



Australian Government

RIIMEX405D Apply and monitor systems and methods of surface coal mining

Release: 3

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Modification History

Release	Comment
1	This unit replaces RIIMEX405A Apply and monitor systems and methods of surface coal mining
2	Removed repetition from Knowledge Evidence
3	Required frequency and volume of evidence amended in Performance evidence. Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.

Application

This unit develops a participant's skills and knowledge required to monitor the systems and methods of surface mining in Coal mining.

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

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

Unit Sector

Coal mining (Surface)

Elements and Performance Criteria

1. Plan and prepare for surface coal mining systems	1.1 Access, interpret and apply systems and methods of surface coal mining documentation and ensure the work activity is compliant 1.2 Obtain, read, interpret, clarify and confirm work requirements 1.3 Identify and address potential risks, hazards and environmental issues and implement control measures 1.4 Select and wear personal protective equipment appropriate for work activities 1.5 Obtain, interpret and apply verbal or written work instructions for the allocated task
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	1.6 Identify and assess the risks associated with unstable mining structures 1.7 Obtain and interpret emergency procedures, and be prepared for an emergency
2. Monitor mine development operation	2.1 Communicate, apply and monitor approved mining system 2.2 Communicate and apply primary, secondary and other support systems 2.3 Identify and assess operational constraints impacting on the maintenance of stable mining structure 2.4 Assess and report strata spoil and dump failures and implement appropriate control measures 2.5 Identify and monitor the application of the mining sequences 2.6 Identify, assess and record failure mechanisms, including virgin and induced stress control methods and implement appropriate control measures 2.7 Identify and apply emergency response and evacuation plans and procedures and report on outcomes 2.8 Monitor and report on effectiveness of standard operating procedures 2.9 Contribute to systems audit and review requirements
3. Monitor waste management procedures	3.1 Identify, interpret and assess surface and groundwater information 3.2 Monitor the implementation of the drainage system
4. Monitor stockpile formation and reclaiming systems	4.1 Identify, interpret and confirm stockpile requirements 4.2 Monitor and report stockpile configuration 4.3 Identify and assess the stockpile operation to meet mine site requirements and implement appropriate control measures
5. Report on the systems and methods of mining	5.1 Complete and submit written reports 5.2 Submit reasoned recommendations to improve the safety, efficiency and effectiveness of the systems

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit. Further information is available in the Resources and Infrastructure Industry Training Package Companion Volume.

Unit Mapping Information

RIIMEX405A Apply and monitor systems and methods of surface coal mining

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for RIIMEX405D Apply and monitor systems and methods of surface coal mining

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Performance Evidence

Evidence is required to be collected that demonstrates a candidate's competency in this unit. Evidence must be relevant to the roles within this sector's work operations and satisfy all of the requirements of the performance criteria of this unit and include evidence that the candidate:

- locates and applies relevant documentation, policies and procedures
- implements the requirements, procedures and techniques for the safe, effective and efficient monitoring of systems and methods of surface coal mining including:
 - analysing hazards and risks, and implementing control measures
 - accessing and analysing archival and historical mine management information related to the mine and failure mode of mine structures
 - interpreting and monitoring the application of design criteria for strata management
 - identifying and evaluating geological and geotechnical information
- works effectively with others to undertake and complete the monitoring of systems and methods of surface coal mining that meets all of the required outcomes including:
 - complying with written and verbal reporting requirements and procedures
 - providing leadership and direction to the team by communicating clearly and concisely with others to receive and clarify work instructions
 - providing clear and timely instruction and supervision to those involved in monitoring of the mining systems and methods
 - communicating clearly and concisely with others to resolve coordination requirements prior to commencing and during work activities

- demonstrates completion of applying and monitoring systems and methods of surface coal mining that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - implementing measures for strata spoil and dump failures
 - implementing control methods for virgin and induced stress
 - implementing stockpile control measures
 - assessing outcomes to make reasoned recommendations and writing reports
 - interpreting and assessing surface and groundwater information
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Knowledge Evidence

The candidate must demonstrate knowledge of **monitoring systems and methods of surface coal mining** through:

- the **considerations for monitoring systems and methods of surface coal mining**
- interpreting visual signs of stress, including mining induced stress, adverse joining, fault orientation, spoil characteristics
- stable structure control and maintenance of excavation
- geology, hydrogeological, strata and strata gas characteristics
- basic mining engineering principles
- monitoring systems and methodologies
- audit methodologies
- audit inspection, communication and reporting methodologies
- awareness of mine site historical information
- implementation of plant, equipment and tools maintenance requirements and procedures
- mining induced stress, vertical and horizontal stress tectonics
- mining structure failure modes

Assessment Conditions

- An assessor of this unit must satisfy the requirements of the NVR/AQTF or their successors; and Industry regulations for certification and licensing; and,
- this unit must be assessed in the context of this sector's work environment; and,
- this unit must be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- assessment may be conducted in conjunction with the assessment of other Units of Competency; and,
- assessment must confirm consistent performance can be applied in a range of relevant workplace circumstances; and,
- assessors must demonstrate the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and through the minimum years of current* work experience specified below in an Industry sector relevant to the outcomes of the unit; or,

- where the assessor does not meet experience requirements a co-assessment or partnership arrangement must exist between the qualified assessor and an Industry subject matter expert. The Industry subject matter expert should hold the unit being assessed (or an equivalent unit) and/or demonstrate equivalence of skills and knowledge at the unit level. An Industry technical expert must also demonstrate skills and knowledge from the minimum years of current work experience specified below in the Industry sector, including time spent in roles related to the unit being assessed; and,
- assessor and Industry subject matter expert requirements differ depending on the Australian Qualifications Framework Level (AQF) of the qualification being assessed and/or Industry Sector as follows:

Industry sector	AQF** Level	Required assessor or Industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Construction	1	1 Year
	2	2 Years
Drilling, Coal Mining and Extractive (Quarrying)	3-6	3 Years
Metalliferous Mining and Civil Construction	3-6	5 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.	

*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 frequent site assessments across various locations.

**Where a unit is being delivered outside of a Qualification the first numeric character in the Unit code should be considered to indicate the AQF level

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