

## Carbon monoxide exposure in wood pellet storage

### What is the potential risk?

Wood pellets can release carbon monoxide, which may accumulate in unventilated storage areas, putting workers who attempt to enter these spaces at risk of injury.

Wood pellets are made of compressed sawdust and wood shavings, and are a source of biofuel. When exposed to oxygen, fatty acids contained in the wood break down and release carbon monoxide. The highest amounts of carbon monoxide are released soon after manufacturing when the wood still contains a greater concentration of fatty acids. High temperatures and high levels of oxygen also increase the amount of carbon monoxide that is released.

There have been incidents of worker injuries and fatalities due to exposure to carbon monoxide in wood pellet storage areas.

Wood pellets may be stored at manufacturing plants, in transport vessels, or in buildings where wood pellet boilers are used, putting workers involved in these activities at risk.

### What industries may be at risk?

- Pellet manufacturing
- Bulk pellet transportation
- Boiler, tank, or furnace manufacture
- Furnace, duct, or air vent cleaning and servicing
- Furnace cleaning and servicing

- Industrial kiln furnace (heavy) sales, rental, service, or repair
- Plumbing, heating, vent, residential air conditioning, or central vacuum system installation or repair
- Servicing heating equipment

### How can I reduce the risk in my workplace?

As an employer, you need to know if there is the potential for the risk identified in this advisory to be present in your workplace. It's your responsibility to regularly inspect your workplace, and to ensure that your safety procedures and practices control the risk. The following information highlights some of the sections of the Occupational Health and Safety (OHS) Regulation and Guidelines that are most relevant to this risk.

Section 5.54 of the OHS Regulation requires that employers implement an exposure control plan (ECP) when:

- (a) exposure monitoring under section 5.53(3) indicates that a worker is or may be exposed to an air contaminant in excess of 50% of its exposure limit,
- (b) measurement is not possible at 50% of the applicable exposure limit, or
- (c) otherwise required by this Regulation.

The airborne concentration of any gas or vapour must be controlled so that workers are not exposed to an oxygen-deficient atmosphere, and there is no other hazard, such as a fire or explosion.

Some of the locations where carbon monoxide may be emitted may also be confined spaces. Part 9 of the Regulation requires that a hazard assessment be prepared and a confined space entry program be implemented before a worker enters a confined space.

For more information on how we identified this risk, visit [worksafebc.com/riskawareness](https://worksafebc.com/riskawareness).