



**Australian Government**

# **Assessment Requirements for RIIMCU504D Implement the outburst management plan**

**Release: 2**

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## Modification History

| Release | Comment                                                                                                                                                                                                                                                                                                      |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | This unit replaces RIIMCU504A Implement the outburst management plan                                                                                                                                                                                                                                         |
| 2       | 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. |

## 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 legislation, documentation, policies and procedures
- implements the procedures and techniques for the safe, effective and efficient implementation of the outburst management plan including:
  - operating hand held monitoring equipment
  - accessing and interpreting data from monitoring systems and equipment
  - accessing, interpreting and applying design criteria for outburst management systems and devices
  - accessing and interpreting archival and historical outburst information related to the mine
  - interpreting and applying mathematical and scientific theorems/laws related to outburst
  - performing outburst planning mathematical calculations
  - interpreting computer spreadsheets and outburst modelling/simulations
- works with others to undertake and complete the implementation of the outburst management plan that meets all of the required outcomes including:
  - communicating clearly and concisely with others to receive and clarify work instructions, and convey work progress
  - identifying roles and responsibilities in accordance with outburst mining management plan
  - identifying the relevant information and scope of the work necessary to meet the required outcomes

- interpreting outburst training requirement
- demonstrates completion of implementing the outburst management plan that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
  - identifying viable options and selecting the gas drainage management plan elements that best meet the required outcomes
  - conducting enquiries/investigations and preparing reports
  - conducting audit and review processes

## Knowledge Evidence

The candidate must demonstrate knowledge of the following when implementing the outburst management plan through:

- legislative, organisation and site requirements and procedures for outburst management plan implementation for:
  - developing requirements and processes for outburst mining management plan
  - applying risk assessment and management processes
  - identifying and managing environmental issues, hazards and risks
- systems of mining including:
  - tunnels, drifts, stone drivage, shaft sinking, pillar extraction, partial extraction, punch mining and fault drivage
  - systems of work including: bord and pillar, place changing, longwall, highwall, auger mining, pillar extension, partial extension and punch mining
- factors affecting stability of mining structures including:
  - stress analysis, including mining induced stress and topography
  - sedimentology, including subsidence, water bearing strata, permeability of seam and strata, hydrology, physical property testing, caving characteristics, windblast, outburst, gas content and over and underlying strata
  - mining structure failure modes
- mining and general engineering principles relevant to the behaviour of excavations in rock including:
  - geology, lithology and strata gas characteristics
  - exploration techniques
  - ground support systems
  - audit methodologies
  - geotechnical engineering
  - excavation engineering
  - tunnel engineering and shaft sinking
  - rock mechanics
  - mine surveying
  - mining of coal deposits
  - thermodynamics

- impact of differing geological and geotechnical features and conditions on outburst including:
  - faults, dykes, intrusions and strata deformities
  - mine gases: the types and their characteristics, sources, physiological effects and methods of detection
  - the effects of coal seam characteristics on outburst
- systems and techniques including:
  - fixed monitoring systems types, uses/limitations, design criteria, specifications and design processes
  - portable monitoring equipment, types, uses/limitations
  - de-gassing: methods of control, including brattice, auxiliary, compressed air venturis, sails, hurdles and bleeders
  - the use of simulation techniques and applications relevant to outburst
  - computer-based systems for outburst analysis
  - outburst indicators and ratios
  - methods of control of outburst
  - processes and techniques for determining alarms and trigger points/levels
  - emergency response and evacuation/disaster planning processes and techniques

## 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

## Links

Companion Volume implementation guides are found in VETNet -

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