



Australian Government

Department of Education, Employment and Workplace Relations

RIIERR303A Operate in self-contained regenerative oxygen breathing apparatus

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers operating in self-contained regenerative oxygen breathing apparatus in the metalliferous mining industry. It includes: preparing for operation, operating in irrespirable atmosphere and carrying out post-operation activities.

Application of the Unit

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

- 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. Prepare for operations	1.1. Access, interpret and apply <i>compliance documentation</i> relevant to operating in <i>self-contained regenerative oxygen breathing apparatus</i> 1.2. Ensure fitness levels are suitable to operate breathing apparatus 1.3. Carry out <i>pre-operational equipment tests</i> 1.4. Record test outcomes 1.5. Inspect apparatus for damage and missing components and readiness for operation before entering mine 1.6. Don and adjust self-contained regenerative oxygen breathing apparatus for comfort and correct operation 1.7. Select additional personal protective equipment appropriate for work activities
2. Operate in irrespirable atmosphere	2.1. Navigate in breathing apparatus in adverse underground conditions, including <i>irrespirable atmosphere</i> 2.2. Identify, monitor and control <i>hazards</i> 2.3. Establish and maintain <i>communication</i> with team members and leader throughout the activity 2.4. Apply breathing apparatus techniques and procedures by undertaking activities as a member of a team 2.5. Monitor the operation of the breathing apparatus and the <i>condition of the wearer</i> 2.6. Operate in breathing apparatus in <i>emergency situations</i> 2.7. Follow <i>entrapment procedures</i> 2.8. Maintain personal safety at all times
3. Carry out post-operation activities	3.1. Close down self-contained regenerative oxygen breathing apparatus 3.2. Remove self-contained regenerative oxygen breathing apparatus 3.3. Report operational activities to appropriate personnel 3.4. Strip, clean, service, check, reassemble and test breathing apparatus in accordance with procedures, specification and the code of practice on transmittable diseases 3.5. Store equipment ready for operational use

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 operate in self-contained regenerative oxygen breathing apparatus:

- apply legislative, organisation and site requirements and procedures
- select and use appropriate PPE
- apply pre operational checks and testing of equipment
- apply procedures for operating in escape apparatus
- work as a team member
- read mine plans and symbols and orientate in the mine
- use communications and signals
- identify adverse conditions
- interpret monitoring device readings
- apply basic life support
- interpret manufacturer's specifications
- apply equipment stripping and reassembly requirements and procedures
- apply equipment cleaning, servicing and testing requirements and procedures

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 operate in self-contained regenerative oxygen breathing apparatus:

- respiratory system, effects of irrespirable atmospheres on the body
- protective equipment
- characteristics, component parts, operation of self-contained regenerative oxygen breathing apparatus
- testing parameters and methods
- operational testing
- standard operating procedures
- safe work practices when wearing breathing apparatus
- operating breathing apparatus
- use of distress signals
- communication methods and protocols
- use of the breathing apparatus control equipment
- self-contained regenerative oxygen breathing apparatus cleaning and hygiene requirements

- operating limits/entrapment procedure

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 operating in self-contained regenerative oxygen breathing apparatus • implementation of requirements, procedures and techniques for safe, effective and efficient operating in self-contained regenerative oxygen breathing apparatus • working with others while using self-contained regenerative oxygen breathing apparatus that meets all of the required outcomes • consistent timely operating in self-contained regenerative oxygen breathing apparatus 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.
Method of assessment	<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: <ul style="list-style-type: none"> • 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's: <ul style="list-style-type: none"> • working with others while using self-contained regenerative oxygen breathing apparatus
Guidance information for assessment	<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>Self-contained regenerative oxygen breathing apparatus may be defined as:</p>	<ul style="list-style-type: none"> • "an apparatus which is worn by the wearer which contains all the functions to allow breathing in a hostile atmosphere without any connection to normal atmospheric conditions, and where the exhaled atmosphere is cleansed of carbon dioxide and the remaining oxygen can be re-used"
<p>Pre-operational equipment tests may include:</p>	<ul style="list-style-type: none"> • visual inspection • exhalation and inhalation valve operation • positive and negative pressure leak tests • pre-flushing • cylinder contents • pressure relief valve • dosage • high pressure leaks • lung demand valve opening pressure • pressure gauge zero test
<p>Irrespirable Atmosphere is considered an atmosphere which is unsafe for a person to breathe as a result of either oxygen depletion or the presence of:</p>	<ul style="list-style-type: none"> • toxic fumes • gases • contaminants • smoke or suspended particles • heated atmospheres
<p>Hazards may include:</p>	<ul style="list-style-type: none"> • fire • explosion • failure to maintain a face seal • exhaustion of oxygen supply

	<ul style="list-style-type: none"> • malfunction of equipment • disorientation in smoke/darkness or confinement • structural hazards and/or hazardous materials • entrapment
Communications may include:	<ul style="list-style-type: none"> • distress signals • portable radio • communications equipment • signal lines • hand signals • telephone • mobile phone
Condition of wearer may include:	<ul style="list-style-type: none"> • economic breathing techniques • oxygen capacity and temperature • wearer stress
Emergency Situations may include:	<ul style="list-style-type: none"> • high pressure oxygen leak • collapsed team member • entrapment • low pressure oxygen leak • high pressure leak • evacuation
Entrapment procedures may include:	<ul style="list-style-type: none"> • ceasing all strenuous activity • activating distress signals • relocating to safest available place • calling for assistance

Unit Sector(s)

Emergency Response and Rescue

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.