



Australian Government

PUAFIR605 Determine origin and cause of mobile property fire

Release: 1

PUAFIR605 Determine origin and cause of mobile property fire

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 manage, inspect and assess a mobile property fire to determine origin and cause. For the purposes of this unit mobile property includes aircraft, farm machinery, caravans, campervans, marine craft, motor vehicles, trains, trams, trucks and buses.

The unit focuses on developing and applying a systematic approach to fire investigations in a mobile property context. It includes coordinating mobile fire investigations, securing fire scenes, preserving evidence, conducting analysis of evidence and making informed fire cause determinations and is applicable to fire investigators who are required to determine the origin and cause of a mobile property fires.

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

PUALAW002 Conduct initial investigation at incident scene

Competency Field

Fire

Unit Sector

Fire

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

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

1 Coordinate mobile property fire investigation

1.1 Cooperation with multi-organisational/agency personnel is consistent with designated roles and responsibilities and is in accordance with organisational procedures

1.2 Information required by fire investigators from multi-organisation/agency personnel is identified

1.3 Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) procedures are followed, in accordance with organisational procedures

2 Secure fire scene and preserve evidence

2.1 Legal obligations of fire scene investigators are determined and adhered to throughout the investigation

2.2 Methods of scene security prior to examination are implemented, in accordance with organisational procedures

2.3 Procedures to monitor and log access to a fire scene are identified and applied, in accordance with organisational procedures

2.4 Strategies for locating, collecting, preserving and processing evidence are implemented, in accordance with organisational procedures

3 Conduct scene investigation

3.1 Investigation activities are coordinated with Incident Controller, in accordance with organisational procedures, when active fire management operations are still occurring in relation to the incident

3.2 External and internal survey of scene is conducted to identify hazards and action is taken to mitigate risk

3.3 Scene is investigated to determine areas of interest and to record observations on origin, cause or development of the fire

3.4 Burn patterns and effects of fire suppression are identified and assessed

3.5 Areas or items of evidence that have a potential bearing

- on origin, cause or development of fire are identified
- 3.6** Effects of construction and other factors that impact fire development and spread are identified
 - 3.7** Nature, combustibility and reactivity of materials involved in fire cause are identified
 - 3.8** Indicators of fire spread are identified in conjunction with other sources of evidence
 - 3.9** Effects of environmental conditions are recorded
 - 3.10** Evidence is assessed and prioritised for further review
 - 3.11** Fire origin and cause is determined and reported, in accordance with organisational procedures
- 4 Collect and analyse evidence from a fire scene**
- 4.1** Appropriate sampling areas and items are identified using sampling equipment and resources
 - 4.2** Appropriate collection techniques are applied including eliminating contamination and loss of evidence
 - 4.3** Integrity and continuity of collected exhibits is maintained, in accordance with organisational procedures
 - 4.4** Evidence from fire scene is analysed and processed using a range of recording and digital multimedia
 - 4.5** Product recall and safety data sheet databases are researched, as required
 - 4.6** Fire origin and cause determination theories are developed and assessed
 - 4.7** Findings are reported and documented, in accordance with organisational procedures
 - 4.8** Evidence is secured for subsequent action, in accordance with organisational procedures
 - 4.9** Investigation report is completed and forwarded to relevant authorities and stakeholders, 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.

- origin and cause determination must include
- analysing
 - identification of origin
 - interpretation
 - processing

Unit Mapping Information

This unit replaces and is equivalent to PUAFIR605A Determine origin and cause of mobile property fire.

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 PUAFIR605 Determine origin and cause of mobile property fire

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, performance criteria and range of conditions on at least one occasion and includes

- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including safe work practices at a fire scene
- articulating and justifying investigation findings
- assessing and investigating fire scenes externally and internally
- conducting witness interviews
- coordinating mobile fire investigation and managing fire scene examination
- identifying area, point of origin and possible cause of fire
- identifying potential ignition sources and follow processes for elimination of cause
- implementing approved collection techniques
- implementing organisationally approved systematic approach to mobile property investigations
- packaging and preserving evidence to avoid damage, spoliation or contamination
- recognising potential hazards including assessing and mitigating risks
- securing fire scene and preserving evidence
- taking fire notes using digital multi-media accompanied with written explanation and narratives
- using methods and techniques to identify, document, collect, handle, transport and store evidence
- using sampling equipment and resources
- writing fire reports related to origin and cause of mobile structure fire

Knowledge Evidence

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

- approved collection techniques
- causes of fire including chemical reaction; electrical wiring; engine fire; fuel line and systems; fuel types and mixtures; incendiary devices including commercial, manufactured

devices for other purposes, homemade, industrial and military; mechanical failure or damage and transmission fires

- common causes of fires including accidental, chemical, electrical, incendiary, natural, negligence and mechanical
- methods, techniques and equipment for handling and storing evidence to preserve and avoid damage or contamination
- organisational documentation, policies and procedures
- organisational requirements for producing investigation reports
- origin and cause determination
- other organisations/agencies and support personnel
- package, label and storage of evidence for transportation requirements
- potential ignition sources, their identification and processes of elimination
- principles of investigation based on based on organisationally approved systematic approaches
- product recall and Safety Data Sheets (SDSs)
- technological media for recording
- types of evidence including burn patterns, electronic data and witness statements
- types of sampling equipment and resources
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) legislated 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
 - that capture the range of causes for which evidence needs to be gathered and managed including using organisational procedures and protocols relating to the gathering and managing of evidence
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

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