

Certification and Registration Standards for Fire Investigators in Australia/New Zealand

The **Australasian Fire and Emergency Service Authorities Council (AFAC)**, is the peak body responsible for representing fire, emergency services and land management agencies in the Australasian region (*Australia, New Zealand and South Pacific rim countries*). It was formed in 1993 and has 34 full members and 13 affiliate members. (See the member list at the end of this article.)

The AFAC website contains the following description of AFAC (& EMPS) and what it aims to achieve.

A leader in managing risk, preparing for and dealing with emergencies.

We are the facilitator and custodian of contemporary fire and emergency service knowledge and practice, for the benefit of our members and through them, the community. We will be recognised and have impact as the National Council for fire and emergency services, through collaboration and influence.

AFAC have developed the *Emergency Management Professionalisation Scheme (EMPS)*

Since 2015, EMPS have been credentialing practitioners in emergency management, benchmarking individual skills against published professional standards and providing assurance to individuals, fire and emergency service agencies and the public that their qualifications and experience meet nationally-agreed requirements.

The origins of EMPS stem from a perceived need in fire and emergency services to be seen not just as 'professional' in what we do, but as a 'profession'. A starting point for this was to have an entity that could examine individuals' education and experience, and promote standards of ethics in the sector. The result was the creation of the Emergency Management Professionalisation Scheme, EMPS, within AFAC.

The Emergency Management Professionalisation Scheme is an industry designed and endorsed program, which benchmarks the professional expertise of career and volunteer individuals from across Australia and New Zealand, against nationally agreed standards. Individuals can apply to be recognised as Certified or Registered practitioners under the scheme.

As well as needing to meet the education and experience requirements for each role, practitioners wishing to join the Scheme must agree to follow the EMPS Code of Ethics and must commit to a minimum number of hours continuing professional development per year. Applicants must be supported by their organisation. Applications are assessed on

merit, and applicants may be volunteer or career members of their organisation. (AFAC website)

There are two standards set by AFAC/EMPS, and these are *Registered Fire Investigator* and *Certified Fire Investigator*.

Professional Standard: *Registered Fire Investigator*

[This standard was endorsed by the EMPS panel on 15 March 2019.]

The Registered Fire Investigator credential is awarded to an individual who has successfully fulfilled all eligibility requirements. Individuals will be recognised as proficient in carrying out origin and cause fire investigations, managing the chain of evidence, completing detailed fire investigation reports and presenting findings in court as a witness of fact [*Authors' emphasis*] (if required to do so), for fire scenes of moderate impact and complexity. The knowledge skills and experience required are beyond those gained through fire investigation training provided to front line firefighters by fire agencies.

Applicants must be able to provide documented evidence of successful completion of the education components and all associated prerequisites as specified in Table 1.

Table 1: Course or Program

PUAFIR501B Conduct fire investigation and analysis activities *or*

A qualification which was awarded after formal assessment and which in the view of the Panel provides evidence of the Applicant's competence to conduct fire investigations equivalent to PUAFIR501B Conduct fire investigation and analysis activities

** PUAFIR501B (superseded in July 2019 by PUAFIR501, an equivalent course of the same name) is a module from the AFAC endorsed Australian Government Industry Skills Council, and is entitled '*Conduct Fire Investigation and Analysis Activities*'. (This unit covers the competency required to respond to an incident and to undertake a preliminary fire investigation prior to the arrival of a specialist fire investigator; the role of the specialist fire investigator is encompassed within the PUAFIR60913 Advanced Diploma of Public Safety (Fire Investigation)).

As part of this qualification the student is not qualified to provide opinion evidence, only evidence of fact (Factual evidence). (<https://training.gov.au/Training/Details/PUAFIR501>)

Eligibility:

Applicants must be able to provide documented evidence to demonstrate that he or she:

- Has committed to the EMPS Code of Ethics.
- Has successfully fulfilled the role of Fire Investigator at fire scenes of moderate impact and complexity for at least one year and in a minimum of five instances, including all associated reporting requirements, with at least one instance being in the 12 months before applying.
- Is supported by their home organisation or jurisdiction.

Continuing Professional development:

The following Professional development must be recorded and reported in accordance with the EMPS Professional Standard.

- Ten hours of knowledge development per year, which is exposure to external learning in relation to fire investigation through training courses, seminars, conferences, online learning, reading journal articles and research;
- Investigating and reporting on a minimum of four fire scenes in a two-year period.

