



**Australian Government**

# **PUAFIR302B Suppress urban fire**

**Release 3**

## PUAFIR302B Suppress urban fire

### Modification History

| Release | TP Version | Comments                                                                                                                                                                                                                                                                    |
|---------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3       | PUA12 V2.1 | Editorial changes.                                                                                                                                                                                                                                                          |
| 2       | PUA12 V2   | Content reviewed<br>Pre-requisite unit PUAEME002C Manage injuries at emergency incident removed and replaced with HLTFA301B Apply first aid<br>Application of the Unit added<br>Range statements revised to reflect current work requirements<br>Method of assessment added |
| 1       | PUA00 V8.1 | Primary release on TGA                                                                                                                                                                                                                                                      |

### Unit Descriptor

This unit covers the competency required to work as a member of a team under limited supervision when suppressing an urban fire.

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

### Application of the Unit

This unit applies to personnel required to suppress a range of different types of structure and non-structure fires and where there is the potential for multiple hazards to be present.

### Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

HLTFA311A Apply first aid

PUAFIR203B Respond to urban fire

## Employability Skills Information

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 required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

## Elements and Performance Criteria

| ELEMENT                                        | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Initiate response to fire                   | <p>1.1 <b>Fire</b> details are received and initial response is determined in accordance with organisational procedures.</p> <p>1.2 Firefighting <b>personal protective clothing and equipment</b> requirements are determined based on available information.</p> <p>1.3 Changes to fire condition are <b>reported</b> and acted on to determine <b>firefighting tactics</b>.</p> <p>1.4 <b>Firefighting considerations</b> are taken into account when determining tactics.</p>                              |
| 2. Determine extinguishing media and equipment | <p>2.1 Available static or reticulated water supplies to support firefighting operations are identified and capacity is determined.</p> <p>2.2 Selection of hose and <b>equipment</b> is sufficient to support firefighting operations.</p> <p>2.3 <b>Extinguishing media</b> are selected according to the type of fire within area of operation.</p> <p>2.4 Breathing apparatus is used within its safe work limitations in accordance with manufacturer's specifications and organisational procedures.</p> |
| 3. Determine structural fire behaviour         | <p>3.1 <b>Combustion processes</b> taking place in the structure are determined.</p> <p>3.2 Tactics for terminating the combustion processes are determined.</p> <p>3.3 Presence of <b>hazardous materials</b> located in the fire area are identified and appropriate plan of action is determined.</p>                                                                                                                                                                                                       |
| 4. Protect people                              | <p>4.1 Primary and secondary searches are planned, conducted and supported in accordance with organisational procedures.</p> <p>4.2 Appropriate priority and support is allocated to fire rescue and evacuation activities.</p> <p>4.3 Casualties are treated and/or handed to the care of medical personnel once clear of threat of fire.</p>                                                                                                                                                                 |
| 5. Attack fire                                 | <p>5.1 <b>Firefighting strategies</b> and tactics are prioritised, implemented and monitored in accordance with organisational procedures.</p> <p>5.2 Firefighting extinguishing media are selected according to the type of fire and to the actual or potential hazards identified within the area of operations.</p>                                                                                                                                                                                         |

- 5.3 Fire is located and **access** to the fire is gained in the safest and most effective manner to minimise damage to property or the risk of injury to others or self.
- 5.4 Potential fire behaviour is anticipated and action taken to protect the safety of self and others, and to achieve the determined strategies.
- 5.5 Breathing apparatus procedures are conducted in accordance with organisational requirements.
- 5.6 Fire is attacked using a range of extinguishing media and **application techniques** appropriate to the type and size of fire in accordance with manufacturers' specifications and organisational procedures.
- 5.7 Evidence of fire cause is protected and action taken in accordance with organisational procedures.
- 5.8 **Firefighting suppression activities** ensure the use of extinguishing media in containing the spread of fire is maximised and **damage to the environment** and property is minimised in accordance with organisational procedures.
- 5.9 Burning and smouldering material are identified and extinguished in accordance with organisational requirements.
- 5.10 Communication is maintained and monitored throughout firefighting operations in accordance with organisational procedures.
- 5.11 Firefighting **ancillary activities** are undertaken to avoid or minimise risk of environmental damage.
- 6. **Ventilate structure**
  - 6.1 **Structures** are ventilated where required, using the most appropriate natural and mechanical **ventilation techniques** as outlined in organisational procedures.
  - 6.2 Structures are ventilated without endangering personnel or increasing the spread of fire in accordance with organisational procedures.
- 7. **Observe and react to fire conditions**
  - 7.1 Fire is continually monitored and significant changes affecting the status of the fire and the effectiveness of selected firefighting strategies are reported in accordance with organisational procedures.
  - 7.2 Firefighting strategies and tactics are modified and adjusted according to the changing conditions at the fire and as directed by supervisor.
- 8. **Undertake ancillary firefighting operations**
  - 8.1 Firefighting and ancillary activities undertaken at the incident ensure the risk of injury to the public, other personnel and self is avoid or minimised.

