



**Australian Government**

# **PUASAR031 Undertake an urban search and rescue Category 2 rescue technician**

**Release: 1**

# **PUASAR031 Undertake an urban search and rescue Category 2 rescue technician**

## **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 provide safe and effective rescues at an Urban Search and Rescue (USAR) incident as a Category 2 technician who is a member of a USAR team.

USAR is a specialised technical rescue capability for the location and rescue of trapped people following a structural collapse. The types of incidents that may require the skills and knowledge of a USAR Category 2 technician include earthquakes, terrorist and transport accidents, crashes, disasters and/or major structural collapses.

The unit is applicable to locating and removing trapped and injured casualties or deceased victims from partially or totally collapsed structures or environments and providing emergency medical care, as required.

It also includes using USAR specialist equipment and techniques and the ability to work as a team member. The authorisation to perform this role is subject to organisational policies and procedures. A person performing this role will typically operate under supervision as a member of a USAR team.

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

## **Pre-requisite Unit**

PUASAR023 Participate in an urban search and rescue Category 1

## **Competency Field**

Search and Rescue

## **Unit Sector**

USAR

## Elements and Performance Criteria

### ELEMENTS

Elements describe the essential outcomes.

#### **1 Prepare and plan to respond to USAR incidents**

### PERFORMANCE CRITERIA

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

- 1.1** Personal documentation and kit is prepared appropriate to the nature of the incident and length of deployment
- 1.2** Pre-deployment briefing detailing mission information is received and clarified
- 1.3** Based on incident information received appropriate rescue resources are identified, selected and checked to ensure they are ready for use
- 1.4** Personal protective clothing and equipment is selected based on the nature of the incident and rescue resources to be used
- 2.1** Adequate communication is maintained with team members
- 2.2** Personal conduct is maintained, in accordance with applicable situation, cultural sensitivities and organisational requirements
- 2.3** Systematic approach to identifying potential hazards and associated risks is discussed with team members en route to the incident
- 2.4** Personal hygiene and safety is maintained, in accordance with organisational procedures
- 3.1** Reconnaissance of area of operation is undertaken with other team members
- 3.2** Incident briefing detailing operational and task information is received and communicated with team members
- 3.3** Area of operations is managed to control access and maintain a safe and effective operational environment, in accordance with organisational procedures
- 3.4** Initial rescue operations are undertaken with other team members

#### **2 Mobilise as part of a task force**

#### **3 Assess and work within USAR incidents**

- 3.5 Establishment of a base of operations is undertaken with other team members, in accordance with organisational procedures
  - 3.6 Communication is established and maintained with other organisations/agencies on scene
  - 3.7 Appropriate marking systems are used
  - 3.8 Personal wellbeing and fatigue management strategies are implemented
  - 3.9 Allocated rescue, logistics and communications tasks are undertaken, as directed
- 4 **Determine location and condition of casualties**
  - 4.1 Search techniques and equipment are used to locate trapped casualties under the surface, in voids and spaces and from heights
  - 4.2 Nature of casualty entrapment is ascertained, where possible
- 5 **Gain access to casualties**
  - 5.1 Exclusion zone is established, in accordance with organisational procedures to provide a safe working environment
  - 5.2 Stabilisation techniques are utilised to make collapsed structure and/or site safe
  - 5.3 Rescue techniques appropriate to the nature of entrapment is used to access casualties
  - 5.4 Located casualties are treated in consultation with medical personnel, in accordance with organisational procedures
  - 5.5 Incident scene is constantly monitored for situational and environmental hazards and structural stability to prevent injury to self or others
- 6 **Remove casualties**
  - 6.1 Casualties are safely prioritised, packaged and handled from surface and sub-surface voids and spaces using recognised techniques and equipment to minimise further injury to casualty, self and others
  - 6.2 Evidence of casualty identity is collected and processed, in accordance with jurisdictional disaster victim identification procedures

|                                            |            |                                                                                                                            |
|--------------------------------------------|------------|----------------------------------------------------------------------------------------------------------------------------|
|                                            | <b>6.3</b> | Appropriate actions are taken to preserve site, where possible, for evidentiary purposes                                   |
| <b>7 Demobilise as part of a USAR team</b> | <b>7.1</b> | Equipment is recovered, cleaned and maintained, in accordance with organisational procedures and manufacturers' guidelines |
|                                            | <b>7.2</b> | Demobilisation of base of operations is undertaken with other team members, in accordance with organisational requirements |
|                                            | <b>7.3</b> | Operational readiness is maintained to support redeployment of USAR team and individual members, if required               |
|                                            | <b>7.4</b> | Signs and symptoms of fatigue and operational stress in self and others is reported to relevant personnel                  |
|                                            | <b>7.5</b> | Operational debriefing is attended and contributed to, in accordance with organisational requirements                      |
|                                            | <b>7.6</b> | Hygiene precautions are implemented in accordance with organisational procedures                                           |
|                                            | <b>7.7</b> | Exposure reports are completed, 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 PUASAR031A Undertake an urban search and rescue Category 2.

