



Australian Government

Department of Education, Employment and Workplace Relations

SISOCVE415A Perform cave rescues

Release: 2

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Modification History

Not Applicable

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to undertake rescues in caves and pits, as an individual or as part of a multi-disciplinary team.

Application of the Unit

This unit applies to those working as caving adventure guides, instructors or program managers. This may include those required to perform cave rescues individually or as part of a team.

This unit also applies to outdoor recreation leaders working for outdoor education or adventure providers; volunteer groups; not-for-profit organisations or government agencies.

Licensing/Regulatory Information

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

Pre-Requisites

SISOVTR402A Perform complex vertical rescues

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

Elements describe the essential outcomes of a unit of competency

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the Evidence Guide.

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|---|---|
| <p>1. Prepare for cave rescue operation.</p> | <p>1.1. Obtain and analyse operation and task information.</p> <p>1.2. Select <i>rescue equipment</i> based on incident information and check to ensure it is ready for use.</p> <p>1.3. Select and fit <i>personal protective equipment</i> according to the nature of the cave rescue operation and <i>organisational policies and procedures</i>.</p> |
| <p>2. Assess and manage cave rescue.</p> | <p>2.1. Assess physical features of cave rescue scene before deploying rescue resources according to <i>relevant legislation</i> and organisational policies and procedures.</p> <p>2.2. Assess, minimise and control immediate <i>hazards</i> and <i>risks</i> to self and others.</p> <p>2.3. Manage rescue to control access and maintain a safe and effective operational environment according to relevant legislation and organisational policies and procedures.</p> <p>2.4. Establish and maintain communication with other <i>personnel</i> on site.</p> <p>2.5. Select and co-ordinate a rescue method suitable to the situation.</p> |
| <p>3. Determine location and condition of casualties.</p> | <p>3.1. Assess incident scene and use appropriate equipment to determine possible location of casualties.</p> <p>3.2. Collect and report <i>evidence</i> of location within cave.</p> <p>3.3. Ascertain the condition of casualties and or nature of entrapment, where possible.</p> |
| <p>4. Undertake cave rescue.</p> | <p>4.1. Obtain entry permission and obtain additional relevant information before entering cave according to relevant legislation and organisational policies and procedures.</p> <p>4.2. Monitor atmosphere according to relevant organisational policies and procedures.</p> |

ELEMENT**PERFORMANCE CRITERIA**

- 4.3. Implement appropriate ventilation procedures and use respiratory protection in irrespirable atmospheres, where required according to organisational policies and procedures.
 - 4.4. Employ appropriate techniques and equipment to access the casualty.
 - 4.5. Negotiate obstacles and hazards and maintain communication with other personnel and casualty throughout the rescue process.
 - 4.6. Treat located casualties in consultation with medical personnel, according to organisational policies and procedures.
 - 4.7. **Remove casualties** safely according to organisational policies and procedures.
 - 4.8. Take appropriate actions to **preserve the incident scene**, where possible.
5. Conclude rescue operations.
- 5.1. Recover, clean and service equipment according to organisational policies and procedures and manufacturer's guidelines.
 - 5.2. Report signs and symptoms of operational stress, where required.
 - 5.3. Evaluate rescue activity and identify improvements for future rescue experiences in a cave.
 - 5.4. Complete **operational documentation** according to organisational policies and procedures.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- problem-solving skills to:
 - determine the most appropriate rescue method to use according to the incident scene
 - anticipate and mitigate hazards and risks
 - determine location and condition of casualty inside cave
- communication skills to inform progress and interact with other personnel and casualty throughout the rescue process
- teamwork skills to support other personnel in the rescue operation, including removing casualties from a cave using lifting, lowering and or hauling systems
- planning and organising skills to:
 - select relevant equipment
 - assess the rescue scene before deploying resources
 - conduct atmospheric monitoring procedures
 - apply ventilation procedures and respiratory protection in irrespirable atmospheres
- self management skills to recognise and report signs of operational stress
- first aid and emergency response skills appropriate to the location to enable initial response to emergencies and treatment of casualties in consultation with medical personnel.

