



Australian Government

Department of Education, Employment and Workplace Relations

RIIBLA204A Store, handle and transport explosives in underground coal mines

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers the storage, handling and transport of explosives in underground coal mining. It includes planning and preparing for storage; handling and transport of explosives; accessing and managing explosives storage; preparing to transport explosives: and transporting explosives.

Application of the Unit

This unit is appropriate for those working in operational roles, at worksites within:

- Coal mining

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for storage, handling and transport of explosives	1.1. Access, interpret and apply <i>compliance documentation</i> relevant to the storage, handling and transport of explosives in underground coal mining 1.2. Obtain, confirm and apply <i>work instructions</i> for the allocated task 1.3. Identify, manage and report all potential <i>hazards</i> 1.4. Resolve <i>coordination requirements</i> with others at the site prior to commencing and during work activities 1.5. Identify the <i>explosives and accessories</i> used for different applications 1.6. Classify explosives according to statutory criteria 1.7. Apply safe handling procedures and precautions
2. Access and manage explosives storage	2.1. Gain access to <i>magazine</i> as <i>authorised person</i> 2.2. Maintain compliance requirements for signage, construction, safety and security of magazines, storage limits 2.3. Receive and despatch explosives and record transfers indicating type and quantity together with identity of recipient 2.4. Segregate explosives and accessories according to type in magazines and to prevent deterioration, spoilage and spillage 2.5. Ensure rotation of explosives in magazine 2.6. Restrict access to store to authorised persons 2.7. Maintain stock records and report discrepancies 2.8. Conduct housekeeping of magazine 2.9. Complete all required documentation and reports clearly, concisely and on time 2.10. Pass on information regarding explosives stock and storage
3. Prepare to transport explosives	3.1. Receive orders and confirm authority of recipient to possess explosives 3.2. Select sufficient quantities of explosives and accessories according to shot plan, for safe transport

	<ul style="list-style-type: none">3.3. Conduct and record results of pre-start check on explosive transport vehicle and confirm presence and operability of relevant safety equipment3.4. Carry out vehicle start-up procedures3.5. Display and ensure legibility of relevant signs on vehicles3.6. Load vehicle in accordance with separation and segregation requirements3.7. Adhere to emergency procedures in case of fire and/or accident
4. Transport explosives	<ul style="list-style-type: none">4.1. Communicate with other equipment operators and other persons using appropriate communication methods to advise of explosive movements4.2. Transport explosives and accessories separately in approved and secured containers4.3. Transport explosives and accessories to designated location using <i>designated route</i>4.4. Apply secure and <i>safe driving conventions</i>4.5. Check that delivery site is suited to explosives storage and that consignment is not left unattended4.6. Implement emergency procedures to ensure safety of personnel and site4.7. Return surplus explosives to magazine4.8. Complete required documentation and reports promptly

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to store, handle and transport explosives in underground coal mining:

- apply legislative, organisation and site requirements and procedures for the storage, handling and transport of explosives in underground coal mining
- apply procedures for preparing explosives and equipment for transport
- apply control requirements and procedures explosives magazine
- apply explosives classification and segregation requirements
- apply hazard identification processes
- apply hazardous goods handling techniques
- apply driving regulations and site procedures for explosives transport
- apply towing requirements and procedures
- apply vehicle refuelling procedures
- implement emergency procedures
- apply mathematical calculations using addition, subtraction, multiplication and division
- apply record keeping

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following, as required to store, handle and transport explosives in underground coal mining:

- shot plan
- site security plan
- handling and transporting hazardous goods requirements
- OHS requirements and procedures
- equipment safety requirements
- emergency procedures
- site operational systems, procedures and checks
- manufacturer's instructions
- types, characteristics and applications of explosives and accessories
- explosives storage regulations and procedures
- explosive transportation procedures and regulations
- explosive magazine maintenance requirements
- waste management requirements and procedures

- equipment operational procedures, technical capability and limitations
- start-up and shutdown procedures
- isolation procedures
- labelling requirements