8.2 Salvage and overhaul activities are undertaken to support the conclusion of firefighting operations in accordance with organisational procedures.

## **9. Complete operations**

9.1 Equipment is made up and made ready for operational use in accordance with organisational procedures.

9.2 Damaged or missing equipment is replaced, recorded and/or reported in accordance with organisational procedures.

## **Required Skills and Knowledge**

This describes the essential skills and knowledge and their level, required for this unit.

### **Required Skills**

- apply a range of extinguishing media to fire
- apply natural and mechanical ventilation techniques to structures
- control fire environment by cooling fire gases
- operate a range of firefighting equipment
- operate breathing apparatus
- undertake salvage and overhaul
- work as a member of a team to attack and extinguish fire

### **Required Knowledge**

- appropriate procedures for breathing apparatus control
- fire behaviour and the factors which impact on its spread
- firefighting media and their suitability for the different classes of fire
- firefighting strategies and methods of attack for extinguishing fire in a range of structures
- personal protective clothing and equipment (including breathing apparatus) requirements
- procedures for reporting and recording incident details
- use of ventilation techniques, including:
  - assisting in fire suppression activities
  - facilitating evacuation of occupants
  - maximizing visibility within a structure
  - minimizing damage
  - preventing a build up of toxic or explosive atmospheres
  - providing clean air
- use of firefighting equipment and application techniques

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to:

- work effectively in a team
- recognise fire behaviour and the impact of firefighting tactics
- conduct firefighting operations in accordance with organisational safe work practices
- apply strategies and tactics such as rescue, exposures, confinement, extinguishment, overhaul, ventilation and salvage

### Consistency in performance

Competency should be demonstrated over time in a range of actual or simulated workplace environments.

### Context of and specific resources for assessment

#### Context of assessment

Competency should be assessed on-the-job and/or in a simulated environment.

#### Specific resources for assessment

Access is required to:

- range of controlled or simulated fires
- firefighting equipment
- breathing apparatus control equipment
- extinguishing media

### Method of assessment

This unit may be assessed with the following unit/s:

- PUALAW001B Protect and preserve incident scene
- PUATEA002B Work autonomously

In a public safety environment assessment is usually conducted via direct observation in a training environment or in the workplace via subject matter supervision and/or mentoring, which is typically recorded in a competency workbook.

Assessment is completed using appropriately qualified assessors who select the most appropriate method of assessment.

Assessment may occur in an operational environment or in an agency-approved simulated work environment. Forms of assessment that are typically used include:

- direct observation
- interviewing the candidate
- journals and workplace documentation
- third party reports from supervisors
- written or oral questions

## 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 in the Performance Criteria is detailed below.

|                                                                        |                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b><i>Fire</i></b> must include:                                       | <ul style="list-style-type: none"> <li>fires involving electricity</li> <li>industrial complex</li> <li>mobile property fires</li> <li>multi-storey structures</li> <li>structure and non-structure fires</li> </ul>                                                                                   |
| and may also include:                                                  | <ul style="list-style-type: none"> <li>fires involving fuels and chemicals</li> <li>ship fires</li> </ul>                                                                                                                                                                                              |
| <b><i>Personal protective clothing and equipment</i></b> must include: | <ul style="list-style-type: none"> <li>breathing apparatus</li> <li>chemical protective clothing</li> <li>distress alarms</li> <li>structural fire protective clothing</li> </ul>                                                                                                                      |
| <b><i>Reporting</i></b> of changes to fire condition may include:      | <ul style="list-style-type: none"> <li>initial reports at scene</li> <li>reports of achievement during firefighting (e.g. completion of rescue, fire under control etc.)</li> <li>reports of significant changes in conditions</li> <li>situation reports (sitreps)</li> <li>status reports</li> </ul> |
| <b><i>Firefighting tactics</i></b> must include:                       | <ul style="list-style-type: none"> <li>cooling the fuels</li> <li>interrupting the chemical chain reaction</li> <li>removing fuels</li> <li>excluding oxygen</li> <li>ventilation</li> </ul>                                                                                                           |
| <b><i>Firefighting considerations</i></b> must include:                | <ul style="list-style-type: none"> <li>available firefighting resources</li> <li>extinguishing media</li> <li>fire exposures</li> <li>signs of structural collapse</li> <li>size of fire</li> <li>topography</li> <li>type of fire</li> <li>weather</li> </ul>                                         |
| <b><i>Equipment</i></b> must include:                                  | <ul style="list-style-type: none"> <li>branches, nozzles and monitors</li> <li>breathing apparatus and control equipment</li> <li>fire extinguishers</li> <li>forcible entry tools</li> <li>hand tools</li> <li>hoses and hose fittings</li> </ul>                                                     |

