



Australian Government

RIIERR305D Control underground fires

Release: 4

RIIERR305D Control underground fires

Modification History

Release	Comment
1	This unit replaces RIIERR305A Control underground fires.
2	Add Coal Mining Sector to Unit Sector field.
3	Assessment Conditions amended.
4	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 control underground fires in Coal Mining and Metalliferous mining.

This unit is appropriate for those working in operational 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.

Pre-requisite Unit

Competency Field

Unit Sector

- Metalliferous mining
- Coal Mining

Elements and Performance Criteria

1. Plan and prepare for the control of underground fires	1.1 Access, interpret and apply control of underground fires documentation and ensure the work activity is compliant 1.2 Obtain, read, interpret, clarify and confirm work requirements
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	1.3 Identify and address potential risks, hazards and environmental issues and implement control measures 1.4 Select and wear personal protective equipment appropriate for work activities 1.5 Interpret data and reports to determine cause and location of fire and record on the mine plan 1.6 Assess type, size and spread of fire to determine risk 1.7 Identify and assess potential ignition sources for further fires to determine control measures and record on the mine plan 1.8 Assess secondary risks and recommend actions for control 1.9 Assess fire-fighting personnel's exposure to fire and identify methods and equipment to control risks 1.10 Determine personnel numbers, equipment and personal protective equipment requirements 1.11 Determine fire-fighting strategy and procedures 1.12 Assess fire control equipment and fire-fighting media capability and quantity, and decide on the appropriate course of action 1.13 Communicate and assign activities to personnel 1.14 Identify and apply ventilation monitoring and control measures 1.15 Assess need for evacuation of personnel and take appropriate action 1.16 Prepare action plan
2. Control the fire	2.1 Isolate and barricade fire area/zone to prevent entry of non-involved personnel 2.2 Access, assemble and test equipment determined in the action plan 2.3 Apply fire-fighting techniques and methods determined in the action plan 2.4 Maintain communication with other fire-fighters and emergency control personnel on condition of fire and status of fire control operations 2.5 Continue to monitor fire and put controls in place to ensure the safety of personnel in the vicinity of the fire 2.6 Continue to reassess and apply ventilation control measures 2.7 Continue to monitor fire and fire-fighting activities to determine ability to continue to handle the situation and take action 2.8 Minimise damage and disruption to mine working during the

	fire control operation 2.9 Assess fire intensity and magnitude, withdraw from fire zone and relocate fire control equipment to a safe place if fire is uncontrollable 2.10 Bring fire safely under control and extinguish 2.11 Monitor fire site and take actions to prevent possible re-ignition 2.12 Report to emergency control personnel 2.13 Monitor for structural and ground support integrity
3. Restore and refurbish fire equipment to operational condition	3.1 Inspect equipment for any damage 3.2 Repair, replenish or replace defective/depleted equipment 3.3 Tag, record and quarantine unusable equipment 3.4 Return fire control system and equipment to operational readiness 3.5 Process written records and reports

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.

Range of Conditions

Unit Mapping Information

RIIERR305A Control underground fires

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 RIIERR305D Control underground fires

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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 that the candidate:

- locates and applies relevant documentation, policies and procedures
- works effectively with others to undertake and complete the control of underground fires that meets all the required outcomes, including:
 - complying with written and verbal reporting requirements and procedures
 - communicating clearly and concisely with others to receive and clarify work instructions
 - communicating clearly and concisely with others to coordinate work activities
 - operating emergency communications systems
- demonstrates completion of controlling underground fires that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - locating fire fighting equipment on mine site
 - navigating in an underground mine
 - reading maps and interpreting symbols
 - locating plant and fire suppression systems on a mine layout plan
 - locating and operating fixed and portable fire suppression equipment
 - selecting and using appropriate extinguishing media
 - using and troubleshooting water supply systems and identifying alternative systems

Knowledge Evidence

The candidate must demonstrate knowledge of the following in relation to controlling underground fires:

- the types and causes of hazards and incidents in underground mines
- accessing and interpreting geological and survey data
- the effects of hot and humid atmospheres
- the location and distribution of caches
- the trigger points to initiate emergency response to alarms
- the location and purpose of a place of safety
- identifying and using guidance systems and markers
- site emergency plans
- location of escape routes and alternative escape routes
- the functions of mine ventilation systems
- the types and effects of mine gases
- the rescue team structure, roles and responsibilities
- operation and limitations of breathing apparatus
- standby/emergency procedures for incident control
- types of fire and associated risks and control measures
- ventilation management techniques
- the properties of extinguishing media and the selection of those appropriate to the situation
- fire-ground management procedures
- use of signals
- refurbishing fire-fighting equipment and systems

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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