



Australian Government

Department of Education, Employment and Workplace Relations

RIIRAI501B Implement mine transport systems and production equipment

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers implementing mine transport systems and production equipment in the coal and metalliferous mining industries. It includes: planning and preparing for implementation; and implementing systems for installation, commissioning, operation, maintenance, audit and review.

Application of the Unit

This unit is appropriate for those working in management 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

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. Plan and prepare for the implementation	1.1. Access, interpret and apply compliance documentation relevant to implementing of mine transport systems and production equipment 1.2. Identify the purposes of transport systems and production equipment in accordance with the system of mining 1.3. Identify and record site requirements for the implementation of production equipment and/or transport systems 1.4. Access and interpret the specifications for the required production equipment and/or transport systems 1.5. Identify, clarify and communicate roles and responsibilities 1.6. Identify training needs 1.7. Access and interpret site requirements
2. Implement systems for installation and commissioning	2.1. Identify hazards associated with the installation and operation of production equipment and transport systems and evaluate and respond to risks in accordance with established procedures 2.2. Implement emergency response and evacuation plans and procedures in accordance with site requirements 2.3. Integrate new and existing work systems and processes to achieve required outcomes 2.4. Implement standard operating procedures 2.5. Implement site production and transport installation and commissioning procedures 2.6. Implement the program to satisfy identified production and transport training requirements 2.7. Commission equipment and systems in accordance with manufacturer's specifications and site procedures 2.8. Modify equipment and systems to satisfy required changes arising from the commissioning process
3. Implement systems for the operation and maintenance of	3.1. Implement procedures for the operation of production equipment and transport

transport systems and production equipment	systems in accordance with legislative, manufacturer's and site requirements 3.2. Implement reporting and recording systems, in accordance with legislative and site requirements 3.3. Implement and apply procedures for reviewing and modifying work processes
4. Implement systems for audit and review	4.1. Audit production equipment and transport systems standards for compliance with legislative and site requirements 4.2. Audit production and transport maintenance standards for currency and compliance with legislative and site requirements 4.3. Audit systems and equipment for compliance with legislative and site requirements 4.4. Audit emergency response and evacuation plans and procedures for compliance with site requirements 4.5. Audit reporting and recording systems for production and transport equipment for compliance with legislative and site requirements 4.6. Audit the training program for currency, relevance and compliance with site requirements

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 implement mine transport systems and production equipment:

- apply legislative, organisation and site requirements and procedures
- provide information/briefings and handover details
- apply hazard identification and risks assessment processes
- apply transport systems and production equipment management procedures
- apply work planning and coordination procedures
- apply training needs identification procedures
- interpret and apply manufacturer's instructions
- apply maintenance and modification surveys and audits

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 implement mine transport systems and production equipment:

- legislative and site requirements and instructions including transport rules, no-go zones for mobile equipment, maintenance schemes, SOPs training, statutory testing on diesel vehicles, battery charging, underground fuel depots, conveyor belts
- site operation procedures
- assessment of geological structures
- site plans
- site design relating to production and transport systems and equipment
- production and transport systems and equipment management requirements
- site environmental monitoring requirements
- risk management procedures
- production and transport systems and equipment statutory inspection requirements
- site transport systems design and functionality
- site reporting procedures
- emergency response and evacuation planning processes and techniques
- maintenance and modification systems
- audit review processes and techniques
- site document control requirements
- production and transport equipment and systems; the types, uses, characteristics and limitations appropriate for safe operation at the site including braking systems

- energy sources including electrical, hydraulic, pneumatic, diesel
- safety design features of production and transport systems including traffic control devices
- safe operating procedures relating to production and transport equipment
- stores systems
- specification design criteria including access, noise, dust, lighting, ergonomics, remote control, physical clearance, confined space, visibility, seating vibration and machine equipment and personal protection
- development, administration and review of procedures that apply to the system
- raining plan
- standard operating procedures relating to production and transport equipment
- safety design features for maintenance of production and transport equipment
- use of computer based systems for production and transport systems
- fire fighting systems and precaution rules

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	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: • knowledge of the requirements, procedures and instructions for the implementing of mine transport systems and production equipment • implementation of procedures and techniques for the safe, effective and efficient implementing of mine transport systems and production equipment • the identification of the relevant information and scope of the work required to meet the required outcomes • the identification of viable options and the selection of options that best meet the required outcomes • working with others to undertake and complete the implementing of mine transport systems and production equipment • consistent successful implementing of mine transport systems and production equipment
Context of and specific resources for assessment	• 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 English speaking background may have second language issues. • Assessment of this competency requires typical resources normally used in a civil works 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	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: • 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 procedures and techniques for the safe, effective and efficient achievement of the required outcomes • identification of the relevant information and scope of the work required to meet the required outcomes • identification of viable options and the selection of options that best meet the required outcomes • consistently achieving the required outcomes • first hand testimonial and documentary evidence of the candidate's: • working with others to undertake and complete the implementing of mine transport systems and production equipment

	• provision of clear and timely required support and advice on the implementing of mine transport systems and production equipment
Guidance information for assessment	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

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.

Relevant compliance documentation may include:	• 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
System may comprise:	• policy, standards, procedures and tools/protocols
Transport systems include capacities for personnel, equipment/materials and may be:	• wheeled transport including: • rubber-tyred man transport • multipurpose vehicles • load haul dump • forklifts • front end loader • skid steer loader • grader • rail transport may include: • locomotives (electric/diesel) • rail mounted personnel carriers • rolling stock • tracked vehicles may be fixed or mobile and may include: • shearer carrier • personnel carriers • chock recovery vehicles (mules) • site dozer • shaft and drift winding systems may include product, personnel and material including: • head gear • cages and skips

	• winding apparatus • communications • control system discharge • loading facilities • counter balances • conveyor system including: • conveyor belts • drive heads • tail ends transfer points • surge bins • inter seam bins • fabricated bins • chain conveyors • product slurry pumping including: • batching stations • dewatering systems • water reticulation pumping stations
Production equipment (manual or remote control) may include:	• shearer • armoured faced 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
Specifications may include, but not be limited to:	• performance requirements • costs • dimensions

	• capacity • OHS requirements • training requirements • key selection criteria
Site requirements are also known as:	• Standard Operating Procedures (SOP) • safe working procedures • safe operating procedures • standard working procedures
Hazard is defined as:	• a source of potential harm or a situation with a potential to cause loss
Risk is defined as:	• the chance of something happening that will have an impact upon objectives. It is measured in terms of consequences and likelihood
Audit is defined as:	• 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
Maintenance may be divided into:	• predictive • preventative • breakdown

Unit Sector(s)

Resources and Infrastructure

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.