|                                                  |                                                                                                                                                                                                                                                                                   |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                  | <ul style="list-style-type: none"><li>• ladders and rope lines</li><li>• portable lighting</li><li>• radios</li><li>• salvage gear</li><li>• small gear and ancillary equipment</li><li>• stand-pipes, hydrants and booster connections</li><li>• ventilation equipment</li></ul> |
| <b><i>Extinguishing media</i></b> must include:  | <ul style="list-style-type: none"><li>• water</li><li>• extinguishing powders</li><li>• vaporising liquids</li><li>• foams</li><li>• gaseous extinguishing agents</li></ul>                                                                                                       |
| <b><i>Combustion processes</i></b> must include: | <ul style="list-style-type: none"><li>• spontaneous heating combustion and ignition</li></ul>                                                                                                                                                                                     |
| <b><i>Hazardous materials</i></b> must include:  | <ul style="list-style-type: none"><li>• those defined by the Australian Dangerous Goods Code</li></ul>                                                                                                                                                                            |
|                                                  | and may also include <ul style="list-style-type: none"><li>• other fire extinguishing substances</li></ul>                                                                                                                                                                        |

|                                                          |                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Firefighting strategies</b> must include:             | <ul style="list-style-type: none"> <li>• rescuing occupants</li> <li>• protecting exposures</li> <li>• confining the spread of fire</li> <li>• extinguishment</li> <li>• salvage and overhaul</li> <li>• ventilation</li> <li>• finding evidence of fire cause</li> </ul>                                                                                 |
| <b>Access</b> may include:                               | <ul style="list-style-type: none"> <li>• forcible entry</li> <li>• normal entry</li> <li>• roof access from ladders and/or aerial appliance</li> </ul>                                                                                                                                                                                                    |
| <b>Application techniques</b> must include:              | <ul style="list-style-type: none"> <li>• defensive mode</li> <li>• offensive mode</li> <li>• direct attack</li> <li>• indirect attack</li> <li>• direction of attack</li> </ul>                                                                                                                                                                           |
| <b>Firefighting suppression activities</b> must include: | <ul style="list-style-type: none"> <li>• locating and accessing the fire</li> <li>• search and rescue</li> <li>• anticipation of fire behaviour</li> <li>• ensuring safety</li> <li>• applying extinguishing media</li> <li>• applying techniques to maximise the effect and minimise the damage</li> <li>• identifying evidence of fire cause</li> </ul> |
| <b>Damage to the environment</b> may include:            | <ul style="list-style-type: none"> <li>• air pollution</li> <li>• hazards to flora and fauna</li> <li>• soil pollution</li> <li>• water pollution</li> </ul>                                                                                                                                                                                              |
| <b>Ancillary activities</b> may include:                 | <ul style="list-style-type: none"> <li>• draining water run-off</li> <li>• guarding against hazards</li> <li>• making-up equipment</li> <li>• overhaul</li> <li>• patrol</li> <li>• protecting the ignition site</li> <li>• securing the area</li> <li>• supply of materials</li> </ul>                                                                   |
| <b>Structures</b> to be ventilated must include:         | <ul style="list-style-type: none"> <li>• residential</li> <li>• commercial</li> <li>• multi-storey</li> <li>• unfenestrated</li> </ul>                                                                                                                                                                                                                    |
| and may also include:                                    | <ul style="list-style-type: none"> <li>• high-rise buildings</li> <li>• mobile structures (i.e. road, rail, aviation and marine)</li> </ul>                                                                                                                                                                                                               |

|                                                    |                                                                                                                                            |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
|                                                    | vehicles)                                                                                                                                  |
| <b><i>Ventilation techniques</i></b> must include: | <ul style="list-style-type: none"><li>• horizontal</li><li>• hydraulic</li><li>• mechanical</li><li>• natural</li><li>• vertical</li></ul> |

## Unit Sector(s)

Not applicable.