ACCIDENT ALERT

Confined Spaces

A health and safety message from the WCB

In a recent accident, the owner of a winery collapsed while taking a sample from a wine fermentation tank. A second person entered the tank in an attempt to rescue him, and he also collapsed. They could not be revived.

Confined space accidents are rare but they can be deadly both to the worker who initially enters the space and to would-be rescuers. This alert provides links to resources to help you prevent similar accidents in your workplace.

Other examples of confined space accidents in BC that led to the death of workers include:

In 2001, a welder entered the hull of a barge and became unconscious in the oxygen-deficient atmosphere. Four other workers entered the hull to rescue the welder and also became unconscious. The welder died and the other workers suffered lung damage.

In 1997, a worker at a pulp mill entered a tank without testing the air. The tank was filled with colourless, odourless nitrogen, and the worker collapsed from oxygen deficiency. A second worker at the entrance to the tank also collapsed. They could not be revived.

HAZARDS OF CONFINED SPACES

Confined spaces have limited openings for entry and exit, such as silos, vats, ship holds, sewers, tunnels, large pipelines, and other such spaces that workers could enter to perform work.

Confined spaces may contain hazardous air contaminants that may be colourless, odourless gases that can only be detected with testing. Sometimes inert gases (such as nitrogen) displace oxygen so that the confined space is oxygen-deficient. Lack of oxygen can cause brain damage or heart failure in minutes.

Other hazards of confined spaces are flammable gases or vapours that ignite, causing an explosion or fire. Workers have also been engulfed in loose materials such as grain, sand, or gravel in silos or storage bins.

Entering an unventilated and untested confined space may pose a hazard that is immediately dangerous to life or health.

HAZARD ALERTS ON CONFINED SPACES

Here are some hazard alerts describing confined space accidents and how to prevent them.

2000 Fatal. Confined space - Explosion kills one and seriously injures another
http://publications.healthandsafetycentre.org/s/Topic.asp?ReportID=31778

1992 Fatal. Beverage warehouse - production worker
http://publications.healthandsafetycentre.org/s/Topic.asp?ReportID=31781

1992 Fatal. Sawmill supervisor
http://publications.healthandsafetycentre.org/s/Topic.asp?ReportID=31780

ONLINE RESOURCES ON CONFINED SPACES

“Hazards and Risks of Confined Spaces.” SafetyLine Institute, WorkSafe Western Australia.
http://www.safetyline.wa.gov.au/institute/level1/course8/lecture23/l23_01.asp

“Western Australian Wine Industry Occupational Safety and Health: Code of Practice 2002,” Part 18 on Confined Spaces. (PDF 373 KB)
http://www.winewa.asn.au/wiawa_osh.pdf

“Confined Spaces - No Easy Way Out.” Human Resources Development Canada for federally regulated workplaces.
http://info.load-otea.hrdc-drhc.gc.ca/~oshweb/confinen.shtml

NIOSH. This page gives brief descriptions of and links to five publications on confined spaces:
http://www.cdc.gov/niosh/injury/traumaconf.html

OSHA. This page gives links to a number of resources, including hazard recognition, solutions, and training.
http://www.osha.gov/SLTC/confinedspaces/index.html

“Is it safe to enter a confined space?” California State Department of Industrial Relations (PDF 3 MB)
http://www.dir.ca.gov/dosh/dosh_publications/ConfSpa.pdf

REGULATIONS AND GUIDELINES

Occupational Health and Safety Regulation, Part 9, Confined Spaces:
http://regulation.healthandsafetycentre.org/s/Part9.asp

Guidelines to the Regulation, Part 9, Confined Spaces:
http://regulation.healthandsafetycentre.org/s/GuidelinePart9.asp

WorkSafe
WORKERS' COMPENSATION BOARD OF BC