



Australian Government

PUAFIR501 Conduct fire investigation and analysis activities

Release: 1

PUAFIR501 Conduct fire investigation and analysis activities

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to respond to an incident and to undertake a preliminary fire investigation prior to the arrival of a specialist fire investigator.

The unit is applicable to personnel required to conduct a fire investigation at a fire or related incident. It is not intended for personnel operating in the role of specialist fire investigator.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

It is essential that the prerequisite units listed below are obtained prior to the issuance of this unit to individuals within the fire sector or the units contributing to the attainment of a fire qualification.

PUALAW001 Protect and preserve incident scene

Competency Field

Fire

Unit Sector

Fire

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

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| 1 Plan fire or incident investigation and analysis activities | <ul style="list-style-type: none">1.1 Roles and responsibilities of organisations or agencies and support personnel involved in the fire or incident investigation are confirmed1.2 Procedures and protocols for the coordination of organisations involved in the fire or incident investigation are identified, agreed and implemented1.3 Strategies required to conduct fire or incident investigation and analysis are identified and implemented, in accordance with organisational procedures1.4 Preliminary and background sources of information concerning the context of the fire or incident investigation are identified and used1.5 Legislative requirements that impact on the collection and recording of evidence are identified1.6 Evidence and information gathering process at the incident site is planned, in accordance with organisational procedures, environmental conditions and resource availability1.7 Fire investigation equipment and resources for the incident are identified and assembled |
| 2 Collect, collate and preserve evidence | <ul style="list-style-type: none">2.1 Methods and techniques of evidence and information collection for the investigation are applied, in accordance with organisational procedures2.2 Various types of evidence and information pertinent to the investigation are recorded or collected, in accordance with organisational procedures2.3 Organisational procedures for continuity and preservation of evidence are followed2.4 Packaging and identification techniques for transportation of evidence for laboratory testing are followed, in accordance with organisational procedures |
| 3 Determine origin and cause of fire at incident | <ul style="list-style-type: none">3.1 Fire investigation procedures to determine the origin and cause of fire are followed3.2 Liaise with specialist fire investigation personnel to support determination of the cause of fire, in accordance with organisational procedures |

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| | 3.3 | Provide assistance to forensic personnel and specialist organisations, in accordance with organisational procedures |
| | 3.4 | Evidence of origin and cause of fire is identified and examined |
| | 3.5 | Preliminary findings are documented and validated, in accordance with organisational procedures |
| | 3.6 | Fire origin and cause determination theories are developed and assessed, using organisationally approved scientific methods |
| | 3.7 | Findings, methodologies, support data and briefing notes are documented, in accordance with organisational procedures |
| | 3.8 | Fire origin and cause is determined and reported, in accordance with organisational procedures |
| 4 | Conduct analysis of incident | |
| | 4.1 | Information relating to incident is gathered, in accordance with organisational procedures |
| | 4.2 | Information relating to incident is evaluated, in accordance with organisational procedures |
| 5 | Record and report information collected | |
| | 5.1 | Information for a fire incident investigation is recorded, in accordance with organisational procedures and the rules of evidence |
| | 5.2 | Information collected for a fire incident investigation is prepared and documented, in accordance with organisational procedures |
| | 5.3 | Report is submitted through the chain of command, in accordance with organisational procedures |
| 6 | Prepare for proceedings | |
| | 6.1 | Briefings are participated in with counsel, as required |
| | 6.2 | Additional information or clarification of fire incident investigation procedures or findings are investigated, if required |
| | 6.3 | Protocols for giving evidence at coronial, civil or criminal proceedings are implemented |
| 7 | Review and evaluate fire or incident investigation | |
| | 7.1 | Outcomes of legal proceedings are identified and distributed to ensure knowledge of investigations and |

trends is maintained and is current

- 7.2 Changes to organisational policies and procedures arising from legal proceedings and decisions are formulated and reported
- 7.3 Fire or incident cause determination, documentation or recommendations are forwarded to relevant personnel, in accordance with organisational procedures

Foundation Skills

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

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to PUAFIR501B Conduct fire investigation and analysis activities.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAFIR501 Conduct fire investigation and analysis activities

Modification History

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes

- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements
- communicating using approved methods and tools
- conducting analysis of the incident
- determining origin and cause of fire at incident
- displaying evidence gathering and packaging techniques
- participating in briefings
- planning fire or incident investigation and analysis activities
- recording and reporting information collected
- securing, collecting, collating and preserving evidence
- utilising methods and techniques for evidence and information collection

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of

- causes of fire including accidental, chemical, deliberate, electrical origin, environmental or natural occurrences, flammable liquids, gas and gas explosions, lightning, matches and lighters, mechanical defects, motor vehicles, smoking and spontaneous combustion
- determination of point of origin through use of evidence
- differences between accidentally, negligently, deliberately or naturally lit fires
- examination of fire scenes
- factors affecting fire behaviour
- fire dynamics such as flash over and back draught
- fire scene and risk investigation hazards
- legal implications of evidence collection
- legal protocols for giving evidence including court practices and procedures, pre-court briefings and rules of evidence
- legislative requirements in relation to fire incident investigation

- organisational documentation including reporting requirements
- organisational policies and procedures including fatality and criminal involvement procedures
- personal protective clothing and equipment
- preservation of evidence including maintaining chain of evidence and log of events
- processes for packaging
- security, contamination and preservation of fire scenes
- techniques for collecting evidence and sources of information
- types of specialist and forensic personnel
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including risk mitigation

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

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Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in industry approved simulated workplace operational situations that reflect workplace conditions.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry including
 - evidence management, handling and packaging resources
 - fire investigation equipment and resources real or simulated, test fire sites and fire crews and pumpers, as required
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

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