Australian Government

Assessment Requirements for RIIMCU406D Apply and monitor the inrush management plan

Release: 1

INDUSTRY SKILLS COUNCILS
Creating Australia's Future

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Modification History

Not applicable.

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 consistent timely completion of inrush management plan application and monitoring that safely, effectively and efficiently meet all of the required outcomes on a minimum of 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
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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
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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 using Resources and Infrastructure Industry sector specific policies, procedures, processes and operational manuals; and,
- an assessor must demonstrate the skills and knowledge of this unit through twelve (12) month work experience in an Industry relevant to the skills being assessed within the last three (3) years; and,
- where the assessor does not have current experience a co-assessment or partnership arrangement needs to exist between the qualified assessor and an Industry technical expert/ subject matter expert. The Industry technical expert/subject matter expert must demonstrate competency in the unit being assessed, and be currently working in the sector with a minimum of twelve (12) months' work experience within the last three (3) years.
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Links

SkillsDMC RII Companion Volumes - http://www.skillsdmc.com.au/