Australian Government

Department of Education, Employment and Workplace Relations

CPCSFS5015A Assess documentation for annual fire systems certification inspections

Release: 1

CPCSFS5015A Assess documentation for annual fire systems certification inspections

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit of competency specifies the outcomes required to research the applicable regulatory requirements for existing fire systems in all types of buildings, and assess compliance documentation to determine whether requirements are met. Licensing, legislative, regulatory or certification requirements may apply to this unit and so the varying state or territory requirements should be confirmed with the relevant body.

Application of the Unit

Application of the unit	This unit of competency supports the role of annual certifiers of fire systems with responsibility for determining which legislation, codes and standards apply to particular existing fire systems and assessing the documentation of regular fire safety inspection, testing and maintenance activities.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units	Nil

Employability Skills Information

Employability skills	This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine the installation dates for fire systems.	1.1. The construction dates and modification histories of buildings to be inspected are accessed, interpreted and noted. 1.2. The types of ***fire systems*** installed in buildings to be inspected are identified from ***compliance documentation***. 1.3. The installation dates for individual fire systems in buildings to be inspected are identified.
2. Research and interpret the applicable codes and standards.	2.1. The ***current and historical legislation***, ***codes and standards*** applicable to individual fire systems at the time of installation, or modification of the building are researched and identified. 2.2. The detailed requirements of applicable historical legislation, codes and standards are researched and interpreted. 2.3. Any disparity between historical legislation, codes and standards applicable at the installation or modification date and current fire safety requirements are noted and reported to ***relevant stakeholders***. 2.4. Checklists and notes on applicable current and historical codes and standards are prepared to assist the annual inspection process.
3. Assess and report on fire system compliance documentation.	3.1. Schedules for the inspection, testing and maintenance of fire safety systems are reviewed and checked for compliance with current regulatory requirements. 3.2. Documentation for regular fire systems inspection and testing activities is reviewed and checked for currency and completeness. 3.3. Information regarding non-compliance issues and defects is identified and noted. 3.4. Documentary evidence of resolution of non-compliance issues and defects is requested and reviewed, if available. 3.5. Checklists and notes on non-compliance issues and defects identified from compliance documentation are prepared to assist the annual inspection process. 3.6. Reports detailing anomalies and omissions in fire systems' compliance documentation are prepared and processed according to workplace and regulatory requirements.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- operating computer software packages and systems, including:
  - word processing
  - spreadsheet
  - email
  - internet
  - design and drawing software
  - proprietary project management and project scheduling software
- language and literacy skills for:
  - listening to and communicating clearly with stakeholders, colleagues and contractors
  - explaining gravity of fire systems inspection findings to owner
  - researching, accessing, reading, interpreting and applying relevant current and historical legislation, codes and standards
  - letter writing
  - updating knowledge of products, software systems and technology
  - reading and interpreting drawings, including:
  - architectural
  - structural
  - mechanical
  - hydraulic
  - electrical
  - report writing
- developing constructive and cooperative working relationships with stakeholders, colleagues and clients
- negotiation and conflict management
- organising own work, including creating personal systems and checklists for planning, managing and checking work

Required knowledge

- fire science, including:
  - fire behaviour and dynamics
  - impact of fire on structures and materials
  - products of combustion

REQUIRED SKILLS AND KNOWLEDGE

- fire control strategies
- fire retardants
- fire detection technologies
- fire suppression technologies
- fire containment

- fire engineering principles, including:
  - engineered solutions
  - innovative fire systems
  - fire modelling
- computer software functions and operation, including relevant proprietary software
- relevant current and historical legislation, codes and standards, including:
  - building Acts
  - building regulations
  - infrastructure supply regulations
  - the Building Code of Australia
  - Australian standards for fire systems
  - international standards for fire systems
  - other fire system standards commonly required by building insurers
- protection requirements for different buildings
- fire systems' technology and components, including:
  - water-based systems, including:
  - wet pipe sprinkler systems
  - deluge and drencher systems
  - dry pipe sprinkler systems
  - pre-action sprinkler systems
  - early suppression fast response (ESFR)
  - hydrants, hose reels and monitors
  - water supply tanks
  - fire pump sets
  - detection and warning systems, including:
  - emergency warning and intercommunications systems (EWIS)
  - fire detection and alarm systems
  - smoke control systems
  - emergency lighting systems
  - special hazard fire systems, including:
  - foam systems (low expansion, medium expansion and high expansion)
  - gaseous agent systems (carbon dioxide, inert gas and halocarbon gases)
  - water spray systems (deluge, medium/high velocity water spray and high