## 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 PUASAR031 Undertake an urban search and rescue Category 2 rescue technician

## Modification History

**Release 1.** 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

- accessing and utilising rescue resources
- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements including secondary structure collapse monitoring procedures and safe work practices in a range of environments
- assessing and working within USAR incidents including reconnaissance
- completing allocated rescue, logistics and communications tasks
- completing organisational documentation including exposure records
- cutting concrete, reinforcing bar, structural steel, timber and a range of non-structural components and contents
- demobilising as part of a USAR team
- determining location and condition of casualties
- gaining access to casualties
- implementing hygiene precautions
- implementing stabilisation techniques
- maintaining situational awareness and being alert to environmental and situational hazards including assessing and evaluating potential risks and hazards, monitoring and using acquired information of collapse patterns in structures and putting strategies in place prior to hazards becoming a threat to the team
- managing and controlling access at a scene including tag in and tag out procedures
- managing USAR scene
- mobilising and participating in the establishment of a remote base of operations
- mobilising as part of a USAR team
- operating equipment techniques including
  - air bags and other lifting equipment
  - concrete cutting, coring, breaching and lifting equipment
  - generators and lighting equipment
  - heavy duty cutting, breaking and lifting equipment
  - jacks and props
  - manual handling equipment

- ropes, anchors and rigging systems
- structural collapse rescue equipment
- visual and audible locating devices
- participating in rescue scene reconnaissance activities
- preparing and planning to respond to USAR incidents including collecting task information and rescue resources
- preserving evidence at incident scene
- prioritising, packaging and handling patients in surface/confined space environments
- recognising and reporting on signs and symptoms of fatigue and stress
- recovering, cleaning and maintaining of rescue equipment including
  - checking inventories
  - cleaning or disposing of contaminated clothing and equipment
  - conducting a general clean-up of the rescue work area
  - inspecting equipment for damage and serviceability
- rescue scene reconnaissance
- removing casualties whilst minimising further injury to self or others using recognised techniques and equipment for removing casualties including
  - creation of exit route for technicians and packaged casualty
  - mechanical advantage hauling and lowering systems
  - stretcher packaging as appropriate including
    - rescue and spine board
    - stretchers appropriate for packaging in a range of situations
    - team stretcher handling
- taking part in briefings and debriefings
- treating located casualties must include packaging and removal of casualties for handover to local authority
- undertaking a primary survey using methodical processes to identify immediate life-threatening injuries and conditions that require intervention
- using a range of
  - breaching, coring and cutting equipment
  - equipment and techniques to locate and stabilise trapped casualties
  - search techniques and equipment to locate trapped casualties
  - shoring and cribbing techniques including constructing and safety assembling a range of shoring and cribbing sets needed to allow teams to safely move in and around a collapsed or practically collapsed structure and/or zone
  - techniques appropriate to nature of entrapment
- utilising appropriate marking systems
- wearing personal protective clothing and equipment
- working with tunnelling techniques safely
- working in a team within an organisational command and control structure

## 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

- base of operations
- casualty search techniques and strategies
- communication methods and techniques including face to face, marking systems, radio communications and whistle or horn warning signals
- construction and utilisation of a vertical raising and lowering system
- cutting concrete, reinforcing bar, structural steel, timber, non-structural components and contents
- disaster victim identification procedures
- equipment and expertise to support lifting loads utilising heavy equipment
- equipment capabilities and limitations
- extrication techniques appropriate to nature of entrapment including
  - HAZMAT (hazardous materials) detection and reporting
  - individually or as part of a team demonstrate breaking and breaching including
    - concrete coring
    - dirty and clean breaches
    - penetrating below to a void space, laterally to a void space and overhead to a void space
  - individually or as part of a team demonstrate shoring - stabilising and supporting structural components with the use of
    - cribbing and wedges
    - horizontal shores
    - split sole shore
    - T-shore, sloped floor shore, laced post shore, and vertical or dead shore
    - window and door shores
- first aid including primary surveys
- hazards including adverse weather conditions, below debris hazards, biological hazards, different levels of elevation, hazardous materials, overhead hazards, structural instability and surface hazards
- heavy lifting techniques including manual handling
- industry standards, guidelines and methodology for marking systems
- lift equipment to move loads
- manage scenes to control access
- medical considerations and casualty packaging
- movement and lifting of concrete slabs
- operational briefing and debriefing processes including tasking information
- organisational documentation including exposure reports
- organisational incident command and control system
- organisational policies and procedures including relevant legislation and personnel roles and

responsibilities

- personal documentation and kit
- personal protective clothing and equipment
- potential hazards
- preserving evidence at a scene
- principles of dynamic risk assessments
- principles of structural collapse operations
- range of environments
- relationship of USAR team with other rescue response and emergency management organisations or agencies
- rescue resources
- search techniques and equipment to locate trapped casualties including primary surface search and rescue and technical search equipment
- signs and symptoms of fatigue and stress
- situational and cultural sensitivity requirements when working with trapped persons
- sources of information
- stabilisation techniques appropriate to a range of environments
- structural collapse patterns and monitoring techniques
- tasking information
- treatment of located casualties
- types of personnel including local emergency management personnel
- voids and spaces
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements including risks associated with working in voids and spaces

## 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.

Competency should be assessed where

- designated role as an active team member are performed within a team structure and given scenarios
- mobilisation and remote living procedures of a USAR team are rehearsed

- rescue techniques are applied throughout, at a minimum, a 36 hour continuous exercise which incorporates a minimum of three shift changes

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
  - equipment, personnel and facilities appropriate to a USAR incident
  - simulation of a USAR incident in a multi-organisational/agency response environment
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operations manuals.

## Links

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