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> • knowledge of the requirements, procedures and instructions for the storage, handling and transport of explosives in underground coal mining • implementation of requirements, procedures and techniques for the safe, effective and efficient storage, handling and transport of explosives in underground coal mining • working with others to undertake the storage, handling and transport of explosives in underground coal mining that meets all of the required outcomes • consistent timely completion of the storage, handling and transport of explosives in underground coal mining that safely, effectively and efficiently meets the required outcomes
Context of and specific resources for assessment	<ul style="list-style-type: none"> • This unit must be assessed in the context of the 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 workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job. • Customisation of assessment and delivery

	<p>environment to sensitively accommodate cultural diversity.</p> <ul style="list-style-type: none"> • Aboriginal people and other people from a non English speaking background may have second language issues. • Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances. • Where applicable, physical resources should include equipment modified for people with disabilities. • Access must be provided to appropriate learning and/or assessment support when required.
Method of assessment	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes • consistently achieving the required outcomes • first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • working with others to undertake the storage, handling and transport explosives in underground coal mining
Guidance information for assessment	<p>Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Relevant compliance documentation may include:</p>	<ul style="list-style-type: none"> • legislative, organisation and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • code of practice • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
<p>Work instructions may come from briefings, handovers, plans and work orders and may be written or verbal, formal or informal and may include:</p>	<ul style="list-style-type: none"> • nature and scope of tasks • specifications • achievement targets • operational conditions • obtaining of authorisations required • site layout • designated routes • out of bounds areas • worksite inspection requirements • lighting conditions • plant or equipment defects • hazards and potential hazards • coordination requirements or issues • contamination control requirements • barricade and signage requirements
<p>Hazards may include:</p>	<ul style="list-style-type: none"> • chemical energy, including: <ul style="list-style-type: none"> • premature explosion • deterioration of explosives • stored energy • working environment, including: <ul style="list-style-type: none"> • weather conditions • insufficient illumination • methane • coal dust • NO_x gases

	<ul style="list-style-type: none">• poor road or rail conditions• strata conditions• fire/flames/ignition sources• atmospheric contaminants• dust• noise• lack of ventilation• extraneous electricity e.g. static electricity, lightning• equipment and materials, including:<ul style="list-style-type: none">• faulty vehicle• faulty equipment• electricity• radio frequencies and transmitters• hot exhaust system• people, including those:<ul style="list-style-type: none">• speeding• unauthorised persons• committing theft• processes and procedures, including:<ul style="list-style-type: none">• back injuries
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Coordination requirements may include:	<ul style="list-style-type: none"> • explosives purchase and delivery personnel and suppliers • blasting team • supervisors • other mine personnel
Explosives and accessories may include:	<ul style="list-style-type: none"> • high explosives • packaged explosives • permitted explosives • detonators • detonation mechanisms including: <ul style="list-style-type: none"> • bell wire and firing lines • delay mechanisms • blasting machines or mains firing equipment • explosives tester • binding tape
Explosives are classified in accordance with the Australian Explosives Code and a competent authority. These provide specifications for:	<ul style="list-style-type: none"> • class divisions • segregation • compatibility • transportation requirements
Magazine is:	<ul style="list-style-type: none"> • a specially constructed store or container which is used exclusively for keeping explosives or pyrotechnics
Authorised person is a person authorised by an appropriate senior operational manager, and may include:	<ul style="list-style-type: none"> • shotfirers • magazine keepers • management • supervisors • surveyors • drivers • miners • visitors • trainees or apprentices • inspectors • maintenance staff • service personnel • tradespersons
Designated route may include:	<ul style="list-style-type: none"> • direct route • safest route • specified route • preferred route

	<ul style="list-style-type: none">• alternative route
Safe driving conventions may include observing:	<ul style="list-style-type: none">• speed limits• driving to road conditions• mine lighting• right of way• parking on slopes• refuelling procedures• rules at intersections• towing methods• mine traffic procedures• designated roads• pre-start checks• signs on roads• no tools or other equipment carried with explosives• segregated explosives• no smoking• only authorised driver

Unit Sector(s)

Blasting

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.