



Australian Government

RIIMCU406D Apply and monitor the inrush management plan

Release: 2

RIIMCU406D Apply and monitor the inrush management plan

Modification History

Release	Comment
1	This unit replaces RIIMCU406A Apply and monitor the inrush 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 inrush management plan in Coal Mining.

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 inrush management plan	1.1 Access, interpret and apply inrush management plan documentation, and ensure the work activity is compliant 1.2 Identify, clarify and communicate roles and responsibilities 1.3 Communicate and explain work group individual responsibilities and tasks in an effective and timely manner 1.4 Identify, obtain and allocate resources required for the application of the inrush management plan 1.5 Identify individual training needs and prepare training plans
2. Apply and monitor inrush activities	2.1 Identify, interpret and apply inrush monitoring, recording and reporting procedures 2.2 Interpret, apply and monitor control measures which impact

	on inrush control zones and methods 2.3 Interpret, apply and monitor actions and procedures in response to potential inrush 2.4 Confirm, apply, communicate and post permit-to-mine procedures 2.5 Apply and monitor procedures covering inrush personnel safety measures and techniques 2.6 Inspect equipment protection/defensive requirements and measures 2.7 Participate in systems audit and review requirements 2.8 Implement training plans
3. Apply inrush prevention 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

RIIMCU406A Apply and monitor the inrush 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 RIIMCU406D Apply and monitor the inrush 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 inrush management plan application and monitoring including:
 - reading, interpreting, communicating and applying technical information
 - operating hand held monitoring equipment
 - accessing and interpreting data from monitoring systems and equipment
 - accessing and interpreting design criteria for inrush prevention/management systems and devices
 - interpreting computer spreadsheets and inrush modeling/ simulations
 - accessing and interpreting archival and historical inrush information related to the mine
 - conducting enquiries/investigations and preparing audit reports
 - identifying training needs, and preparing and implementing training plans
- works effectively with others to plan, prepare and conduct the application and monitoring of the inrush management plan that meets all of the required outcomes 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 inrush management plan that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - applying inrush controls such as:
 - controls that eliminate the hazard by removing the damaging energy, e.g. drainage including pumping and ventilation
 - controls that reduce the magnitude of the hazard (less water, less pressure etc), e.g. drainage, including pumping and ventilation
 - controls that reduce the likelihood of the event through engineering or hard barriers, e.g. seals
 - controls that reduce the likelihood of the event through procedural or soft barriers, e.g. establishment of inrush control zones, protective drilling
 - controls that reduce the likelihood of the event through warnings, e.g. action levels associated with increased water make
 - applying monitoring systems such as:
 - continuous and/or periodic monitoring
 - portable (hand held) monitoring
 - core samples
 - visual observation
 - geological mapping
 - borehole pressure readings
 - identifying and controlling inrush hazards such as:
 - continuous and/or periodic monitoring
 - portable (hand held) monitoring
 - core samples
 - visual observation
 - geological mapping
 - borehole pressure readings

Knowledge Evidence

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

- accessing, interpreting and applying legislative, organization and site requirements and procedures for:
 - planning and design of mines and mining structures including: mine plans, ventilation, gas monitoring, strata support and safety management plans
 - developing the requirements and processes of the inrush management plan
 - applying risk assessment and management processes
 - identifying and managing environmental issues, hazards and risks
 - conducting audit and review processes and techniques
- 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, hydrogeology, physical property testing, caving characteristics, over and underlying strata
 - mining structure failure modes
- identifying mining and general engineering principles relevant to the behaviour of excavations in rock including:
 - ground support systems
 - audit methodologies
 - geotechnical engineering
 - excavation engineering
 - tunnel engineering and shaft sinking
 - rock mechanics
 - mine surveying
 - mining of coal deposits
 - thermodynamics
- identifying the impact of differing geological features and conditions of potential inrush including:
 - the effects of coal seam characteristics on inrushes
 - faults, dykes, intrusions and strata deformities
- 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
 - processes and techniques for determining alarms and trigger points/levels
 - methods of control of inrush
 - inrush control zones
 - 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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