



**Australian Government**

# **PUAFIR303B Suppress wildfire**

**Revision Number: 2**

## PUAFIR303B Suppress wildfire

### Modification History

Release	TP Version	Comments
2	PUA12 V2	Application of the Unit added Unit revised to reflect current work requirements Context of Assessment revised Method of assessment added
1	PUA00 V8.1	Primary release on TGA

### Unit Descriptor

This unit covers the competency required to work as a situation-aware member of a crew to apply appropriate fire control strategies and safe work practices to extinguish a wildfire, participate in mop-up and patrol operations, and prepare equipment for the next crew. 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 who work as a member of a team. Work at this level is often undertaken without direct supervision and instruction. There may be some level of supervision of other members of the crew at this level.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

PUAFIR204B Respond to wildfire

## 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. Receive and report details of wildfire	1.1 Details of the wildfire including its location, <i>type</i> , behaviour and development are received and recorded. 1.2 Fire details are reported in accordance with organisational procedures.
2. Prepare to respond to fire	2.1 Location of the wildfire is confirmed and the safest effective <i>access</i> route is determined. 2.2 <i>Personal protective clothing and equipment</i> , apparel, food and water are obtained before departure, in accordance with organisational requirements. 2.3 Most appropriate method of transport to the wildfire is selected and used.
3. Proceed to fire	3.1 Location of the wildfire is confirmed by observation or from instructions while on approach. 3.2 Access to area is determined and achieved without injury to personnel or damage to vehicles, equipment or <i>environmentally sensitive areas</i> . 3.3 Evidence observed on approach relevant to wildfire cause is noted and brought to the attention of the appropriate authority. 3.4 <i>Navigational aids</i> are used for planning and operational purposes.
4. Protect people and assets	4.1 As far as conditions allow, number, location and safety of people and <i>assets</i> in the threatened area is determined and assessed. 4.2 Appropriate <i>protective procedures</i> are implemented under direction, to protect persons in the path of a wildfire. 4.3 Access by the public and personnel to hazardous locations is controlled as directed and in accordance with organisational procedures. 4.4 Defensibility of property is considered and, if appropriate, assistance is provided to help occupiers. 4.5 Safety of people and assets in the threatened area is monitored during the course of the fire. 4.6 Safety of people and security of assets in the area is checked and reported after the passing of the fire.
5. Combat wildfire	5.1 Access to the area of operations is gained in the safest and most effective manner. 5.2 Notification of arrival and appropriate report is

provided.

- 5.3 Briefing is received including area of operations, strategies and tactics to be employed.
- 5.4 Most suitable location to commence wildfire control operations is selected.
- 5.5 **Firefighting media and equipment** are selected and used effectively and safely in accordance with organisational procedures.
- 5.6 **Fire hazards** are identified and action taken to minimise the risk of injury to the public, personnel and self.
- 5.7 **Firefighting strategies** are implemented to achieve objectives in accordance with organisational procedures.
- 5.8 Fire control activities are undertaken to minimise overall damage and impact on assets and the environment.
- 5.9 **Potential fire behaviour** is considered and acted upon to ensure safety and achievement of objective.
- 5.10 **Fuel, weather and topographical factors** are observed and potential fire behaviour anticipated.
- 5.11 Communication is maintained with supervisor and other firefighters in the work area.
- 5.12 **Fire reports** are provided to supervisor as required.
- 5.13 Area of origin and **evidence of fire cause** are protected and brought to attention of supervisor or relevant authority.
- 5.14 **Escape routes and safety zones** are established and communicated to personnel.

## 6. Conduct mop-up and patrol activities

- 6.1 Mop-up activities are carried out in accordance with guidelines and conditions.
- 6.2 Patrol of the perimeter or sector of the fire is maintained in accordance with organisational procedures and guidelines.

