

## F2 Fixed Fire Protection Systems (NCI 25)

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### **Purpose**

This document provides for:

- safe and effective operations at calls to complexes protected by sprinkler, drencher, or other fixed fire protection systems.

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### **Chief Fire Officers' responsibilities**

Chief Fire Officers will issue a local procedure on fixed fire protection systems when a risk identified during operational planning is significantly different to the general risks covered by this procedure.

### **Sprinkler Systems**

Where a fire exists, and the sprinkler system allows, an appliance will be tasked to connect in and boost the sprinkler system.

Systems that comply with NZ Standards will have a fire hydrant inlet located close to the valve house.

### **System Integrity**

On arrival, the OIC Fire will ensure that the integrity of the sprinkler system is in place by checking that:

- the main valve is open
- floor isolation valves are open
- the drain valve is closed
- adequate water is flowing into the system (if not, boost pressure as described at the beginning of this section).

### **Floor isolation valves**

Floor isolation valves are used:

- to isolate sections of the sprinkler system
- to reduce further damage once the fire has been extinguished
- in preference to shutting down a whole system.

Building familiarisation will include the identification of floor isolation valves and their location (they have been mandatory in buildings with 6 or more floors since 1996).

During a fire, where isolation valves are fitted, a firefighter will be stationed at the isolation valve on the fire floor.

### **Salvage**

Early attention will be given to minimising water damage including early salvage by:

- use of a sprinkler stopper tool
- use of a floor isolation valve (refer to 'Floor isolation valves' above).
- draining sprinkler heads and diverting water away.

### **System Shutdown**

Sprinkler systems may be shut down at:

- the main stop valve
- floor isolation valve (preferable where applicable).

The OIC Fire will instruct NZFS personnel to shut down all or part of the sprinkler system(s), only when:

- appropriate extinguishing resources are in place
- the fire is under control
- more efficient use of the available water can be made where floor isolation valves are fitted

Whenever a sprinkler system is shut down, the owner/occupier of the building or their agent will be notified.

### **Gas Flooding Systems**

Operational planning will identify sites that are fitted with gas flooding systems.

Local procedures will identify:

- warning pre-activation
- entry procedures
- building layout/access
- location and types of gas cylinders
- the need to wear BA
- covering deliveries or extinguishers
- CO<sub>2</sub> and nitrogen asphyxiates
- valuables being protected
- system operation and shutdown

- ventilation
- rescues.

### *Smoke Cloak Security Systems*

There is an increasing use of “Smoke Cloak” security systems in some retail stores.

NZFS personnel engaged in operational planning and/or building inspections will identify those premises that have smoke cloaks or similar security systems, and create local procedures to provide guidance on how to manage calls to premises with these installations.

This information will be relayed to responding crews.

## **Hazard Identification and Control: Fixed Fire Protection Systems**

### ***Hazard control***

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

Hazards	Control measures
<p><i>Significant hazards:</i></p> <ul style="list-style-type: none"> <li>• asphyxiation</li> <li>• reduced visibility</li> <li>• noise from fire alarm system</li> </ul>	<ul style="list-style-type: none"> <li>• all personnel will be trained in the risks to be encountered and safe practices for working in environments where fixed fire protection systems have operated</li> <li>• operational planning and risk assessment</li> <li>• briefing crew/s on plan of action and safety measures</li> <li>• structural firefighting uniform worn correctly</li> <li>• breathing apparatus &amp; hearing protection</li> </ul>