



Australian Government

Department of Education, Employment and Workplace Relations

RIIRAI503B Implement site services and infrastructure systems

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers implementing site services and infrastructure systems in the coal and metalliferous mining industries. It includes planning and preparing for implementation; and implementing installation and commissioning procedures, systems for operation and maintenance of services and infrastructure, and systems for auditing and reviewing site services, infrastructure and equipment.

Application of the Unit

This unit is appropriate for those working in management 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 implementation	1.1. Access, interpret and apply compliance documentation relevant to implementing site services and infrastructure systems 1.2. Identify the purpose of site services and infrastructure systems and equipment in accordance with the system of mining 1.3. Identify and record site requirements for the implementation of site services and infrastructure systems and equipment 1.4. Access, identify and interpret the specification for the required site services and infrastructure equipment 1.5. Identify and communicate roles and responsibilities 1.6. Identify training needs 1.7. Access and interpret site procedures
2. Implement installation and commissioning procedures	2.1. Identify hazards associated with the installation of site services and infrastructure equipment and systems, and evaluate and respond to risks 2.2. Integrate new and existing work systems/processes/plant to achieve required outcomes 2.3. Implement site procedures 2.4. Implement site services and infrastructure transport and installation procedures in accordance with manufacturer's specifications and site requirements 2.5. Implement site services and infrastructure commissioning procedures 2.6. Implement the site services and infrastructure training plan 2.7. Identify and implement changes to equipment and systems to satisfy required changes arising from the commissioning process 2.8. Implement emergency response and evacuation plans and procedures in accordance with site requirements
3. Implement systems for the operation and maintenance of	3.1. Implement operational procedures for site services and infrastructure systems and

site services and infrastructure and equipment	equipment according to site requirements 3.2. Implement maintenance procedures for site services and infrastructure systems and equipment according to manufacturer's and site requirements 3.3. Implement and apply procedures for reviewing and modifying work processes
4. Implement systems for audit and review of site services and infrastructure and equipment	4.1. Audit site services and infrastructure system and equipment for compliance with legislative and site requirements 4.2. Audit site services and infrastructure system and equipment maintenance for currency and compliance with legislative and site requirements 4.3. Audit reporting and recording systems 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 the training plan 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 site services and infrastructure systems:

- apply legislative, organisation and site requirements and procedures
- access, interpret and apply:
 - technical information
 - briefings and handover details
 - site/legislative requirements
 - records and reports
- apply hazard identification and risk management processes
- apply work planning and coordination requirements and procedures
- apply training needs analysis procedures
- interpret and apply manufacturer instructions
- apply maintenance and modification systems implementation 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 implement site services and infrastructure systems:

- legislative, Australian standards and site specific requirements
- emergency response and disaster planning processes and techniques
- audit review process and techniques
- site procedures
- site design relating to site services and infrastructure systems
- energy sources, including electrical, hydraulic, compressed air, diesel
- safety design features of site services and infrastructure systems
- computer based systems
- training programs
- fire fighting systems and precaution rules
- safety design features for maintenance of site services and infrastructure systems
- maintenance and modification systems
- stores systems
- roadway maintenance and drilling
- protection systems

- reticulation systems
- specifications for site services and infrastructure

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 implementing site services and infrastructure systems • implementation of procedures and techniques for the safe, effective and efficient implementing of site services and infrastructure systems • 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 implementation of site services and infrastructure systems • consistent successful implementation of site services and infrastructure systems
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 implementation of site services and infrastructure systems • provision of clear and timely required

	support and advice on the implementation of site services and infrastructure systems
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
Site services may include:	• water • wastewater • compressed air • fire fighting • fuel • electrical • waste disposal • condition monitoring • sanitation
Infrastructure may include:	• fabrication and construction areas • servicing areas • refuelling points • workshops • dams • explosives magazines • training facility • bathrooms • HV switch rooms • lamp cabin • laboratory • store-houses • equipment storage areas • on site residential housing • site access (road, rail, air) • battery charging rooms

	• water treatment plant • sewerage treatment plant • offices • emergency facilities (First Aid, fire and rescue) • coal preparation plant • stockpile • coal load out • control room • "Fixed Plant"
Site requirements may include:	• site plans • electrical rules • gas drainage • compressed air • electrical/mechanical equipment • inspection requirement • environmental management • explosion barriers • communication • emergency procedures • risk management • recording and reporting • sites rescue • OHS • manufacturer instructions • standard work procedures • training • fire fighting • handling and storage of dangerous goods • local government • power authorities
Site procedures are also known as:	• standard operating procedures (SOP) • safe working procedures • safe operating procedures • standard working procedures
Site procedures may apply to:	• transport systems • conveyor systems • systems of mining • ventilation system • gas management • site water management • site communication systems

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
Manufacturer's specifications may include:	• performance requirements • costs • dimensions • capacity • occupational health and safety requirements • training requirements • key selection criteria
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
Reporting and recording systems include site requirements and consist of:	• phones • radios • computer systems • verbal and written
Emergency response systems may include:	• refuge chambers and changeover stations • designated escape ways • places of safety • alarm systems • guidance systems • emergency communication systems • escape apparatus and systems • sites rescue capability • first response stations • quick fill stations

Unit Sector(s)

Resources and Infrastructure

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.