



Australian Government

RIIBLA302D Conduct shotfiring operations in underground coal mines

Release: 2

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Modification History

Release	Comment
1	This unit replaces RIIBLA302A Conduct shotfiring operations in underground coal mines
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 conduct shotfiring operations in underground coal mines in Coal mining.

This unit is appropriate for those working in operational roles.

No licensing, legislation or certification requirements apply to this unit at the time of publication.

Unit Sector

Coal mining (Underground)

Elements and Performance Criteria

1. Plan and prepare to conduct underground shotfiring operations	1.1 Access, interpret and apply shotfiring documentation and ensure the work activity is compliant 1.2 Obtain, confirm and apply Blasting Management Plan and blast plan requirements and work instructions before proceeding 1.3 Identify, manage and report all potential hazards, risks and environmental issues 1.4 Select and wear personal protective equipment appropriate to the work activities 1.5 Obtain and interpret emergency procedures and be prepared for fire/accident/emergency 1.6 Coordinate vehicle, equipment and personnel support
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	requirements 1.7 Access, interpret and apply environmental, geological and survey data required to complete the work 1.8 Carry out calculations to enable pattern design, loading and tying in of shots 1.9 Complete pattern design, including loading, hole spacing and depth, stemming and wiring requirements 1.10 Carry out briefings 1.11 Identify and confirm the explosives and accessories required
2. Supervise the store and transport explosives and accessories	2.1 Order and receive explosives and accessories 2.2 Ensure explosives and accessories are safely and correctly stored 2.3 Ensure inventory control systems are accurately and correctly maintained 2.4 Ensure explosives and accessories are transported to blast area and segregate correctly 2.5 Ensure that explosives are not left unattended 2.6 Identify and dispose of any deteriorated or out of date explosives and accessories correctly
3. Prepare for charging	3.1 Identify, manage and report potential hazards and risks 3.2 Secure blast area in accordance with procedures and blast plan 3.3 Establish and communicate access routes to shot area for authorised persons and vehicle 3.4 Identify hole locations and any non-conforming conditions in preparation for charging 3.5 Set up charging equipment 3.6 Prepare holes for charging
4. Charge holes	4.1 Supervise blast personnel during loading operations 4.2 Prime and charge holes 4.3 Ensure blast holes are charged in accordance with loading plan and identify non-conforming conditions 4.4 Apply explosion inhibitor 4.5 Ensure blast holes are stemmed 4.6 Clear the area of equipment, personnel and isolate/barricade the blast area, including warning signs 4.7 Test equipment and accessories

	4.8	Maintain written records
	4.9	Conduct blast monitoring
5. Conduct the blast	5.1	Carry out pre blasting procedures and establish exclusion zone
	5.2	Carry out tying in
	5.3	Supervise all personnel within the blast area during tie-in and initiation
	5.4	Initiate the blast
	5.5	Carry out and record activities in accordance with the blast plan
6. Complete post blast activities	6.1	Carry out post blast inspection
	6.2	Secure firing circuits and initiation device
	6.3	Report blasting has been completed to relevant personnel
	6.4	Carry out post-blast coordination and declare area safe for re-entry
	6.5	Inspect site and deal with non-conformities including misfires
	6.6	Identify and dispose of surplus, damaged and deteriorated explosives and detonators
	6.7	Ensure that emergency services are advised of the disposal activities in accordance with site procedures
	6.8	Complete written reports
7. Carry out equipment maintenance	7.1	Carry out inspection and required maintenance during and after shotfiring operations
	7.2	Maintain maintenance records

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

RIIBLA302A Conducting shotfiring operations in underground coal mines

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 RIIBLA302D Conduct shotfiring operations in underground coal mines

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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 documentation, policies and procedures
- works effectively with others to undertake and complete shotfiring operations in underground coal mines that meet all of 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 resolve coordination requirements prior to commencing and during work activities
- demonstrates completion of conducting shotfiring operations in underground coal mines that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - planning and preparing for shotfiring
 - supervising the storage and transport of explosives and accessories
 - preparing for charging and charge holes
 - conducting the blast
 - completing post-blast activities
 - carrying out equipment maintenance

Knowledge Evidence

The candidate must demonstrate knowledge in conducting shotfiring operations in underground coal mines:

- Australian standards and code of practice
- explosives and safety and health legislation
- site and equipment safety procedures
- personal safety procedures
- site emergency procedures
- environmental requirements and procedures, including vibration, noise, dust and chemicals
- site geological and survey information
- types, physical and technical characteristics, uses and limitations of explosives and protection measures associated with their use
- initiation systems
- delayed blasts
- cause and management of misfires
- non-conforming conditions
- non-conformities
- planning processes
- equipment characteristics, technical capabilities and limitations
- analysis of site geological and survey data
- selection of appropriate explosives to meet site/ground conditions
- monitoring and review processes and techniques

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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