Related professional standards

- Code of Ethics (2017).
- Professional Standard: Continuing Professional Development (2018).

Professional Standard: *Certified Fire Investigator*

[This standard was endorsed by the EMPS panel on 15 March 2019.]

The Certified Fire Investigator credential is awarded to an individual who has successfully fulfilled all eligibility requirements. Individuals will be recognised as possessing advanced capability in carrying out complex origin and cause fire investigations involving factors such as significant size of fire, high value loss, serious criminal action, limited indicators to determine fire spread or substantial destruction of the scene. Certified fire investigators are expected to be able to present credible evidence in court in the capacity of expert witness, based on a detailed fire investigation report, and to appropriately defend their conclusions in the event that their evidence is contested.

Applicants must be able to demonstrate:

1. Successful completion of one or more of the education components and all associated prerequisites as specified in Table 1
2. Capabilities as described in the Professional Standard: Fire Investigator Capabilities; and
3. Written documentation as evidence of meeting the requirements of this standard.

Table 1: **Course or Program**

PUA60913 Advanced Diploma in Fire Investigation

A tertiary qualification awarded after formal assessment by an institution legally permitted to award qualifications of that nature in its jurisdiction of establishment, and which in the view of the Panel provides evidence of the Applicant's competence in complex fire investigation at least equivalent to PUA60913 Advanced Diploma in Fire Investigation.

<https://training.gov.au/Training/Details/PUA60913>

The web address site above, detailing the components of PUA60913 Advanced Diploma of Fire Investigation has the following included:

PUA60913 Advanced Diploma of Public Safety (Fire Investigation)

Custom Content Section

* This unit has been assigned not for public access (NFPA), which means that it is not publicly available - it is only available through request via the Australia New Zealand Policing Advisory Agency (ANZPAA) website (www.anzpaa.org) as is the case with other endorsed NFPA Police Sector units.

Eligibility:

An applicant must be able to provide evidence to demonstrate that he or she:

- Has committed to the EMPS Code of Ethics.
- Has the equivalent of three years or more applicable experience and has investigated and reported on at least three complex fire scenes.
- Is in compliance with the Professional Standard: Continuing Professional Development.
- Is supported in their application by their home agency or jurisdiction.

Continuing professional development

The following Continuing Professional Development requirement, which must be recorded and reported in accordance with the EMPS Professional Standard: Continuing Professional Development applies to Certified Fire Investigators:

- Thirty recorded hours of knowledge development per year, which is exposure to external learning in relation to fire investigation through training courses, seminars, conferences, online learning, reading journal articles and research
- Attend and supervise or conduct two complex fire investigations over a rolling two-year period.

Related professional standards

- Code of Ethics (2017).
- Professional Standard: Certified Fire Investigator Capabilities (2019).
- Professional Standard: Continuing Professional Development (2018).

*(** Both of the above can be accessed via the web address in the Reference List**)*

Other sources of professional and ethical guidance for fire investigators include:

- Code of Practice for Investigators of Fires and Explosions for the Criminal Justice Systems in the UK (Institute of Fire Engineers, 2017)
- NFPA 921 Guide for Fire and Explosion Investigations (2017)

continued on page 34

Both the *Registered* and *Certified* Fire Investigator standards contain the following:

Areas of competency

Fire investigators should have and maintain at a minimum an (*Registered* = up-to-date basic knowledge) (*Certified* = up-to-date sound knowledge) of the following topics relevant to their area of expertise. Exposure to these topics should occur within a three-year cycle. If an asterisked* topic is irrelevant to a practitioner's field of practice e.g. for a specialist bushfire fire investigator, the requirement does not apply to that topic.

1. Safety related to fire investigation
2. Fire science
3. Fire chemistry
4. Thermodynamics
5. Thermometry
6. Fire dynamics
7. Explosion dynamics*
8. Computer fire modelling
9. Fire investigation process, methodology and technology
10. Fire analysis
11. Hazardous materials*
12. Fire protection systems*
13. Evidence documentation, collection, and preservation
14. Electricity and electrical systems
15. Presenting of evidence in judicial settings as an expert witness
16. Research relating to fire cause and emerging fire trends
17. Wildfire fire behaviour*
18. Arson.

