

# Unit of Competency CPCPFS4022

## Commission and maintain special hazard fire suppression systems

### Application

This unit specifies the skills and knowledge required to test, commission and maintain special hazard fire suppression systems.

It covers preparation for the work, identification and confirmation of system specifications and requirements, physical testing and commissioning of the systems, and conduct of systems maintenance and work finalisation processes, including records and documentation.

Site location for work application may be either domestic or residential, and may be a new work site or an existing structure being renovated, extended, restored or maintained.

This unit is suitable for those using specialised knowledge to complete routine and non-routine tasks and using their own judgement to deal with predictable and sometimes unpredictable problems.

All technicians performing work described in this unit that involves the handling of prescribed ozone depleting substances (ODS) and synthetic greenhouse gases (SGG) extinguishing agents must hold an appropriate extinguishing agent handling licence (EAHL).

### Prerequisite Unit

Nil.

### Elements and Performance Criteria

1. Prepare for work.	<ul style="list-style-type: none"><li>1.1 Obtain plans and specifications.</li><li>1.2 Apply workplace policies and procedures, work health and safety (WHS) and environmental requirements.</li><li>1.3 Identify and adhere to quality assurance requirements to according to workplace requirements.</li><li>1.4 Commission, inspect, test and maintain ozone depleting substances (ODS) and synthetic greenhouse gases (SGG) legislative and industry requirements to activities for special hazard fire suppression systems.</li><li>1.5 Plan and sequence tasks in conjunction with others involved in or affected by the work.</li><li>1.6 Select and check tools, equipment and materials for serviceability prior to commissioning and maintaining special hazard fire suppression systems, including personal protective equipment.</li><li>1.7 Prepare work area to support efficient commissioning process.</li></ul>
2. Identify system requirements.	<ul style="list-style-type: none"><li>2.1 Identify and confirm service design requirements from job specifications and are according to standards.</li><li>2.2 Identify testing and commissioning requirements of special hazard fire suppression systems according to standards, authorities' requirements and</li></ul>

		job specifications.
3. Test and commission system.	3.1	Check special hazard fire suppression systems to ensure type and installation conform to standards, job specifications, manufacturer recommendations and authorities' requirements.
	3.2	Test operation of system according to job specifications, manufacturer recommendations and authorities' requirements, including ODS and SGG legislative requirements, and is adjusted as required.
	3.3	Commission system to ensure correct operation according to standards, and manufacturer and job specifications.
4. Maintain system.	4.1	Identify service and maintenance requirements from manufacturer specifications or authorities' requirements.
	4.2	Check and fit replacement components periodically and as required according to specifications.
	4.3	Conduct maintenance and repair of system observing maintenance schedule described in current Australian standard, and manufacturer and/or authorities' requirements, including ODS and SGG legislative requirements.
	4.4	Observe sustainability principles and concepts when preparing for and undertaking work process.
5. Clean up work area.	5.1	Clear work area and dispose of reused or recycled materials, according to legislation, regulations, codes of practice and job specification.
	5.2	Clean, check, maintain and store tools and equipment according to manufacturer recommendations and workplace procedures.
	5.3	Access information and complete documentation according to workplace requirements.

## Foundation skills

A person demonstrating competency in this unit must have the following language, literacy, numeracy and employment skills:

- technical skills to test, commission and maintain a special hazard protection system consisting of an extinguishing agent, piping, actuating devices and sprinkler delivery
- technology skills to:
  - access and understand site-specific instructions in a variety of media
  - use mobile communication technology.

## Unit Mapping Information

Supersedes and is equivalent to CPCPFS4022A Commission and maintain special hazard fire suppression systems.

## Links

Companion Volume Implementation Guide:

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

# Assessment Requirements for CPCPFS4022

## Commission and maintain special hazard fire suppression systems

### Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria of this unit by:

- locating, interpreting and applying relevant information, standards and specifications to testing and commissioning special hazard fire suppression systems
- applying safety requirements throughout the work sequence, including electrical safety requirements and the use of personal protective clothing and equipment
- testing and commissioning one special hazard fire suppression system (not prescribed ODS or SGG extinguishing agent), being a gaseous, chemical or fluid-based system; and inspect, test and maintain one prescribed ODS or SGG system, ensuring:
  - o application of sustainability principles and concepts
  - o correct identification of location, design specification and details of proposed service
  - o correct selection and use of appropriate processes, tools and equipment
  - o completion of all work to specification
  - o compliance with regulations, standards and organisational quality procedures and processes
  - o communicating and working effectively and safely with others.

### Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- work health and safety are to be according to commonwealth, state and territory legislation and regulations:
  - o handling of materials
  - o hazard control
  - o personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices
  - o safe operating procedures, including recognising and preventing hazards associated with:
    - electricity
    - hazardous materials and substances
    - other machines
    - surrounding structures and facilities
    - trip hazards
    - underground services
    - use of tools and equipment
    - work site visitors and the public
    - working at heights

- working in confined spaces
  - working in proximity to others
- use of firefighting equipment
- use of first aid equipment
- workplace environment and safety
- environmental requirements cover water quality management:
  - clean-up protection
  - complying with ODS and SGG legislation, codes and regulations, e.g. Ozone Protection and Synthetic Greenhouse Gas Management Act 1989
  - preventing emissions of prescribed ODS and SGG extinguishing agents
  - stormwater protection
  - waste management
- materials:
  - actuating devices
  - alarms
  - control valve assemblies
  - unplasticised polyvinyl chloride (PVC-U), steel or copper pipes or other approved materials
  - special hazard fire suppression agents, including prescribed ODS and SGG materials
  - sprinkler heads
- special hazard fire suppression systems:
  - carbon dioxide and other gases (such as inergen and argonite)
  - chemical reaction and explosion suppression systems
  - dry chemical
  - foam
  - prescribed ODS and SGG extinguishing agents (such as halon and NAF S-III)
  - water
  - water mist
- information:
  - charts and hand drawings
  - instructions issued by authorised organisational or external personnel
  - job drawings
  - manufacturer specifications and instructions
  - material safety data sheets (MSDS)
  - memos
  - organisation work specifications and requirements
  - plans and sketches
  - regulatory and legislative requirements, particularly those pertaining to:
    - building codes
    - WHS and environmental requirements, including ODS and SGG legislation, codes and regulations
    - plumbing regulations
  - relevant Australian standards, including AS2118 Automatic fire sprinkler systems and AS1851 Maintenance of fire protection systems and equipment
  - safe work procedures relating to testing and commissioning special hazard fire suppression systems

- o signage
- o verbal, written and graphical instructions
- o work bulletins
- o work schedules, plans and specifications.

## Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

This unit must be assessed in the workplace or a close simulation using realistic workplace conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

## Links

Companion Volume Implementation Guide:

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>