



Australian Government

RIIMCU405D Apply and monitor the outburst management plan

Release: 2

RIIMCU405D Apply and monitor the outburst management plan

Modification History

Release	Comment
1	This unit replaces RIIMCU405A Apply and monitor 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 apply and monitor the outburst management plan in Coal Mining (Underground).

This unit is appropriate for those working in supervisory or technical specialist 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 for the application and monitoring of the outburst management plan	1.1 Access, interpret and apply the outburst management plan documentation and ensure the work activity is compliant 1.2 Identify, clarify, and communicate roles and responsibilities 1.3 Identify, obtain and allocate resources required for the application of the outburst mining management plan 1.4 Identify individual training needs and prepare training plans 1.5 Encourage, receive, review and, where appropriate, implement suggestions and recommendations for changes to outburst mining management procedures
2. Apply and monitor the outburst	2.1 Interpret and apply procedures covering the relocation, operation and maintenance of the drilling rig

mining activities	2.2 Interpret, apply and monitor core sampling techniques, procedures and processes 2.3 Interpret and apply environmental monitoring, recording and reporting procedures 2.4 Interpret, apply and monitor ventilation control measures which impact on outburst mining 2.5 Interpret, apply and monitor actions and procedures in response to gas threshold levels 2.6 Confirm, apply, communicate and post permit to mine procedures 2.7 Interpret, apply and monitor procedures covering outburst mining personnel safety measures and techniques 2.8 Inspect equipment protection/defensive requirements and measures to ensure compliance with standards 2.9 Contribute to systems audit and review requirements 2.10 Implement training plans
3. Apply outburst mining management system maintenance procedures	3.1 Carry out inspections, repair and maintenance activities 3.2 Record, report and review maintenance activities

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

RIIMCU405A Apply and monitor 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 RIIMCU405D Apply and monitor 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 requirements, procedures and techniques for the safe, effective and efficient completion of the application and monitoring of the outburst management plan including:
 - accessing and interpreting design criteria for outburst management systems and devices
 - operating hand held monitoring equipment
 - accessing and interpreting data from monitoring systems and equipment
 - interpreting computer spreadsheets and outburst modelling / simulations
 - accessing and interpreting archival and historical outburst information related to the mine
 - interpreting outburst training requirement
- works effectively with others to plan, prepare and conduct the application and monitoring of the outburst management plan including:
 - organising work activities to meet all task requirements
 - communicating clearly and concisely with others to receive and clarify work instructions
 - complying with written and verbal reporting requirements and procedures
 - resolving coordination requirements throughout work activities

- demonstrates completion of applying and monitoring the outburst management plan that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - applying outburst mining management plans procedures for maintaining a safe environment including:
 - hazard identification and quantification
 - risk assessment
 - authority and responsibility
 - controls established to manage identified risks
 - reporting and communication
 - document control
 - audit and review
 - applying mine atmosphere monitoring methods such as:
 - continuous monitoring
 - portable (hand held) monitoring
 - collection of bag samples
 - gas chromatography
 - ventilation measurements from all areas of the mine, including sealed area and waste workings

Knowledge Evidence

The candidate must demonstrate knowledge of applying and monitoring the outburst management plan through:

- accessing, interpreting and applying legislative, organization and site requirements and procedures for:
 - developing the requirements and processes of the outburst management plan
 - applying risk assessment and management processes
 - identifying and managing environmental issues, hazards and risks
 - conducting audit and review processes and techniques
- applying legislative and statutory requirements for planning and design of mining structures, including: mine plans, ventilation, gas monitoring, strata support and safety management plans
- identifying the systems of mining including:
 - tunnels, drifts, stone drivage, shaft sinking, pillar extraction, partial extraction, punch mining and fault drivage
- identifying systems of work: including bord and pillar, place changing, longwall, highwall, auger mining, pillar extension, partial extension and punch mining
- identifying 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
- identifying the mining and general engineering principles relevant to the behaviour of excavations in rock including:
 - geology, hydrogeology, lithology and strata gas characteristics
 - ground support systems
 - audit methodologies
 - geotechnical engineering
 - excavation engineering
 - tunnel engineering and shaft sinking
 - rock mechanics
 - mine surveying
 - mining of coal deposits
 - thermodynamics
 - exploration techniques
- identifying the impact of differing geological 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
 - de-gassing: methods of control, including brattice, auxiliary fans, compressed air venturis, sails, hurdles and bleeders
 - the effects of coal seam characteristics on outburst
- identifying and using monitoring systems and techniques including:
 - fixed monitoring systems: types, uses/limitations, design criteria, specifications and design processes
 - portable monitoring equipment: types, uses/limitations
 - 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
 - identifying and applying 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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