The following definitions are contained within the two standards:

<i>Fire scenes of moderate impact and complexity:</i>	Is a fire scene involving factors such as substantial physical size of the fire, moderate to high value loss, criminal action, limited indicators to determine fire spread or significant destruction of the scene
<i>Instance:</i>	Is a fire scene where a specialist fire origin and cause investigation has been required i. by organisational policies and procedures or ii. for the purpose of resolving an insurance claim or in support of potential court proceedings.
<i>Complex fire scene:</i>	Is a fire scene involving factors such as significant physical size of the fire, high value loss, serious criminal action, limited indicators to determine fire spread or substantial destruction of the scene, as determined by the Panel.
<i>Equivalent three years' experience:</i>	Is experience as a fire investigator at complex fire scenes for at least three years, or in the case of an individual who is Registered as a fire investigator under EMPS, for at least two years following Registration, as determined by the Panel.

[Authors' comment: There is no reference source provided for the above list, nor is there any information as to where information relating to each of these topics should be obtained.]

Reference List

- Advanced Diploma of Public Safety – (Fire Investigation) - <https://training.gov.au/Training/Details/PUA60913>
- Australasian Fire and Emergency Service Authorities Council. <https://www.afac.com.au/>
- Certified Fire Investigator – *Capabilities*
https://www.emps.org.au/Public/Certification/Certification_Roles/Public/Membership/Certified/Roles.aspx?hkey=bf981498-90f6-4e10-b7d6-edf00393508c
- Certified Fire Investigator – *Continuing Professional Development*
https://www.emps.org.au/Public/CPD/Certified/Public/CPD/CPD_Requirements/Certified.aspx?hkey=e4609024-838c-4cca-a2f1-85b3e6473f32
- Code of Practice for Investigators of Fires and Explosions for the Criminal Justice Systems in the UK. (2017)
https://www.ife.org.uk/write/MediaUploads/Documents/Fire_Investigation_Code_of_Practice.pdf
Chief Fire Officers' Association, the Institution of Fire Engineers and the UK Association of Fire Investigators.
- Conduct fire and analysis activities - <https://training.gov.au/Training/Details/PUAFIR501>
- Emergency Management Professionalisation Scheme. <https://www.emps.org.au/>

Australasian Fire and Emergency Service Authorities Council (AFAC)

Full Members (AFAC Council)

Australia (National):

[Airservices Australia](#)

Australian Capital Territory:

[ACT Emergency Services Agency](#)

ACT Parks and Conservation Service

New South Wales:

[Fire and Rescue NSW](#)

Forests NSW

[NSW Rural Fire Service](#)

[NSW State Emergency Service](#)

[Office of Environment and Heritage \(New South Wales\)](#)

New Zealand (National):

[Fire and Emergency New Zealand](#)

Northern Territory:

Bushfires NT [3]

Northern Territory Emergency Service

[Northern Territory Fire and Rescue Service](#)

Queensland:

Department of Environment and Resource Management

[Emergency Management Queensland](#)

[Queensland Fire and Emergency Services](#)

South Australia:

[Department of Environment and Water](#)

[South Australian Forestry Corporation](#) (trading as Forestry SA)

[South Australian Country Fire Service](#)

[South Australian Metropolitan Fire Service](#)

South Australian State Emergency Service

Tasmania:

[Forestry Tasmania](#)

[Tasmania Parks and Wildlife Service](#)

State Emergency Service Tasmania

[Tasmania Fire Service](#)

Victoria:

[Country Fire Authority](#)

[Department of Environment, Land, Water and Planning](#)

[Metropolitan Fire and Emergency Services Board](#)

[Parks Victoria](#)

[Victoria State Emergency Service](#)

Western Australia:

[Department of Parks and Wildlife \(Western Australia\)](#)

DFES State Emergency Service

[Department of Fire and Emergency Services](#)

Affiliate Members

[Attorney-General's Department \(Australia\)](#)

Australasian Road Rescue Organisation (ARRO)

[Bureau of Meteorology](#)

CSIRO Forestry & Forest Products

[Department of Conservation \(New Zealand\)](#)

EMQUAL

Forestry Plantations Queensland

[Hong Kong Fire Services Department](#)

[Melbourne Water](#)

Office of the Fire Services Commissioner Victoria

Pacific Islands Fire Service Association (PIFSA)

Papua New Guinea Fire Service

South Australian Fire and Emergency Services Commission (SAFECOM)