

Title	Demonstrate knowledge of maintenance, testing, inspections, and surveys of special hazards fixed fire protection systems		
Level	4	Credits	7

Purpose	<p>This unit standard is for personnel in the fire protection industry and covers the knowledge of routine tests, maintenance, and surveys of special hazards fixed fire protection systems.</p> <p>People credited with this unit standard are, for special hazards fixed fire protection systems, able to: demonstrate knowledge of general requirements for maintaining systems in compliance and good working order; demonstrate knowledge of routine tests, maintenance, and inspections; surveys; describe the process required to reinstate systems to be operational on completion of maintenance, testing, inspections, and surveys; and describe the documentation required for reporting after routine tests, maintenance, and surveys of special hazards fixed fire protection systems and complete examples of each.</p>
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Classification	Mechanical Engineering > Fixed Fire Protection Systems
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Available grade	Achieved
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Entry information	
Recommended skills and knowledge	Unit 17732, <i>Demonstrate knowledge of special hazards and non-standard fixed fire protection systems</i> , or demonstrate equivalent knowledge and skills.

Explanatory notes

- References
 Building Act 2004
 Ministry of Business, Innovation and Employment (MBIE) *Acceptable Solutions (AS) and Verification Methods (VM)*. Available at <http://www.dbh.govt.nz/AS/VM-documents>
 New Zealand Building Code
 AS 4214:2006, *Gaseous fire extinguishing systems*
 AS 4587:2003, *Water mist fire protection systems – System design, installation and commissioning*
 NFPA 12:2011, *Carbon dioxide extinguishing systems*
 NFPA 15:2012, *Water spray fixed systems for fire protection*
 NFPA 16:2011, *Installation of foam-water sprinkler and foam-water spray systems*
 NFPA 17:2013, *Dry chemical extinguishing systems*

NFPA 17A:2013, *Wet chemical extinguishing systems*
NFPA 750:2010, *Water mist fire protection systems*
NFPA 2001:2012, *Clean agent fire extinguishing systems*.

2 Definitions

Enterprise procedures refer to the documented procedures used by the organisation carrying out the work and applicable to the tasks being carried out. They may include but are not limited to – standard operating procedures, site safety procedures, equipment operating procedures, codes of practice, quality assurance procedures, housekeeping standards, charging of time and materials, management of drawings and documentation, procedures to comply with legislative and local body requirements.

Inspection refers to an organised examination of characteristics of fire protection systems against established standards.

Maintenance refers to the carrying out of preventive maintenance and repairs at specific intervals necessary to assure the continuing reliability of fire safety systems and equipment in accordance with relevant standards.

Special hazards fixed fire protection systems refer to systems designed and installed to AS 4214:2006, AS 4587:2002, NFPA 12:2011, NFPA 15:2012, NFPA 16:2011, NFPA 17:2013, NFPA 17A:2013, NFPA 750:2010, or NFPA 2001:2012 standards. They may include but are not limited to: carbon, inert gas; dry chemical; wet chemical; foam, foam-water, water mist; and explosion suppression types of systems.

Standards refer to AS 4214:2006, AS 4587:2002, NFPA 12:2011, NFPA 15:2012, NFPA 16:2011, NFPA 17:2013, NFPA 17A:2013, NFPA 750:2010, and NFPA 2001:2012.

Systems documentation refers to the documentation required to be maintained by the relevant special hazards fixed fire protection system standards, including log book, test reports, equipment details and drawings, specifications, contract agreement, additions and alterations, fire reports, building consents standards, codes of practice, installation instructions, test and commissioning procedures, test and maintenance records.

Tests refer to the carrying out of operations, measurements, or functions to confirm correct function or performance of components and systems in accordance with the standards.

3 Assessment

For assessment purposes, competence must be demonstrated on at three different systems.

Outcomes and evidence requirements

Outcome 1

Demonstrate knowledge of general requirements for maintaining special hazards fixed fire protection systems in compliance and good working order.

Evidence requirements

- 1.1 General requirements for maintaining systems in compliance and good working order are identified in accordance with the relevant standards.
- 1.2 Relationship between system owner and maintainer is outlined.

1.3 Procedures to be followed in the event of defects discovered during testing are outlined in accordance with enterprise procedures.

1.4 Safety requirements for the systems are identified and referenced to the systems documentation in accordance with enterprise procedures.

Outcome 2

Demonstrate knowledge of routine tests, maintenance, and inspections.

Evidence requirements

2.1 Routine tests, maintenance, and inspections are identified in accordance with the relevant standards.

2.2 Routine tests, maintenance, and inspections are explained in accordance with the relevant standards.

Outcome 3

Demonstrate knowledge of routine surveys.

Evidence requirements

3.1 Surveys are identified in accordance with the relevant standards.

3.2 Surveys are explained in accordance with the relevant standards.

Outcome 4

Describe the process required to reinstate systems to be operational on completion of maintenance, testing, inspections, and surveys.

Evidence requirements

4.1 Process for reinstatement of systems after completion of maintenance, testing, inspections, and surveys is described in accordance with NZS 4541:2013, systems documentation, and enterprise procedures.

Outcome 5

Describe the documentation required for reporting after routine tests, maintenance, and surveys of special hazards fixed fire protection systems and complete examples of each.

Evidence requirements

5.1 Documentation required by the relevant standards and by typical testing companies is described and examples of each are completed in accordance with the relevant standards, systems documentation, and enterprise procedures.

Planned review date	31 December 2020
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	31 December 2000	31 December 2017
Review	2	26 March 2007	31 December 2017
Review	3	15 October 2015	N/A

Consent and Moderation Requirements (CMR) reference	0013
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMRs). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact Competenz at qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.