



Australian Government

RIIMCU504D Implement the outburst management plan

Release: 2

RIIMCU504D Implement the outburst management plan

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.

Application

This unit describes a participant's skills and knowledge required to implement the outburst management plan in Coal mining.

This unit is appropriate for those working in supervisory roles.

Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and industry sectors. Relevant information must be sourced prior to application of the unit.

Unit Sector

Coal mining (Underground)

Elements and Performance Criteria

1. Plan and prepare the implementation of the outburst mining management plan	1.1 Access, interpret and apply outburst management plan documentation, and ensure the work activity is compliant 1.2 Identify, clarify and communicate roles and responsibilities, as specified in the outburst mining management plan 1.3 Identify, forecast, obtain and allocate/schedule resources required for the implementation of the outburst mining management plan 1.4 Implement the program to satisfy identified outburst mining management training requirements 1.5 Encourage, receive, review and, where appropriate, implement suggestions and recommendations for changes to outburst mining management procedures
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2. Implement the outburst mining management plan	2.1 Implement outburst drilling and sample collection operational procedures 2.2 Implement core sample analysis and reporting procedures 2.3 Implement geological and geotechnical hazard identification and response procedures 2.4 Implement actions and procedures required in response to gas threshold levels 2.5 Implement permit to mine procedures in accordance with the outburst mining management plan 2.6 Implement procedures to minimise potential damage caused by outburst 2.7 Implement outburst information recording and reporting procedures 2.8 Implement emergency and evacuation plans and procedures 2.9 Implement procedures for the recovery of services following outburst
3. Audit and review the effectiveness of the outburst mining management systems	3.1 Audit outburst drilling and analytical operational procedures for compliance with statutory and outburst mining management plan requirements 3.2 Audit monitoring systems operations for compliance with the outburst mining management plan 3.3 Audit geological and geotechnical identification, monitoring and response procedures for compliance with the outburst mining management plan 3.4 Audit recording systems for compliance with the outburst mining management plan 3.5 Audit procedures developed for the recovery of services following outburst for compliance with current statutory and outburst mining management plan requirements 3.6 Trial and audit emergency and evacuation plans and procedures for compliance with the management plan 3.7 Audit outburst training program for currency, relevance and compliance with the requirements of the outburst management plan 3.8 Respond promptly to instances of non-compliance and other discrepancies/deficiencies revealed by audit and modify the management plan as necessary 3.9 Identify evaluate and incorporate future outburst management requirements into the outburst mining management planning procedures as stipulated by the outburst mining management plan

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

RIIMCU504A Implement the outburst management plan

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 RIIMCU504D Implement the outburst management plan

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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 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

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