REQUIRED SKILLS AND KNOWLEDGE
speed deluge) • chemical powder systems • wet chemical systems • characteristics and limitations of products and materials used in fire systems and issues relating to material compatibility • interconnection of fire systems, including: • cause and effect matrix • interface with other services • passive fire safety elements: • identification of passive elements • requirements for safeguarding the integrity of passive fire element performance where penetrations have been made • basic principles of structural engineering • characteristics of building materials • construction industry terminology • sustainability requirements and ratings, including: • energy conservation • water conservation • human psychology, especially fire avoidance behaviour • contractual processes

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that the simulated or project-based assessment fully replicates workplace conditions, materials, activities, responsibilities and procedures. This unit could be assessed as an activity involving the establishment of the legislation, codes and standards that apply to existing fire systems in a range of buildings. The activity should include assessment of the compliance of

EVIDENCE GUIDE	
	fire safety schedules and inspection, testing and maintenance documentation.

EVIDENCE GUIDE	

Critical aspects for assessment and evidence required to demonstrate competency in this unit	A person who demonstrates competency in this unit must be able to provide evidence of the required skills and knowledge specified within this unit.
	In particular the person should demonstrate:
	• a comprehensive understanding of the range of relevant current and historical legislation, codes, standards and regulatory requirements for the certification of existing fire systems
	• an understanding of the function and operation of the full range of fire systems, including water-based fire systems, detection and warning systems and special hazard fire systems used in a wide variety of types of buildings, including:
	  • low-rise buildings
	  • medium-rise buildings
	  • high-rise buildings (over 25 metres)
	  • buildings over 45 metres in height
	• the ability to research and identify the applicable current and historical compliance requirements for a range of fire systems installed and modified at different dates, in a variety of types of buildings
	• the ability to assess fire safety schedules and inspection and testing documentation for currency and completeness
	• the ability to identify and report on anomalies and omissions in fire safety compliance documentation
	• the ability to produce checklists and notes regarding issues of particular interest found in fire safety documentation, to assist annual inspection processes.

Context of and specific resources for assessment	Assessment of essential underpinning knowledge may be conducted in an off-site context. It is to comply with relevant regulatory or Australian standards' requirements. Resource implications for assessment include: • documents, drawings, plans and specifications • copies of codes, standards, legislation and regulatory requirements

EVIDENCE GUIDE	
	• access to information and communications technology - hardware and software.

EVIDENCE GUIDE	
Method of assessment	Assessment must: • satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package • include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application • reinforce the integration of employability skills with workplace tasks and job roles • confirm that competency is verified and able to be transferred to other circumstances and environments.
Guidance information for assessment	Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support. Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	

Fire systems may include:	• water-based systems, including:
	  • wet pipe sprinkler systems
	  • deluge and drencher systems
	  • dry pipe sprinkler systems
	  • pre-action sprinkler systems

RANGE STATEMENT	
	• early suppression fast response (ESFR) • hydrants, hose reels and monitors • water supply tanks • fire pump sets • detection and warning systems, including: • emergency warning and intercommunications systems (EWIS) • fire detection and alarm systems • smoke control systems • emergency lighting systems • special hazard fire systems, including: • foam systems (low expansion, medium expansion and high expansion) • gaseous agent systems (carbon dioxide, inert gas and halocarbon gases) • water spray systems (deluge, medium/high velocity water spray and high speed deluge) • chemical systems, including: • powder • wet chemical.
Compliance documentation may include:	• fire safety schedules • inspection and testing logbooks • maintenance, repair and replacement documentation.
Current and historical legislation, codes and standards may include:	• current, or earlier versions of: • the Building Code of Australia • relevant Australian standards for fire systems • relevant international standards for fire systems • codes and standards stipulated by the regulatory authority or building insurer • obsolete legislation, regulations, codes and standards.
Relevant stakeholders may include:	• owners • agents • occupants • local authority.

Unit Sector(s)

Unit sector	Fire systems design

Co-requisite units

Co-requisite units	Nil

Competency field

Competency field	