S3 Confined Spaces (NCI 34)

Purpose

This document provides for:

- safe and effective operations at incidents involving rescues in confined spaces.

Requirements for Confined Spaces

Definition

A confined space is any area that is not intended for human occupancy and that also has the potential for containing a dangerous atmosphere. A confined space:

- is large enough for a worker to enter and perform assigned work
- has limited entries and exits
- may contain a hazardous atmosphere arising from chemicals, sludge or sewage
- is constructed so that anyone who enters could be asphyxiated or trapped by walls or floor that converge to a small cross-section, such as a hopper
- contains a material, such as sawdust or grain, that could engulf anyone who enters

Examples of confined spaces include wells, silos, pits, cellars, tanks and vessels, manholes, utility tunnels, culverts, caves, collapsed structures and large-diameter pipes and ducts.

References

When working in confined spaces, NZFS personnel will also refer to:

- *E6-2 POP Gas detectors*

Executive Officers' responsibilities

Chief Fire Officers will issue a procedure for managing incidents involving operations in confined spaces.

Fire Region Managers will ensure that every Fire District in the Fire Region has a procedure in accordance with this instruction.

Local procedures

Local procedures will take into account:

- pre-planning
- risk assessment upon arrival at incident
- liaison with people on-site and other emergency services
- command and control
- attendance of senior officer/s
- the wearing of breathing apparatus
- communications
- lighting

- ventilation
- use of safety lines
- emergency medical support
- personnel logistics (relief crews, rest periods, and so on)
- identification of utilities that may be present
- resourcing of shoring material and other equipment
- the utilisation, where appropriate, of any recognised specialist rescue teams
- access to and availability of specialist equipment such as large earthmoving machinery

Hazard Identification and Control: Operating in Confined Spaces

Reference documents

AS/NZS 2865:2001 Safe Working in a Confined Space

Hazard control

All hazards will be controlled by eliminating, isolating where elimination is impracticable, or minimising, using one or more of the control methods in the following table:

Hazards	**Control measures**
Significant hazards: • flammable gases/ dusts and oxygen enrichment of the atmosphere • toxic gases • biological hazards • oxygen deficiency • poor visibility • unstable footing • access/egress difficulties • shafts • the ingress or presence of liquids • solids that can flow or fall • extremes of temperature • electrical hazards • physical exhaustion of personnel • heat stress	• all personnel will be trained in the conditions to be encountered and the safe practices required when operating in confined spaces • pre-planning and risk assessment • brief crews on the plan of action and safety measures • personnel will wear suitable protective clothing (BA, helmet, gloves eye/hearing protection) • command and control • control of entry points • BA control • relief and emergency crews on standby • pre-entry check for gases • continuous monitoring of gases (refer to *E6-2 Gas detectors*) • appoint safety officer/s • ventilation • liaison with workers and management at site • decontamination procedures • relief crews • rest and refreshments for personnel • drain or pump away fluids • isolate non-essential services such as electricity, gas, machinery, and so on • ambulance in attendance • monitor atmosphere • safety line or harness will be secured to rescuers at all times • visual or radio contact will be kept with rescuers at all times • illumination of confined space • illumination of entry points • use intrinsically safe communications and lighting equipment