



Australian Government

RIIUND401D Apply and monitor the ventilation management plan

Release: 2

RIIUND401D Apply and monitor the ventilation management plan

Modification History

Release	Comment
1	This unit replaces RIIUND401B Apply and monitor the ventilation 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 ventilation management plan in Coal and Metalliferous 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

Metalliferous mining

Elements and Performance Criteria

1. Plan and prepare to apply and monitor the ventilation management plan	1.1 Access, interpret and apply ventilation management documentation and ensure the work activity is compliant 1.2 Access and interpret the ventilation management plan 1.3 Identify, clarify and communicate work group and individual roles and responsibilities 1.4 Identify, obtain and allocate required resources 1.5 Identify individual training needs and provide access to the established ventilation management training program and systems
2. Apply the	2.1 Identify and interpret the impact of changes to the ventilation

ventilation management plan	system on the mine atmosphere 2.2 Apply installation and operation procedures for monitoring systems and equipment 2.3 Install, monitor and maintain ventilation control device in the ventilation system 2.4 Apply procedures for monitoring, recording and reporting on mine ventilation, including defects to ventilation control devices 2.5 Adjust mine control devices 2.6 Collect and analyse ventilation data 2.7 Record and report monitoring system data 2.8 Apply water management procedures 2.9 Respond to alarms raised 2.10 Apply ventilation emergency and evacuation procedures 2.11 Contribute to systems audit and review requirements
3. Apply ventilation system maintenance procedures	3.1 Schedule and carry out inspections, repair and maintenance activities 3.2 Record, report and review maintenance requirements and 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

RIIUND401B Apply and monitor the ventilation 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 RIIUND401D Apply and monitor the ventilation 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 application and monitoring of the ventilation management plan including:
 - interpreting and applying a limited range of mathematical and scientific theorems/laws related to ventilation
 - collecting, collating and interpreting ventilation data
 - interpreting and applying ventilation device construction/installation specifications
 - conducting enquiries/investigations and preparing reports
 - accessing, interpreting and applying data from monitoring systems and equipment
 - applying risk management processes and techniques
 - initiating ventilation training
- demonstrates completion of application and monitoring of the ventilation management plan that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - operating hand-held monitoring equipment
 - installing, monitoring and maintaining ventilation control device
 - monitoring, recording and reporting on mine ventilation, including defects to ventilation control devices
 - adjusting mine control devices
 - applying water management procedures

- scheduling and carrying out inspections, repair and maintenance activities
- reviewing and reporting on maintenance requirements and activities

Knowledge Evidence

The candidate must demonstrate knowledge in applying and monitoring the ventilation management plan through:

- methods of mine ventilation and their applications/limitations
- methods of panel ventilation and their applications/limitations
- impact of mining techniques and mine and panel design on ventilation
- mine roadways and shafts and their impact on mine ventilation
- impact of geological characteristics and seam gradients on mine ventilation design
- impacts on the ventilation system of gas drainage, spontaneous combustion, outburst and windblast
- mine gases; the types and their characteristics, sources, physiological effects and methods of detection
- dust, fumes and other particulate matter; the types, sources, physical and physiological effect and control/mitigation methods
- mine fires; the types, sources of ignition, possible effects on the ventilation circuit and prevention/control/mitigation methods
- mine explosions; the types, ignition sources, possible effects on the ventilation circuits and prevention/control/mitigation methods
- pressure changes; causes, the impacts on the ventilation system, and responses
- heat/humidity; the sources and factors which may impact on mine ventilation and personnel
- fixed ventilation monitoring systems types, uses and limitations
- portable monitoring equipment, types, characteristics, uses and limitations
- ventilation surveys including the types, frequency and method for conduct including pressure/quantity/temperature and gas
- dust surveys for irrespirable quantity

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 is best assessed in the context of this sector's work environment;
- where personal safety or environmental damage are limiting factors, assessment may occur in a simulated 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; 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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