



**Australian Government**

# **RIIUND601E Establish and maintain ventilation management systems**

**Release: 1**

# RIIUND601E Establish and maintain ventilation management systems

## 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 establish and maintain ventilation management systems in coal and metalliferous mining, including design, development, audit and review processes and procedures.

It applies to those working in management or technical specialist roles. They generally perform complex, non-routine tasks involving strategic and planning activities and are responsible for establishing and maintaining operational systems and plans.

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

Metalliferous mining

## 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. Identify, analyse and evaluate hazards associated with mine atmosphere	1.1 Access, interpret and apply ventilation management documentation 1.2 Identify and evaluate the sources and hazards of airborne contaminants 1.3 Identify, analyse and evaluate the likely impact of gas drainage 1.4 Identify, analyse and evaluate the hazards of spontaneous combustion, fire and explosion 1.5 Identify, analyse and evaluate the impact of ventilation pressure differentials

ELEMENT	PERFORMANCE CRITERIA
	1.6 Identify, analyse and evaluate the effect of changes in air temperature, pressure and humidity
2. Identify, analyse and evaluate events which impact on ventilation	2.1 Identify and evaluate the impact of disruption to the ventilation system 2.2 Identify and evaluate the causes and effects of recirculation 2.3 Identify, analyse and evaluate the potential for and likely impact of windblast 2.4 Identify, analyse and evaluate the potential for and likely impact of outburst 2.5 Identify, analyse and evaluate the impacts of holing into previous workings 2.6 Identify, analyse and evaluate the impact of water 2.7 Identify, analyse and evaluate the potential for, and likely impact of spontaneous combustion, fires and explosion
3. Identify, analyse and evaluate mine ventilation control options and measures	3.1 Identify, analyse and evaluate the types, applications and limitations of the ventilation control devices 3.2 Identify and evaluate the impact of mine design on the ventilation system 3.3 Identify and evaluate the methods, purposes and limitations of mine monitoring systems and processes
4. Design and develop ventilation management system	4.1 Access, interpret and clarify legislative and site requirements relating to mine ventilation management 4.2 Incorporate principles and requirements of mine ventilation into the design and development of ventilation system 4.3 Identify design criteria and specifications for ventilation networks and incorporate into ventilation system 4.4 Identify, evaluate and incorporate requirements for mine fans into ventilation system 4.5 Evaluate ventilation control device options against requirements and incorporate into ventilation system 4.6 Incorporate ventilation and environmental monitoring systems into ventilation system
5. Establish ventilation management system	5.1 Establish and incorporate mine ventilation objectives, systems descriptions and responsibilities into ventilation management plan 5.2 Establish procedures for installation, operation and maintenance of ventilation monitoring systems according to site requirements 5.3 Prepare and establish procedures for installation, operation and changes to ventilation control devices according to site requirements 5.4 Determine trigger levels for each hazard and incorporate into ventilation management plan according to site requirements 5.5 Establish ventilation system maintenance program and procedures

ELEMENT	PERFORMANCE CRITERIA
	<p>and incorporate into ventilation management plan according to site requirements</p> <p>5.6 Incorporate audit, review and update procedures for the ventilation systems into ventilation management plan according to site requirements</p> <p>5.7 Identify training needs and confirm training plan is established according to site requirements</p> <p>5.8 Establish procedure for planning, controlling, implementing, recording and communicating changes to mine ventilation systems and components and incorporate according to site requirements</p>
6. Plan and prepare to implement ventilation management system	<p>6.1 Identify and interpret legislative and site implementation requirements relating to mine ventilation management</p> <p>6.2 Identify, clarify and communicate roles and responsibilities according to ventilation management plan</p> <p>6.3 Identify, forecast, obtain and allocate/schedule required resources according to ventilation management plan</p> <p>6.4 Provide, review and implement recommendations for changes to ventilation management implementation procedures as required</p>
7. Audit and review ventilation management system	<p>7.1 Audit ventilation standards according to site requirements</p> <p>7.2 Audit ventilation control devices according to site requirements</p> <p>7.3 Audit monitoring systems according to site requirements</p> <p>7.4 Audit ventilation recording systems according to site requirements</p> <p>7.5 Audit ventilation system maintenance program and procedures according to site requirements</p> <p>7.6 Audit the ventilation management training program according to ventilation management plan requirements</p> <p>7.7 Audit and review the planning process of future ventilation requirements according to site requirements</p> <p>7.8 Identify and correct non-compliance or other discrepancies/deficiencies revealed by audit</p>

## 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
Numeracy	<ul style="list-style-type: none"> <li>Calculates resourcing requirements, performs mathematical calculations and applies mathematical and scientific laws and</li> </ul>

<b>SKILL</b>	<b>DESCRIPTION</b>
	theorem
Oral communication	<ul style="list-style-type: none"><li>• Conveys information and requirements clearly and listens actively</li></ul>
Reading	<ul style="list-style-type: none"><li>• Identifies and interprets relevant information from workplace procedures, documentation and legislation</li></ul>
Writing	<ul style="list-style-type: none"><li>• Prepares specific information that complies with a range of requirements, using sector-specific vocabulary, grammatical structures and conventions</li></ul>

## Unit Mapping Information

Supersedes and is equivalent to RIIUND601D Establish and maintain the ventilation management system.

## Links

Companion Volume Implementation Guide is found on VETNet -

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