



Australian Government

Department of Education, Employment and Workplace Relations

RIIERR203B Escape from hazardous situation unaided

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers escaping from hazardous situation unaided in the underground mining industries. It includes: assessing and withdrawing from hazardous situations; evacuating to fresh air; reporting and debriefing.

Application of the Unit

This unit is appropriate for those working in operational, service and maintenance roles, in underground mines, within:

- Coal mining
- Metalliferous mining

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

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 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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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess and withdraw from hazardous situation	<p>1.1 Access, interpret and apply compliance documentation relevant to escaping from hazardous situation unaided</p> <p>1.2 Interpret alarms and indicators to determine the type, cause and severity of the hazard</p> <p>1.3 Assess threat/danger and decide on the safest escape option and escape route in liaison with other workers in the vicinity and notify appropriate personnel as per site requirements</p> <p>1.4 If safe, withdraw from hazardous situation by proceeding to selected escape route</p> <p>1.5 Don self-contained self rescuer and/or other recommended personal protective equipment according to manufacturer's instructions and/or site requirements</p> <p>1.6 Evaluate the need to barricade-in and wait for external aided rescue</p>
2. Evacuate to fresh air	<p>2.1 Evacuate from hazardous situation by the established or alternative escape route and notify appropriate personnel as per site requirements</p> <p>2.2 Follow escape route markers and guidance system to navigate escape route at optimum rate of travel</p> <p>2.3 Continuously monitor and observe the mine atmosphere and mine environmental conditions and respond to adverse conditions</p> <p>2.4 Evaluate if it is an irrespirable atmosphere and locate and access self rescuer/breathing apparatus caches and utilise according to manufacturer's and site requirements</p> <p>2.5 Evaluate the need for, and locate and retreat to, a place of safety or build barricade/s for protection from adverse conditions</p> <p>2.6 Monitor air/oxygen usage and adjust rate of travel where necessary, and ensure efficient changeover of self rescuer/breathing apparatus within determined operational timeframes</p>
3. Report and debrief	<p>3.1 Provide details of escape to relevant personnel in accordance with legislation and site requirements</p> <p>3.2 Evaluate the need for voluntary counselling</p>

Required Skills and Knowledge

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

Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to conduct local risk control:

- apply legislative, organisation and site requirements and procedures
- apply risk management processes and techniques
- inspect, put on and use self rescuer/breathing apparatus
- interpret and respond to adverse environmental conditions
- read mine plans and orientate and navigate in mine
- identify alternative escape routes
- access and use self escape equipment
- observe hygiene requirements
- communicate effectively
- observe and report mine conditions
- access, interpret and apply data from monitoring systems and equipment

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following, as required to conduct local risk control:

- legislative and site requirements for self escape
- risk management processes and techniques
- types and causes of hazards and incidents in underground mines
- key indicators of mine incidents
- relevant geological and survey data
- effects of hot and humid atmospheres
- location and distribution of caches
- trigger points to initiate emergency response to alarms
- barricades and barricading methods
- location and purpose of a place of safety
- orientation and navigation in mines
- guidance systems and markers
- site emergency plans
- implications of lack of visibility
- site communication systems
- escape routes and alternative escape routes
- types of adverse environmental conditions such as smoke, visibility, dust, water, and mud

- basic ventilation systems
- types and effects of mine gases
- travel speeds
- monitoring systems

Evidence Guide

<p>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.</p>	
<p>Overview of assessment</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> • knowledge of the requirements, procedures and instructions for escaping from hazardous situation unaided • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of escape from hazardous situation unaided • working with others to undertake and complete escape from hazardous situation unaided that meets all of the required outcomes • consistent timely completion of procedures for escaping from hazardous situation unaided that safely, effectively and efficiently meets the required outcomes
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job. • Customisation of assessment and delivery environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non

	<p>English speaking background may have second language issues.</p> <ul style="list-style-type: none"> • Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances. • Where applicable, physical resources should include equipment modified for people with disabilities. • Access must be provided to appropriate learning and/or assessment support when required.
<p>Method of assessment</p>	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: • implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes • consistently achieving the required outcomes • first hand testimonial evidence of the candidate: <ul style="list-style-type: none"> • - undertaking and completing escape from hazardous situation unaided
<p>Guidance information for assessment</p>	<p>Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.</p>

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. 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.</p>	
<p>Relevant compliance documentation may include:</p>	<ul style="list-style-type: none"> • legislative, organisation and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • code of practice • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
<p>Causes of hazards may include:</p>	<ul style="list-style-type: none"> • explosion • fire • roof fall • strata • inrush • irrespirable atmosphere • Hazchem • explosives • vehicle accidents • wall collapse • underground explosion or fire • ignition • rock burst/outburst • spontaneous combustion • environmental incidents • hot and humid atmospheres • wind blast • excessive dust
<p>Escape route markers and guidance systems may include:</p>	<ul style="list-style-type: none"> • signs • rope and cone system • streamers • reflective tape • rope • conveyor belt structure • electronic guidance systems

	<ul style="list-style-type: none"> • chemical light guidance systems • reflective droppers • pipes and cables
Mine environmental conditions may include:	<ul style="list-style-type: none"> • temperature • humidity • noise • gas levels • dust and air-borne contaminants • condition of roof and sides • water/mud levels • condition of walkways/escape ways • ventilation • decreased visibility
Irrespirable atmosphere is considered:	<ul style="list-style-type: none"> • an atmosphere which is unsafe for a person to breathe as a result of either oxygen depletion or the presence of: <ul style="list-style-type: none"> • toxic fumes • gases • contaminants
Self rescuer/breathing apparatus may include:	<ul style="list-style-type: none"> • self-contained closed oxygen breathing apparatus (including chemically produced oxygen) • self-contained open circuit compressed air breathing apparatus • self-contained oxygen based self rescuers

Unit Sector(s)

Emergency Response and Rescue

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.