



Australian Government

Department of Education, Employment and Workplace Relations

RIIERR404A Apply and monitor underground metalliferous mine emergency preparedness and response systems

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers the application and monitoring of underground metalliferous mine emergency preparedness and response systems in resources and infrastructure industries. It includes planning, preparing and applying of the plan, and applying routine plan maintenance procedures.

Application of the Unit

This unit is appropriate for those working in a supervisory role or as a technical specialist, on worksites 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

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>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.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Plan and prepare for the application of the plan</p>	<p>1.1. Access, <i>interpret</i> and apply <i>compliance documentation</i> relevant to underground metalliferous mine emergency preparedness and response</p> <p>1.2. Access, interpret and explain the emergency preparedness and response plans</p> <p>1.3. Identify and explain roles and responsibilities, as specified in the plan</p> <p>1.4. <i>Communicate</i> and explain work group and individual responsibilities and tasks in an effective and timely manner</p> <p>1.5. Identify, obtain and allocate <i>resources</i> required for the application of the plan</p> <p>1.6. Identify individual training needs</p>
<p>2. Apply the plan</p>	<p>2.1. Receive and communicate <i>incident</i> information in accordance with the emergency plan</p> <p>2.2. Assess and communicate the nature and scope of the incident in accordance with the emergency plan</p> <p>2.3. Apply and monitor emergency response and evacuation plans and procedures in accordance with the emergency plan</p> <p>2.4. Apply procedures for monitoring, recording and reporting on emergency incidents according to the emergency plan</p> <p>2.5. Apply procedures for the collection, analysis and validation of <i>emergency preparedness and response data</i></p> <p>2.6. Contribute to the management of the situation or incident in accordance with the emergency plan</p> <p>2.7. Apply and monitor action plans in accordance with the emergency plans</p> <p>2.8. Select emergency equipment and use appropriately to deal with the emergency</p> <p>2.9. Isolate potential sources of danger and put in place warning signs/signals/barriers</p> <p>2.10. Response to emergency or incident <i>is</i> coordinated and controlled to ensure continuing safety of personnel at the site</p>

	<p>2.11. Communicate incident information in accordance with the emergency plan</p> <p>2.12. Participate in <i>audit</i> and review requirements in accordance with the emergency plan as per site requirements</p>
<p>3. Apply routine plan maintenance procedures</p>	<p>3.1. Schedule and carry out inspections, <i>equipment</i> repair and maintenance activities in accordance with the emergency preparedness and response plans</p> <p>3.2. Record and report maintenance requirements/activities in accordance with the emergency preparedness and response plans</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 apply and monitor underground metalliferous mine emergency preparedness and response systems:

- apply legislative, organisation and site requirements and procedures
- access, interpret and apply technical information relevant to emergency preparedness and response
- access, interpret and apply emergency preparedness and response information related to the site
- apply emergency preparedness and response systems and plans
- collect, collate, interpret and report incident/emergency data
- perform basic mathematical calculations
- apply investigation and reporting procedures
- apply effective workplace communication procedures
- access, interpret and apply data from monitoring systems and equipment
- operate hand held monitoring equipment
- apply risk management processes and techniques
- apply procedures to initiate emergency preparedness and response training
- propose practical recommendations for identified key issues

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 apply and monitor underground metalliferous mine emergency preparedness and response systems:

- legislative and site requirements for emergency preparedness and response
- audit and review processes and techniques
- training and assessment principles
- training systems
- emergency response and evacuation planning processes and techniques
- structure of emergency procedures guidelines
- legal requirements of incident management teams
- self escape, aided rescue and respond to incident philosophies, systems and equipment
- risk management principles and techniques
- structure of emergency organisations
- intervention/control techniques for heating, fires, explosions, outburst, or inrushes

- effects of heat and humidity
- effects of visibility
- escape strategies and technology
- site environmental risks and controls
- equipment requirements for different types of emergency
- ventilation and its influence on incidents
- deployment of personnel underground under deputies control
- procedure/policy for re-deployment of personnel underground after evacuation
- call-out procedures
- emotional effects of emergencies on rescuers and site personnel
- titles and roles of members of incident management team
- the requirements and structure for place of safety/fresh air base
- equipment handling
- sealing procedures and the legislative implications

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 the application and monitoring of underground metalliferous mine emergency preparedness and response systems • implementation of appropriate procedures and techniques for the safe, effective and efficient application and monitoring of underground metalliferous mine emergency preparedness and response systems • working with others to plan, prepare and conduct underground metalliferous mine emergency preparedness and response systems • provision of clear and timely instruction and supervision by the individual of those involved in applying underground metalliferous mine emergency preparedness and response systems • evidence of the consistent successful application and monitoring of underground metalliferous mine emergency preparedness and response systems
<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

	<p>assessment should not be greater than those required on the job.</p> <ul style="list-style-type: none"> • Customisation of assessment and delivery environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • 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. • 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: <ul style="list-style-type: none"> • implementation of appropriate procedures and techniques for the safe, effective and efficient achievement of the required outcomes • consistently achieving the required outcomes • first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • working with others to plan, prepare and apply underground metalliferous mine emergency preparedness and response • provision of clear and timely instruction and supervision by the individual of those involved in the conduct of the underground metalliferous mine emergency preparedness and response

Guidance information for assessment	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.
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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>Interpret is defined as:</p>	<ul style="list-style-type: none"> • understanding of what is needed by the person within their job role
<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>Communications may include:</p>	<ul style="list-style-type: none"> • radio/PED • telephone/DAC • telemetry • oral • written • computers • runners
<p>Resources may include:</p>	<ul style="list-style-type: none"> • internal site services and resources • contractors • local community • Inspectorate • police • Mines Rescue Service • fire brigades • ambulance • hospitals • critical incident stress debriefing organisations • media • district check inspector • other sites • entrapment procedures
<p>Incidents can be caused by:</p>	<ul style="list-style-type: none"> • explosion • fire

	<ul style="list-style-type: none"> • strata failure • inrush • outburst • irrespirable atmosphere • environmental incident • hazardous chemicals • explosives • vehicle accidents • wind blast • failure of ventilation control devices/appliances
Incidents can be identified as:	<ul style="list-style-type: none"> • minor accident • major accident or fatality • underground explosion • fire • ignition • outburst • inrush • spontaneous combustion • surface fire which disrupts operations • environmental incidents • bomb threat • terrorist attack • high potential incidents • biological incidents • sabotage
Emergency preparedness and response data may include:	<ul style="list-style-type: none"> • gas levels and trends • change in temperature • change in ventilation • visibility • escape route conditions • status of caches, quick fill stations and first response stations • root cause of the emergency incident • status of communication equipment • status of monitoring equipment • location and condition of persons • hazards identified on escape
Audit is defined as:	<ul style="list-style-type: none"> • a systematic examination against defined criteria to determine whether activities and related results conform to planned arrangement, and whether these arrangements

	are implemented effectively and are suitable to achieve the organisation's policy and objectives
Equipment refers to that needed to control the incident and may include:	<ul style="list-style-type: none">• self escape and first response equipment• fire fighting equipment• rescue equipment• mining equipment• transport• specialised equipment from external sources• monitoring and analysis equipment

Unit Sector(s)

Emergency Response and Rescue

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.