

BULLETIN

CARBON MONOXIDE POISONING FROM SMALL PETROL ENGINE PLANT

WHO SHOULD READ THIS?

This alert is for 'persons conducting a business or undertaking' (PCBUs) and their workers who use small petrol engine plant.

INTRODUCTION

The exhaust fumes from small petrol engine plant contain the poisonous gas carbon monoxide. Using small petrol engine plant in confined spaces or areas with poor ventilation has led to several incidents of carbon monoxide poisoning in recent years.

THE HAZARDS AND RISKS

Carbon monoxide fumes can build up to dangerous levels in a short time in confined spaces and other areas with poor ventilation.

Carbon monoxide is difficult to detect because it has no smell, taste or colour. This means people can inhale it and not realise.

The symptoms of carbon monoxide poisoning are headaches, dizziness, feeling sick, stomach pain, feeling tired and confusion, shortness of breath and difficulty breathing. In serious cases it can cause brain and heart damage or death.

People exposed to a high-level of carbon monoxide, or who have symptoms that suggest exposure, need oxygen therapy treatment in hospital.

THE CIRCUMSTANCES

Incident 1

Two workers were cleaning an underground water tank. They were using a portable small petrol engine pump to remove wash water from the tank.



Figure 1: Portable small petrol engine pump

The pump was located near the tank opening with the suction hose going into the tank.

Once most of the water had been pumped out of the tank, the pump no longer had sufficient power to pump the water up from the bottom of the tank, and it stopped working. The pump was then lowered into the tank so it was closer to the water and would operate more effectively.

The workers entered the tank while the petrol engine pump was running. Both men became ill with carbon monoxide poisoning due to the build-up of exhaust fumes. They were given oxygen, and taken to hospital by ambulance.



Figure 2: Petrol engine air compressor

Incident 2

A contractor was doing maintenance work on a bulldozer, in a remote location. To help him complete the work he had a petrol engine air compressor running in a ten foot shipping container.

It appears that the contractor went into the container and was overcome by carbon monoxide from the build-up of exhaust fumes. He was found deceased later in the day.

HOW TO KEEP SAFE

Liquid fuel engines should never be operated in confined spaces or poorly ventilated areas as there is a very high risk of carbon monoxide poisoning.

Before starting work in confined spaces or poorly ventilated areas complete a thorough risk assessment and put control measures in place.

Controls may include the following actions:

- > Use electrical or pneumatic tools instead of fuel-powered tools where reasonably practicable.
- > Install ventilation in work areas to capture the contaminated air and extract it safely outside.
- > Move carbon monoxide producing processes outside.
- > Monitor the work environment.
- > Provide workers with information, supervision and training about the dangers of carbon monoxide and what to do in an emergency.

FURTHER INFORMATION

Fact sheet: Forklifts and Carbon Monoxide

The dangers of poorly ventilated workplaces
WorkSafe Victoria

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