

Safety and health alert

06/98 Working in confined spaces

Incident

A self-employed man in Wangara applying a solvent based coating to the inside of a tank collapsed and lost consciousness in two separate incidents in May 1998.

Oxygen levels were measured inside the tank but solvent levels were not.

In the first incident, the man entered the 2.3 metre diameter and 3.6 meter high tank through a small hatch in the top. He wore a full-face mask with an organics filter (air purifying respirator).

He collapsed and approximately an hour later the Fire and Rescue Service rescued him from the tank. He was discharged from hospital that night.

Two days later, the man entered the tank a second time to finish the job. He rigged up an air hose respirator that would normally provide a higher level of protection than an air-purifying respirator, by connecting a centrifugal blower to a full-face mask with several pipes and a hose. All joints and the exhalation slots on the mask were sealed with tape.

He again collapsed, and fell with one leg bent beneath him, cutting off circulation to that leg. He was discovered several hours later and again rescued and taken to hospital. Consideration was given to amputating the leg because of dead tissue. Doctors finally decided not to amputate but the man spent seven weeks in hospital.

The man stated:

"I almost lost my leg and my life for not having any developed internal procedures while working in confined spaces. We had used non-standard air supply hoses and altered the facemask during use, and I had collapsed as a result. It is vital to have internal procedures or have access to guidelines/standards when performing life-threatening activities."

Apart from the personal injury, he also suffered severe financial losses as there was no one to run his business.

Factors

1. The requirements of regulations 3.85 - 3.87 of the Occupational Safety and Health Regulations 1996 and Australian Standard 2865-1995, Safe Working in Confined Spaces were not observed. Primarily, a satisfactory risk assessment had not been undertaken, the person was not trained to enter the confined space, there was no person in the immediate vicinity outside the confined space, the atmosphere was not adequately monitored and the appropriate respiratory protection was not worn.



2. The initial full-face mask that was used was inappropriate and did not comply with regulation 3.40 or *Australian/New Zealand Standard 1715-1994, Selection, Use and Maintenance of Respiratory Protective Devices*, in that the level of toxic substances in the air was unknown and therefore an air supplied respirator was required to be used.
3. The air hose respirator used on the second occasion did not meet the requirements of regulation 3.40 - 3.44 and *Australian/New Zealand Standard 1716-1994, Respiratory Protective Devices*. The taping of the exhalation valve being particularly hazardous.
4. The supplier of the paint containing the hazardous substance had not provided a current Material Safety Data Sheet (MSDS) to the purchaser as required by regulation 5.8 of the *Occupational Safety and Health Regulations 1996*.
5. The self-employed person did not obtain a Material Safety Data Sheet for the solvent as required by regulation 5.11, which could not then be used during the assessment as per regulation 5.15.

Recommendations

1. Persons in control of work within a confined space must ensure that the requirements of the *Occupational Safety and Health Act 1984* and provisions such as regulations 3.40 - 3.44, 3.82 - 3.87, 5.11 and 5.15 of the *Occupational Safety and Health Regulations 1996* are complied with.
2. 2. Persons working in or near a confined space must be trained. A list of organisations accredited to conduct OSH courses appears at website www.safetyline.wa.gov.au or is available from the department. Several of these training providers provide confined space training.
3. From 30 August 1998 the Safetyline Institute will exist and includes a lecture on confined spaces. It is located at www.safetyline.wa.gov.au/institute, see course 8.

Further Information

Further information can be obtained from the WorkSafe internet site www.worksafe.wa.gov.au, or by contacting customer service on 1300 307 877 or email: safety@docep.wa.gov.au.

Date: July 1998

A413425

