



Australian Government

PUAFIR012 Supervise aerial firefighting operations

Release: 1

PUAFIR012 Supervise aerial firefighting operations

Modification History

Release 1.0 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 supervise aerial fire operations missions during an incident response. It includes applying principles of team resource management to aerial operations missions, assisting with the development of air operations plans, planning aerial operations missions, deploying to mission site, assessing proposed mission site, prioritising and coordinating aircraft assignments, reviewing, monitoring and adjusting aircraft strategy and tactics and concluding mission.

The unit is applicable to airborne air attack supervisors, operating in a separate aircraft to the tactical aircraft, who observe the incident ground and activities of tactical aircraft. However, it should be noted that air attack supervisors may operate from the ground. Authorisation to perform this role is subject to organisational policies and procedures.

The fire sector is those sections of government departments, statutory authorities or agencies 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 with the fire sector or the units contributing to the attainment of a fire qualification.

PUAFIR005 Observe fire from an aircraft

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 Apply principles of team resource management to aerial operations missions	1.1 Team Resource Management (TRM) principles are applied and roles and responsibilities for missions are confirmed 1.2 Communication is maintained with appropriate ground and air team members, where appointed 1.3 Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements are implemented 1.4 Job hazards are identified and action is taken to eliminate, minimise or control them 1.5 Legislation, regulations, contracts and organisational procedures for the mission are implemented
2 Assist with development of air operations plan	2.1 Incident controller's intent and incident management objectives are confirmed 2.2 Strategies for aerial fire suppression to achieve incident management objectives are developed 2.3 Most appropriate product is selected based on level of fire risk, types of fuels and any restrictions on use of specific products 2.4 Resources to implement strategies are confirmed 2.5 Assistance is provided for development of the air operations plan within the incident action plan, as required
3 Plan aerial operations mission	3.1 Briefing is obtained from task supervisor on mission location and objectives 3.2 Assessment of forecast weather conditions on aerial operations is undertaken in discussion with the pilot 3.3 Operational and support resources for mission are confirmed

- 3.4 Hazards are identified and assessed for effect on aerial strategies and tactics
 - 3.5 Information for the mission is collated
 - 3.6 Air communication and operational communication plans are obtained and contact arrangements for team members are confirmed
- 4 **Deploy to mission site**
 - 4.1 Briefing on situation, aerial mission, roles, command and communication arrangements, safety and identified hazards is delivered to pilots
 - 4.2 Communication equipment is tested for correct frequencies and functionality
 - 4.3 Where an air attack supervisor is airborne, pilot is requested to fly to mission site and flight following protocols are established and maintained
- 5 **Assess proposed mission site**
 - 5.1 Mission site is located and key topographic features and hazards are identified
 - 5.2 Communication is established and maintained with ground based commander and pilots of tactical aircraft assigned to mission
 - 5.3 Flight hazards within mission area are noted including topography, tall infrastructure, other aircraft, smoke and extreme fire behaviour
 - 5.4 Weather, fuels, fire behaviour and smoke in the mission area are monitored
 - 5.5 All aircraft flying in the vicinity of the mission area are identified
 - 5.6 Location of ground based resources and members of the public are identified
 - 5.7 Progress of incident and incident control activities are observed, noted and communicated
- 6 **Prioritise and coordinate aircraft assignments**
 - 6.1 Liaison is maintained with ground based commander to identify appropriate targets for tactical aircraft assignments