## 7. Recover and maintain equipment

- 7.1 Equipment is made up and made ready for operational use in accordance with organisational procedures.
- 7.2 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

- communicate effectively in writing and orally
- detect hot spots and hazardous trees
- interpret fire weather, fuels and terrain and predict the likely impact on fire behaviour
- mop-up
- read maps
- receive briefings and confirm instructions
- undertake back burning and burning out
- use wildfire control tools and equipment
- work as part of a team

### Required Knowledge

- defensive/offensive firefighting strategies and tactics:
  - asset protection
  - backburning and burning out
  - control lines and firebreaks
  - defensible space
  - direct, indirect, parallel attack
  - fire attack procedures
  - lighting patterns
  - standard operating procedures; reporting; patrol; mop-up
  - wet, dry firefighting
- fire behaviour:
  - fire development
  - flame height and intensity
  - rate of spread,
  - junction zones
  - spotting
- firefighting protocols
- fireground hazards
- fire weather conditions and impact on fire behaviour:
  - atmospheric stability
  - relative humidity
  - temperature
  - wind speed and direction
- fuel and its impact on fire behaviour

- moisture content, quantity, type, arrangement and distribution,
- size, drought effect, curing
- organisational first aid requirements
- organisational procedures for dealing with injury
- protection of area of origin and evidence of fire cause
- safety near vehicles and machines
- terrain and physical feature and their impact on fire behaviour and suppression:
  - aspect
  - fuel variations
  - slope
  - weather variations

## 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:

- anticipate and react to changing wildfire behaviour
- observe and react to weather behaviour
- accurately assess whether or not it is safe to defend assets
- undertake dry wildfire control activity
- monitor effectiveness of tactics
- use firefighting equipment and extinguishing media
- maintain safety and health of self, other workers and people in the wildfire area
- use communication equipment
- read maps
- protect area of origin and evidence of fire cause

### Consistency in performance

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

### Context of and specific resources for assessment

#### Context of assessment

Evidence of performance at a wildfire or prescribed burn is required for attainment of Elements 5 and 6 of this unit.

The remaining elements should be assessed in an agency approved field-based environment or simulation.

#### Specific resources for assessment

Access is required to:

- access to wildfire or prescribed burns and/or approved field-based environment
- firefighting equipment and extinguishing media

### Method of assessment

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

<p>The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. <b><i>Bold italicised</i></b> wording in the Performance Criteria is detailed below.</p>	
<b><i>Types</i></b> must include:	<ul style="list-style-type: none"> <li>• crown</li> <li>• ground</li> <li>• surface</li> </ul>
<b><i>Access</i></b> may include:	<ul style="list-style-type: none"> <li>• aircraft</li> <li>• boat</li> <li>• foot</li> <li>• vehicle</li> </ul>
<b><i>Environmentally sensitive areas</i></b> may include:	<ul style="list-style-type: none"> <li>• areas of: <ul style="list-style-type: none"> <li>• fragile soils</li> <li>• native flora and fauna</li> <li>• rare and endangered species</li> <li>• threat to water quality</li> </ul> </li> </ul>
<b><i>Navigational aids</i></b> must include:	<ul style="list-style-type: none"> <li>• maps</li> </ul>
and may also include:	<ul style="list-style-type: none"> <li>• aerial photographs</li> <li>• compass</li> <li>• global positioning systems</li> </ul>
<b><i>Assets</i></b> may include:	<ul style="list-style-type: none"> <li>• area of rare or sensitive flora and fauna</li> <li>• buildings</li> <li>• culturally significant sites</li> <li>• crops</li> <li>• plantations</li> <li>• property</li> <li>• public lands</li> <li>• stock</li> <li>• utilities and infrastructure (rail, power and telephone lines, water supply structures, communications towers, bridges)</li> </ul>
<b><i>Protective procedures</i></b> may include:	<ul style="list-style-type: none"> <li>• alerts and warnings</li> <li>• in-situ protection</li> <li>• relocation</li> </ul>
<b><i>Firefighting media</i></b> must include:	<ul style="list-style-type: none"> <li>• water</li> </ul>
and may also include:	<ul style="list-style-type: none"> <li>• Class A foam</li> <li>• earth</li> </ul>