Required knowledge

- legislation and organisational policies and procedures to enable safe conduct of all processes conducted during cave rescues
- cave navigation and search techniques to promptly locate the casualty
- hazards and risks associated with particular cave rescues to minimise risk to those involved
- technical ascending and descending ability to ensure safe and efficient rescue
- personal protective and rescue equipment types, characteristics and technology to enable appropriate selection and use of equipment
- principles and techniques for using and selecting belay systems and devices, anchors, knots and ropes
- methods of removing casualties from caves, including lifting, lowering, hauling and principles of mechanical advantage
- ventilation procedures and respiratory protection in irrespirable atmospheres to ensure sufficient oxygen to breathe
- rescue and emergency procedures relevant to the location and situation to ensure safety of self and other personnel.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

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

Evidence of the following is essential:

- analyses operation and task information and selects rescue and personal safety equipment according to the requirements of the cave rescue operation
- assesses the incident scene to determine potential hazards and risks, and the condition and location of the casualty, to determine the most effective and efficient rescue method for the situation
- monitors atmosphere quality in the cave and implements appropriate ventilation procedures and respiratory protection where required
- communicates with other personnel and casualty throughout the rescue process and treats and removes casualties, according to level of responsibility
- reflects on and evaluates rescue performance and completes operational documentation.

Context of and specific resources for assessment

Assessment must ensure conduct of rescues in caves that are of sufficient breadth and duration to demonstrate competency and consistency of performance.

Assessment must also ensure access to:

- caves with a variety of rescue scenarios, potential hazards and risks, and a casualty to be rescued
- personnel for team based rescues
- caving, safety and rescue equipment.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of assessing incident site for hazards and risks prior to performing rescue
- oral or written questioning to assess knowledge of equipment types and characteristics and organisational policies and procedures and relevant legislation to enable safe conduct of rescue activities
- observation of identifying and assessing the location and condition of casualty prior to rescue
- observation of performing safe and efficient rescue,

including the treatment and removal of casualties according to situation and in consultation with other personnel

- third-party reports from a supervisor detailing performance.

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SISOCVE409A Rig ladders in complex situations

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, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

- Rescue equipment*** may include:
- ropes and tapes
 - tripods and edge management
 - harnesses
 - litters and stretchers
 - drag mats
 - hauling systems
 - communication systems
 - atmospheric monitoring equipment
 - compass, cave maps and surveys.
- Personal protective equipment*** may include:
- gloves
 - helmets
 - safety glasses
 - atmospheric monitoring equipment
 - self-contained breathing apparatus
 - air supply lines.
- Organisational policies and procedures*** may include:
- occupational health and safety
 - use, maintenance and storage of equipment
 - risk management
 - communication protocols
 - removal of casualties
 - ventilation procedures
 - minimal impact environmental and caving codes
 - Australian Speleological Federation Codes and Guidelines
 - code of ethics.
- Relevant legislation*** may include:
- occupational health and safety
 - Australian Standards for safe working in a confined space
 - permits or permission for access
 - environmental regulations.
- Hazards*** may include:
- oxygen enrichment
 - oxygen deficiency
 - atmospheric contaminants

- Risks** may include:
- swift water
 - unstable surfaces
 - falls from heights or into depths.
 - heat exhaustion or hypothermia
 - oxygen deficiency
 - injuries and illnesses.
- Personnel** may include:
- agency support
 - on-site staff
 - emergency services workers
 - government authorities.
- Evidence** may include:
- entry permit
 - permit to work
 - information received from bystanders
 - witnesses and emergency services personnel.
- Remove casualties** may include:
- lifting
 - lowering
 - hauling
 - mechanical advantage systems.
- Preserve the incident scene** may include:
- preservation of evidence and related legal requirements.
 - Documentation, including photographs, of the scene
- Operational documentation** may include:
- entry permits
 - tally boards
 - entry control procedures
 - air monitoring procedures
 - equipment and rope logs
 - exposure records.

Unit Sector(s)

Outdoor Recreation

Competency Field

Caving