in enclosed spaces.

This is one in a series of informational fact sheets highlighting OSHA programs, policies, or standards. It does not impose any new compliance requirements or carry the force of legal opinion. For compliance requirements of OSHA standards or regulations, refer to *Title 29 of the Code of Federal Regulations*. This information will be made available to sensory-impaired individuals upon request. Voice phone: (202) 693-1999. See also OSHA's website at www.osha.gov.

What are the OSHA standards for CO exposure?

- ※ The OSHA PEL is 50 parts per million (ppm). OSHA standards prohibit worker exposure to more than 50 parts of the gas per million parts of air averaged during an 8-hour time period.
- ※ The 8-hour PEL for CO in maritime operations is also 50 ppm. Maritime workers, however, must be removed from exposure if the CO concentration in the atmosphere exceeds 100 ppm. The peak CO level for employees engaged in Ro-Ro operations (roll-on roll-off operations during cargo loading and unloading) is 200 ppm.

How can you get more information on safety and health?

OSHA has various publications, standards, technical assistance, and compliance tools to help you, and offers extensive assistance through workplace consultation, voluntary protection programs, grants, strategic partnerships, state plans, training, and education. OSHA's *Safety and Health Program Management Guidelines (Federal Register 54:3904-3916, January 26, 1989)* detail elements critical to the development of a successful safety and health management system. This and other information are available on OSHA's website.

- ※ For one free copy of OSHA publications, send a self-addressed mailing lable to OSHA Publications Office, P.O. Box 37535, Washington, DC 20013-7535; or send a request to our fax at (202) 693-2498, or call us at (202) 693-1888.
- ※ To order OSHA publications online at www.osha.gov, go to **Publications** and follow the instructions for ordering.
- ※ To file a complaint by phone, report an emergency, or get OSHA advice, assistance, or products, contact your nearest OSHA office under the "U.S. Department of Labor" listing in your phone book, or call toll-free at **(800) 321-OSHA (6742)**. The teletypewriter (TTY) number is (877) 889-5627.
- ※ To file a complaint online or obtain more information on OSHA federal and state programs, visit OSHA's website.