- 6.2** Proposed assignments are prioritised on basis of incident management priorities and safety and effectiveness and are, where appropriate, allocated to individual aircraft
 - 6.3** Safety of ground based resources and members of the public in the mission area is assured prior to commencement and during assignments
 - 6.4** Pilots are briefed on their assignments including area hazards, targets, drop pattern and location of any people
 - 6.5** Activities of multiple tactical aircraft are coordinated
 - 6.6** Separation and stacking of tactical, observation, media and itinerate aircrafts are coordinated and maintained in consultation with pilots
- 7 Review, monitor and adjust aircraft strategy and tactics**
 - 7.1** Aircraft and pilot performance are monitored and requests to modify tactics are made, as required
 - 7.2** Ground based commander, where appointed, is contacted to determine effectiveness of assignments
 - 7.3** Pilots are directed to cease assignments where mission is unsafe, ineffective or conditions are unsuitable
 - 7.4** Aircraft not achieving performance are stood down and replacements are requested, as required
 - 7.5** Changes to types of fire product being used is requested, as required
 - 7.6** Observed hazards or changes in operational conditions that pose a risk to people, property, assets or the environment are reported to ground based commander or operations officer
- 8 Conclude mission**
 - 8.1** Aircraft pilots are advised when to cease operations and return to air base
 - 8.2** Ground based commander and members of mission team are provided with situation reports prior to departure of aircraft from fire site

- 8.3** Notifiable incidents are reported in accordance with organisational procedures
- 8.4** After action review is conducted with team members
- 8.5** Details of aerial fire suppression mission are recorded 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 PUA Public Safety Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is not equivalent to PUAFIR409 Develop air attack strategies.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAFIR012 Supervise aerial firefighting operations

Modification History

Release 1.0 This is the first release of this unit of competency in the PUA Public Safety Training Package.

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 Team Resource Management (TRM) principles
- assessing weather forecast conditions with pilots
- collating information
- complying with relevant legislation and regulations
- confirming
 - incident controller's intent and incident management objectives
 - operational and support resources
 - team roles and responsibilities including contact arrangements for team members
- delivering briefings to pilots on situation, aerial mission, roles, safety, hazards and command and communication arrangements
- developing strategies for aerial fire suppression
- ensuring, where the air attack supervisor is airborne, pilot flies to mission site and implements flight following protocols
- following organisational policies and procedures
- identifying job hazards and actions required to eliminate, minimise or control them
- maintaining communication with team members and task supervisors
- obtaining air communications and operations communications plans
- planning and supervising aerial fire suppression mission
- providing assistance to develop air operations plan
- receiving briefing from task supervisor on mission location and objectives
- reviewing hazards for their impact on aerial strategies and tactics
- selecting appropriate product for firefighting operations
- testing communication equipment for correct frequencies and functionality.

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

- aerial products and equipment including

- performance characteristics and comparative features of fire suppressants and retardants
- types of retardants and suppressants
- aircraft capability
- air attack strategies
- air operations plans
- communication equipment
- effective firebombing including
 - delivery systems and equipment
 - different applications of small medium and large air tankers
 - effect of distance, elevation and atmospheric conditions
 - environmental considerations
 - factors that influence drop patterns
 - fixed wing and helicopter firebombing
 - helicopter belly tanks and buckets
- firebombing procedures including
 - air attack, ongoing, en route and general procedures including TRM
 - joint helicopter and fixed wing firebombing operations
 - maintaining aircraft separation
 - on site tactics and techniques
 - pilot briefings and debriefings
 - pre-flight preparation
- firebombing tactics including
 - containment of a remote fire
 - drop assessment
 - line building techniques
 - operating in urban interface areas
 - support of ground forces and assets
 - techniques for grassfires
- hazards affecting aircraft performance
- organisational policies and procedures
- relevant legislation and regulations including Civil Aviation Regulations
- selection of appropriate products
- Team Resource Management (TRM) principles
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the

time of assessment.

Assessment must occur in operational situations or in simulated operational training situations that reflect workplace conditions.

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.

Resources for assessment must include access to

- a range of exercises, case studies and/or simulations
- appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry including
 - aircraft platform for transporting air attack supervisor
 - an airbase with facilities
 - firebombing aircraft
 - ground operations commander
 - personnel for loading firebombing aircraft with product
 - water source for use as an aerial fire suppressant
- applicable documentation including organisational procedures, standards, equipment specifications, regulations, codes of practice and operational manuals.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>