	<ul style="list-style-type: none"> <li>• fire suppressants (short and long term)</li> <li>• retardants</li> <li>• wetting agent</li> </ul>
<b>Firefighting equipment</b> must include:	<ul style="list-style-type: none"> <li>• driptorch</li> <li>• hand tools</li> <li>• hose and small gear</li> <li>• pump</li> <li>• tanker</li> </ul>
and may also include:	<ul style="list-style-type: none"> <li>• aircraft</li> <li>• chainsaw</li> <li>• earth moving machinery</li> <li>• knap sack</li> <li>• ropes and lines</li> </ul>
<b>Fire hazards</b> must include:	<ul style="list-style-type: none"> <li>• burns</li> <li>• disorientation</li> <li>• environmental</li> <li>• falling branches and trees</li> <li>• falling objects</li> <li>• fatigue</li> <li>• heat-related illness (heat exhaustion and dehydration)</li> <li>• lack of visibility</li> <li>• manual handling</li> <li>• mine shafts</li> <li>• rolling objects</li> <li>• smoke inhalation</li> <li>• snake or insect bite</li> <li>• sprain or fracture</li> <li>• trips/falls</li> <li>• water bombing operation</li> </ul>
<b>Firefighting strategies</b> must include:	<ul style="list-style-type: none"> <li>• combination attack</li> <li>• combined strategy</li> <li>• defensive strategy</li> <li>• direct attack</li> <li>• indirect attack</li> <li>• mop-up</li> <li>• offensive strategy</li> <li>• parallel attack</li> <li>• patrol</li> </ul>
<b>Potential fire behaviour</b> may include:	<ul style="list-style-type: none"> <li>• fire development</li> <li>• flame height and intensity</li> </ul>

	<ul style="list-style-type: none"> <li>• fuel load and arrangement</li> <li>• rate of spread</li> <li>• spotting</li> <li>• change due to terrain, topography</li> <li>• change due to weather conditions - winds, fire whirls</li> </ul>
<b><i>Fuel</i></b> may include:	<ul style="list-style-type: none"> <li>• crop</li> <li>• forest</li> <li>• grass</li> <li>• heath</li> <li>• plantation: <ul style="list-style-type: none"> <li>• stage 1 – post establishment</li> <li>• stage 2 – pre-canopy closure</li> <li>• stage 3a – canopy closure (unpruned)</li> <li>• stage 3b – canopy closure (pruned)</li> <li>• stage 4 – thinned</li> <li>• stage 5 – mature</li> <li>• stage 6 – harvesting/clear felling</li> </ul> </li> <li>• scrub</li> </ul>
<b><i>Fuel factors</i></b> which may impact on fire development must include:	<ul style="list-style-type: none"> <li>• arrangement/distribution</li> <li>• effects of drought</li> <li>• moisture content</li> <li>• quantity</li> <li>• seasonal effects</li> <li>• size</li> <li>• topography</li> <li>• type</li> </ul>
<b><i>Weather factors</i></b> which may impact on fire development must include:	<ul style="list-style-type: none"> <li>• anabatic winds</li> <li>• atmospheric stability</li> <li>• cold fronts</li> <li>• diurnal variations</li> <li>• katabatic winds</li> <li>• land breezes</li> <li>• local effects</li> <li>• relative humidity</li> <li>• sea breezes</li> <li>• temperature</li> <li>• vegetation edge effects</li> <li>• wind changes</li> <li>• wind direction and speed</li> </ul>
<b><i>Topographical factors</i></b> which	<ul style="list-style-type: none"> <li>• aspect</li> </ul>

may impact on fire development must include:	<ul style="list-style-type: none"> <li>• elevation</li> <li>• local wind effects</li> <li>• slope</li> <li>• wind turbulence</li> </ul>
<i>Fire reports</i> may include:	<ul style="list-style-type: none"> <li>• effectiveness of strategies and tactics</li> <li>• fire behaviour</li> <li>• number and status of resources</li> <li>• safety and hazards</li> <li>• weather</li> <li>• welfare of personnel</li> <li>• work achieved and required</li> </ul>
<i>Evidence of fire cause</i> may include:	<ul style="list-style-type: none"> <li>• fresh vehicles tracks</li> <li>• nature and behaviour of fire at the scene upon arrival</li> <li>• nature and colour of smoke and number of columns</li> <li>• people and vehicles leaving the scene</li> <li>• whether gates on access routes to the fire are closed, opened or locked</li> </ul>
<i>Escape routes</i> may include:	<ul style="list-style-type: none"> <li>• prepared tracks</li> <li>• roads</li> <li>• trails</li> <li>• waterways</li> </ul>
<i>Safety zones</i> may include:	<ul style="list-style-type: none"> <li>• bare ground</li> <li>• burnt areas</li> <li>• clearings</li> <li>• rivers</li> <li>• site of a recent wildfire or prescribed burn</li> <li>• static water bodies</li> </ul>

## Unit Sector(s)

Not applicable.