



Australian Government

RIIRAI604E Establish and maintain mine services and infrastructure systems

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 5.0.

Application

This unit describes the skills and knowledge required to establish and maintain mine services and infrastructure systems in coal mining, including developing installation and commissioning systems and procedures, operational and maintenance procedures, and audit and review systems.

It applies to those working in management or technical specialist roles. They generally perform complex, non-routine tasks involving strategic and planning activities and are responsible for establishing and maintaining operational systems and plans.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Coal mining

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare mine services and infrastructure systems	1.1 Obtain, interpret, clarify and confirm work requirements 1.2 Access, interpret and apply mine services and infrastructure documentation 1.3 Identify and address potential risks, hazards and environmental issues and implement control measures according to site requirements 1.4 Identify requirements and purpose of mine services and infrastructure systems according to legislative requirements and the system of mining 1.5 Establish specifications for mine services and infrastructure systems

ELEMENT	PERFORMANCE CRITERIA
	based on analysis of operating requirements 1.6 Identify options from analysis of all relevant technical, operational and financial information 1.7 Select preferred systems according to manufacturer specifications and legislative and site requirements 1.8 Inspect site, assess potential locations for mine services and infrastructure, locate on mine plan and confirm location
2. Select plant, equipment or services	2.1 Conduct detailed scoping of operational requirement and develop key selection criteria according to operational and site requirements 2.2 Establish specifications for required plant, equipment and services 2.3 Select preferred plant, equipment and services according to manufacturer specifications and legislative and site requirements
3. Establish installation and commissioning systems and procedures	3.1 Establish a system to identify hazards and analyse and evaluate risks associated with the installation of plant, equipment and services 3.2 Plan and prepare for integration of new and existing systems and procedures to achieve optimum performance 3.3 Establish procedures for installing and commissioning plant, equipment and services according to site requirements 3.4 Establish systems and procedures to satisfy identified training requirements
4. Establish management systems for operation and maintenance of plant, equipment or services	4.1 Establish operational procedures for plant, equipment and services according to manufacturer specifications and legislative and site requirements 4.2 Establish maintenance procedures for plant, equipment and services according to manufacturer specifications and legislative and site requirements 4.3 Establish procedures for reviewing and modifying work processes according to legislative and site requirements 4.4 Establish the maintenance of plant, equipment and services used for emergency response and evacuation according to manufacturer specifications and legislative and site requirements 4.5 Establish system for recording and reporting of plant, equipment and services information according to site requirements
5. Plan and prepare to implement mine services and infrastructure	5.1 Identify and interpret the legislative and site implementation requirements 5.2 Identify, clarify and communicate roles and responsibilities to all personnel according to mine services and infrastructure requirements 5.3 Identify, forecast, obtain and allocate/schedule resources required for mine services and infrastructure implementation 5.4 Provide, review and implement recommendations for changes to implementation procedures as required

ELEMENT	PERFORMANCE CRITERIA
6. Establish management systems to audit and review mine services and infrastructure systems	6.1 Establish procedures to audit and review equipment compliance according to legislative and site requirements 6.2 Identify and assess future plant, equipment and services requirements into the planning processes 6.3 Establish procedures to audit and review the currency and compliance of operation and maintenance systems relating to plant, equipment and services 6.4 Establish procedures to audit the training programs for currency and relevance 6.5 Establish procedures for incorporating feedback into the audit/review system 6.6 Establish procedures for response to instances of non-compliance or other discrepancies/deficiencies revealed by audit

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Numeracy	Calculates resourcing requirements
Oral communication	Conveys information and requirements clearly and listens actively
Reading	Identifies and interprets relevant information from workplace procedures, documentation and legislation
Writing	Prepares specific information that complies with a range of requirements, using sector-specific vocabulary, grammatical structures and conventions

Unit Mapping Information

Supersedes and is equivalent to RIIRAI604D Establish and maintain mine services and infrastructure systems.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIIRAI604E Establish and maintain mine services and infrastructure systems

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- establish and maintain mine services and infrastructure systems on at least two occasions, including:
 - identifying relevant information and scope of work
 - identifying the full range of specification requirements, including hazard identification and risk analysis
 - identifying all aspects of the mine services and infrastructure systems
 - establishing audit and review system
 - identifying design/selection options according to analysis of all relevant information
 - selecting preferred plant, equipment and services options according to performance against specification requirements.

During the above, the candidate must:

- locate and apply relevant legislation, documentation, policies and procedures and confirm work activity is compliant
- implement procedures and techniques for establishing and maintaining mine services and infrastructure systems, including:
 - accessing, interpreting and applying procedures for:
 - managing technical information
 - managing site/legislative requirements
 - establishing recording and reporting systems
 - conducting briefings and handover details
 - applying the principles of mine design
 - hazard identification and risk management
 - work planning and coordination
 - training needs analysis

- applying manufacturer specifications
- work effectively with others to establish and maintain mine services and infrastructure systems, including:
 - managing people and processes
 - coordinating human, financial and physical resources
 - developing, initiating and administering work plans
 - interpreting and applying operational performance data
 - engaging internal and external stakeholders.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- key legislation required to establish and maintain mine services and infrastructure systems
- key procedures and documentation required to establish and maintain mine services and infrastructure systems, including those relating to:
 - mine operation procedures
 - risk management
 - financial information relating to applicable mine services and infrastructure systems
 - mine reporting procedures
 - emergency response and evacuation planning processes and techniques
 - audit review processes and techniques
- mine designs relating to mine services and infrastructure
- types, characteristics, technical capabilities and limitations of mine services and infrastructure, including:
 - mine operating procedures
 - safety design features, including those for maintenance
 - specifications for fixed plant and infrastructure
 - stores systems
- computer-based systems related to monitoring and operation of mine services and infrastructure
- principles, processes and techniques for emergency response, evacuation and disaster planning, including firefighting systems
- techniques for leading and coordinating work activities with others.

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - mine services and infrastructure system documentation
- be conducted in a safe environment; and,
- be assessed in the context of this sector's work environment; and,

- be assessed in compliance with relevant legislation/regulation and using policies, procedures and processes directly related to the industry sector for which it is being assessed; and,
- confirm consistent performance can be applied in a range of relevant workplace circumstances.

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment* provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

Assessor requirements

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory regulatory standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/Australian Quality Training Framework mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements. This includes:

- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment
- formal relevant qualifications in training and assessment
- having knowledge of and/or experience using the latest techniques and processes
- possessing the required level of RII training product knowledge
- having an understanding and knowledge of legislation and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence outlined in this unit of competency, and
- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must have current industry skills directly relevant to the training and assessment being provided. This means the industry subject matter expert must demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	1	1 year
	2	2 years

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Coal Mining, Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure	3-6	3 years
Other sectors	Where this unit is being assessed outside of the resources and infrastructure sectors assessor and/or industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no industry standard is specified should comply with any relevant regulation.	

*Guidance on simulated environments has been stipulated in the Companion Volume Implementation Guide located on VETNet.

**Assessors can demonstrate current work experience through employment within industry in a role relevant to the outcomes of the unit; or, for external assessors this can be demonstrated through exposure to industry by conducting a minimum number of site assessments as determined by the relevant industry sector, across various locations.

*** While a unit of competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

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