



Australian Government

Department of Education, Employment and Workplace Relations

RIIMEX406A Apply and monitor mine transport system and production equipment

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers the application and monitoring of mine production and transport systems in the coal and metalliferous mining industries. It includes the planning and preparing for and the applying and monitoring of the systems for the operation and maintenance of production and transport systems and equipment; and applying, monitoring and maintenance procedures.

Application of the Unit

This unit is appropriate for those working in a supervisory or technical specialist roles, 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

<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 operation and maintenance of <i>transport systems</i> and <i>production equipment</i></p>	<p>1.1. Access, interpret and apply <i>compliance documentation</i> relevant to the application and monitoring of mine production and transport systems</p> <p>1.2. Identify and interpret the legislative and site requirements related to <i>transport systems</i> and <i>production equipment</i></p> <p>1.3. Identify and confirm the purpose of <i>transport systems</i> and <i>production equipment</i></p> <p>1.4. Identify <i>hazards</i> associated with the installation and operation of transport systems and production equipment, evaluate <i>risks</i> and apply controls</p> <p>1.5. Identify individual <i>training</i> needs</p>
<p>2. Apply and monitor the systems for the operation and maintenance of transport systems and production equipment</p>	<p>2.1. Apply site and manufacturer's requirements to the installation of equipment and systems at the work site</p> <p>2.2. Apply commissioning procedures and report outcomes as per site requirements</p> <p>2.3. Assess the impacts of equipment and systems on work processes and record and report processes to meet equipment and site requirements</p> <p>2.4. Apply operational and maintenance programs and procedures</p> <p>2.5. Apply and monitor procedures for reviewing and modifying work processes</p> <p>2.6. Apply and monitor emergency response and evacuation plans and procedures</p> <p>2.7. Apply and monitor safe operating procedures throughout the work and report, where appropriate</p> <p>2.8. Participate in systems <i>audit</i> and review requirements</p>
<p>3. Apply monitoring and maintenance procedures</p>	<p>3.1. Schedule and carry out inspection, modification, repair and <i>maintenance</i> activities</p> <p>3.2. Record, report and review maintenance and monitoring requirements and activities</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 mine transport systems and production equipment:

- apply legislative, organisation and site requirements and procedures
- access, interpret and apply technical information
- access, interpret and apply briefings and handover details
- assess the risks and consequences attached to production and transport systems and equipment
- apply procedures appropriate to mine operations for management of production and transport systems and equipment
- plan and coordinate work
- apply [procedures to identify training needs related to production and transport systems
- interpret and apply manufacturer's instructions
- apply maintenance and modification systems
- 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 mine transport systems and production equipment:

- legislative and site requirements and instructions including transport rules, no go zones for mobile equipment, maintenance schemes, SOP's, training, legislative testing on diesel vehicles, battery charging, underground fuel depots, conveyor belts
- mine operation procedures
- assessment of geological structures
- mine plans
- mine design relating to production and transport systems and equipment
- production and transport systems and equipment management requirements
- environmental monitoring requirements
- risk management procedures
- production and transport systems and equipment statutory inspection requirements
- lifting, towing and tying down procedures
- mine reporting procedures
- emergency response and evacuation planning processes and techniques

- maintenance and modification systems
- audit review processes and techniques
- production and transport equipment and systems; the types, uses, characteristics and limitations appropriate for safe operation at the mine site including braking systems
- isolation and safe control of energy sources including electrical, hydraulic, pneumatic, diesel
- safety design features of production and transport systems including traffic control devices
- standard operating procedures relating to production and transport equipment
- identifying operational hazards including noise, dust, lighting, ergonomics, remote control, physical clearance, confined space, visibility, seating, vibration and machine equipment and personal protection
- training systems
- computer based systems
- fire prevention techniques and fire fighting systems in relation of production and transport equipment
- identifying and clearly communicating key issues

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 mine production and transport systems • implementation of appropriate procedures and techniques for the safe, effective and efficient application and monitoring of mine production and transport systems • working with others to plan, prepare, apply and monitor mine production and transport systems • provision of clear and timely instruction and supervision by the individual of those involved in applying the mine production and transport systems • evidence of the consistent successful application and monitoring of mine production and transport 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 assessment should not be greater than those required on the job. • Customisation of assessment and delivery environment to sensitively accommodate

	<p>cultural diversity.</p> <ul style="list-style-type: none"> • 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 work sites may • 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 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, apply and monitor mine production and transport systems • provision of clear and timely instruction and supervision by the individual of those involved in the application of mine production and transport systems
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>Interpret is defined as:</p>	<ul style="list-style-type: none"> • the understanding 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 • codes of practice • Employment and Workplace Relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
<p>Transport systems include capacities for personnel, equipment/materials and product and may be:</p>	<ul style="list-style-type: none"> • wheeled • railed • tracked • skidded • conveyor • product slurry pumped • shaft and drift winding based
<p>Transport items may include:</p>	<ul style="list-style-type: none"> • rubber tyred man transport • multipurpose vehicles • load haul dump • forklifts • skid steer loader • grader • locomotives (electric/diesel) • rail mounted personnel carriers • rolling stock • drift haulage systems • monorail • shearer carriers • personnel carriers • chock recovery vehicles (mules) • mine dozer • head gear

	<ul style="list-style-type: none">• cages• skips• winding apparatus• communications• control system discharge• loading facilities• counter balances• conveyor belts• drive heads• tail ends• transfer points• surge bins• inter seam bins• fabricated bins• chain conveyors• batching stations• dewatering systems• water reticulation pumping stations
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Production Equipment (manual or remote control) may include:	<ul style="list-style-type: none"> • shearer • armoured face conveyor • pantech • hydraulic roof supports • stage loader • face drill rigs • shuttle cars • ram cars • ratio/breaker feeders • breaker line support • roof bolters (mobile and hand held) • rib bolters • road header • continuous miners • in-seam miners • high wall miners • auger miners • loaders • shotfiring • hydraulic mining
Hazard is defined as:	<ul style="list-style-type: none"> • a source of potential harm or a situation with a potential to cause loss
Risk is defined as:	<ul style="list-style-type: none"> • the chance of something happening that will have an impact upon objectives. It is measured in terms of consequences and likelihood
Site documentation and training policy may include:	<ul style="list-style-type: none"> • legislative requirements • management plans • procedures
Audit is:	<ul style="list-style-type: none"> • the process by which validation of procedures, processes and systems is assured
Maintenance may be divided into:	<ul style="list-style-type: none"> • predictive/preventative/scheduled • compliance • breakdown

Unit Sector(s)

Materials Extraction

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.