



Australian Government

RIIMCU505E Implement the intrush management plan

Release: 1

RIIMCU505E Implement the inrush management plan

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 5.0.

Application

This unit describes the skills and knowledge required to implement inrush management plans in coal mining, including implementing and reviewing inrush hazard controls and protection measures for personnel, services and infrastructure.

This unit is appropriate for those working in supervisory roles. They generally monitor a broad range of operational activities in their area of responsibility and are responsible for monitoring a safe work environment.

Licensing, legislative and certification requirements that apply to this unit can vary between states, territories and industry sectors. Users must check requirements with relevant body before applying the unit.

Unit Sector

Coal mining (underground)

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare to implement inrush management plan	1.1 Access, interpret and implement inrush management plan implementation documentation and confirm work activity is compliant 1.2 Identify and communicate roles and responsibilities to all involved personnel according to inrush management system 1.3 Identify, forecast, schedule and record resources required to implement inrush management system 1.4 Identify training needs for personnel involved according to inrush management plan and within scope of own role
2. Implement inrush	2.1 Implement inrush hazard control procedures according to inrush

ELEMENT	PERFORMANCE CRITERIA
management plan	management system 2.2 Implement personnel safety measures and techniques according to inrush management system 2.3 Implement services and infrastructure protection measures according to inrush management system 2.4 Implement mine monitoring requirements relating to inrush according to inrush management system 2.5 Implement inrush information recording and reporting procedures according to site requirements 2.6 Implement actions and procedures required in response to inrush indicators according to inrush management system 2.7 Implement permit-to-mine procedures according to inrush management system 2.8 Implement emergency response and evacuation plans and procedures according to inrush management system and site requirements
3. Implement the systems for audit and review of inrush management systems	3.1 Audit inrush management system according to legislative and site requirements 3.2 Audit recording and reporting systems according to legislative and site requirements 3.3 Audit inrush management operational procedures according to legislative and site requirements 3.4 Audit inrush training plan according to inrush management system and site requirements 3.5 Implement procedures for response to instances of non-compliance or other discrepancies/deficiencies revealed by audit according to site requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Oral communication	Conveys information and requirements clearly and listens actively
Reading	Identifies and interprets relevant information from workplace procedures, documentation and legislation
Writing	Prepares specific information that complies with requirements, using sector-specific vocabulary, grammatical structures and conventions

Mapping Information

Supersedes and is equivalent to RIIMCU505D Implement the inrush management plan.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for RIIMCU505E Implement the inrush management plan

Modification History

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- implement inrush management plans on at least two occasions, including:
 - identifying viable options and selecting the inrush management plan elements that best meet required outcomes
 - conducting audits/enquiries/investigations and preparing reports.

During the above, the candidate must:

- locate and apply relevant legislation, documentation, policies and procedures and confirm work activity is compliant
- apply procedures and techniques for implementing inrush management plans, including:
 - operating hand held monitoring equipment
 - accessing and interpreting data from monitoring systems and equipment
 - accessing and interpreting design criteria for inrush prevention and management systems and devices
 - performing inrush planning mathematical calculations
 - interpreting and applying mathematical and scientific theorems/laws related to inrush
 - interpreting computer spreadsheets and inrush modelling/simulations
 - accessing and interpreting archival and historical inrush information related to the mine
- work with others to implement the inrush management plan in a manner that meets required outcomes, including:
 - communicating clearly and concisely with others to receive and clarify work instructions, and convey work progress
 - identifying roles and responsibilities according to the inrush management plan
 - identifying the relevant information and scope of the work necessary to meet required outcomes
 - interpreting inrush training requirements.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- key legislation required to implement inrush management plans
- key procedures and documentation required to implement inrush management plans, including:
 - inrush management plan
 - mine site historical information
- systems of mining and their impact on inrush management, including:
 - tunnels
 - drifts
 - stone drivage
 - shaft sinking
 - pillar extraction
 - partial extraction
 - punch mining
 - fault drivage
- 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
 - outburst
 - over and underlying strata
 - mining structure failure modes
- systems of work and their impact on inrush management, including:
 - bord and pillar
 - place changing
 - longwall
 - highwall
 - auger mining
 - pillar extraction
 - partial extraction

- punch mining
- mining and general engineering principles relating to the behaviour of excavations in rock and coal, including:
 - audit methodologies
 - mine mapping of inrush zones, related geology and features
- differing geological features and conditions on inrush zones, including:
 - effects of coal seam characteristics on inrush
 - faults
 - dykes
 - intrusions
 - strata deformities
- monitoring systems and techniques, including:
 - types of fixed monitoring systems, including:
 - uses and limitations
 - design criteria
 - specifications
 - design processes
 - types, uses and limitations of portable monitoring equipment
 - uses of simulation techniques and computer-based systems for real-time monitoring and their applications to inrush management
 - types, uses and limitations of inrush control methods
 - types, uses and limitations of inrush control zones
 - processes and techniques for determining alarms and trigger points and levels
- techniques for identifying individual training needs
- principles, processes and techniques for emergency response, evacuation and disaster planning
- techniques for leading and coordinating work activities with others.

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - inrush management plan
- be conducted in a safe environment; and,
- be assessed in the context of this sector's work environment; and,
- be assessed in compliance with relevant legislation/regulation and using policies, procedures and processes directly related to the industry sector for which it is being assessed; and,
- confirm consistent performance can be applied in a range of relevant workplace circumstances.

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment* provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

Assessor requirements

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory regulatory standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/Australian Quality Training Framework mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements. This includes:

- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment
- formal relevant qualifications in training and assessment
- having knowledge of and/or experience using the latest techniques and processes
- possessing the required level of RII training product knowledge
- having an understanding and knowledge of legislation and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence outlined in this unit of competency, and
- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must have current industry skills directly relevant to the training and assessment being provided. This means the industry subject matter expert must demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	1	1 year
	2	2 years
Drilling, Coal Mining, Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure	3-6	3 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	

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
		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.

*Guidance on simulated environments has been stipulated in the Companion Volume Implementation Guide located on VETNet.

**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 a minimum number of site assessments as determined by the relevant industry sector, across various locations.

*** While a unit of competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

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