

Unit of Competency CPCPFS3036

Install special hazard systems

Application

This unit specifies the skills and knowledge required to install special hazard extinguishing systems, including decommissioning gaseous agent containers and actuation devices.

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).

In some jurisdictions, this unit of competency may form part of accreditation, licensing, legislative, regulatory or certification requirements.

Prerequisite Unit

CPCPCM2043 Carry out WHS requirements

Elements and Performance Criteria

1. Identify installation requirements.	<p>1.1 Obtain, read and apply special hazard systems requirements from relevant job plans and specifications, codes, Australian Standards, manufacturer's specifications and jurisdictional requirements.</p> <p>1.2 Identify and apply workplace policies and procedures, organisational work health and safety (WHS) and environmental requirements.</p>
2. Prepare for work.	<p>2.1 Create a materials list and collect components.</p> <p>2.2 Select and check the serviceability of appropriate tools and equipment including personal protective equipment (PPE).</p> <p>2.3 Prepare work area to support efficient installation of special hazard extinguishing systems.</p>
3. Decommission gaseous agent containers and actuation devices.	<p>3.1 Confirm and isolate all interface systems and put in place appropriate signage, lock-off and documentation.</p> <p>3.2 Physically disconnect manual, electrical and mechanical actuation devices.</p> <p>3.3 Identify and disconnect pneumatic actuation devices and pilot and slave tubes and fittings.</p> <p>3.4 Connect transport caps on all outlets, plugs and locking devices, according to manufacturer's specifications.</p> <p>3.5 Disconnect container bank manifold connection components.</p> <p>3.6 Install transport caps on valve outlets.</p> <p>3.7 Organise removal and transportation of gaseous agent containers to storage or reclaim facility.</p> <p>3.8 Complete documentation and decommissioning sign-off requirements and confirm with relevant persons.</p>
4. Install and test special hazard systems.	<p>4.1 Set out system and install fixings.</p> <p>4.2 Check pipe supports and install pipes, fittings, nozzles and components.</p> <p>4.3 Perform piping system pressure testing.</p>

	4.4 Connect cylinder manifold and cylinder hoses. 4.5 Connect cylinder supports and cylinders and secure in brackets. 4.6 Remove transport caps and connect cylinder hoses. 4.7 Connect actuators. 4.8 Complete documentation according to relevant regulatory requirements.
5. Clean up.	5.1 Clear the work area, and dispose of, reuse or recycle materials in accordance with state and territory legislation and workplace policies and procedures. 5.2 Clean tools and equipment, check for serviceability, and report any damage, and store and secure.

Foundation skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCPFS3036A Install special hazard systems.

Links

Companion Volume Implementation Guide:

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

Assessment Requirements for CPCPFS3036 Install special hazard systems

Performance Evidence

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

- installing a special hazards fire suppression system (not prescribed ozone depleting substances (ODS) or synthetic greenhouse gases (SGG) extinguishing agent), incorporating a storage cylinder connected by piping to a simple distribution system incorporating two nozzles and one actuating device
- complying with ODS or SGG legislation, codes and regulations
- decommissioning a gaseous system comprising of at least three cylinders and prepare the cylinders for transport
- correctly selecting and using tools and equipment used for installation of gaseous agent containers and actuation devices.

Knowledge Evidence

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

- ODS and SGG legislative and industry requirements for special hazard fire suppression systems installation activities
- characteristics, application and limitations of approved materials and components used in special hazardous systems actuating devices:
 - prescribed ODS and SGG materials
 - extinguishing agents, including or other approved materials
 - pipes
 - sprinkler and delivery systems
- hazard categories, classes of fire hazard and extinguishing agents
 - workplace and safety including dangerous goods
 - transportation of dangerous goods
- processes, procedures and techniques of:
 - installing and testing special hazard systems
 - pressure test systems
 - cylinder anchorage
 - purging
- relevant statutory and authorities' requirements related to installing special hazard systems:
 - requirements for room ventilation and integrity
 - structural systems, building materials and building services
- functional and operational features of tools and equipment used to install special hazard systems:
 - cutting and threading equipment

- o roll grooving equipment
 - o hand and power tools
 - o ladders
 - o testing equipment
- types of special hazard extinguishing systems:
 - o carbon dioxide – high and low pressure
 - o naturally occurring blended gasses (Proinert, Argonite, Inergen)
 - o chemical reaction and explosion suppression systems
 - o dry chemical
 - o foam
 - o prescribed ODS and SGG extinguishing agents
 - o deluge
 - o water mist
- types of operation of actuation devices (also known as actuators):
 - o electrical
 - o manual
 - o mechanical
 - o pneumatic
- special hazard system components, including:
 - o directional valves
 - o lock off valves
 - o pyrotech actuators
 - o nozzles
 - o manifolds
 - o hoses
 - o cylinders
 - o cylinder manifold brackets
 - o pressure relief vents
 - o dirt traps
 - o bracketing and pipe supports
 - o foam generators
 - o foam monitors
 - o foam proportioning equipment
 - o foam indicators
 - o aspirating foam nozzles
 - o foam storage vessels, including bladder tanks
- relevant documentation required when installing special hazard systems
- how to access relevant information, including relevant job plans and specifications, codes, Australian Standards, manufacturer's specifications and jurisdictional requirements for installation of special hazard systems
- tools, materials and equipment used for installation of special hazard systems
- work health and safety (WHS) requirements for installation of special hazard systems
- installation requirements for installation of special hazard systems.

Assessment Conditions

Assessors must satisfy the requirements for assessors listed 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

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