



Australian Government

RIIBLA401E Manage blasting operations

Release: 1

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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 manage blasting operations in the resources and infrastructure industries. It includes implementing blast plans, monitoring blasting and coordinating post-blast inspections.

It applies to those working in supervisory roles. They are generally responsible for the output of others, contribute to the development of technical solutions to non-routine problems and apply management plans to the workplace.

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

Civil construction

Coal mining

Extractive

Drilling

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. Manage compliance with legislation	1.1 Access, interpret and apply blasting operations documentation and confirm work activity is compliant 1.2 Identify and manage training requirements, licenses or authorities required for explosives storage, manufacture, transport and use activities, according to legislative and requirements 1.3 Apply procedures for identification of potential safety and

ELEMENT	PERFORMANCE CRITERIA
	security hazards and implementation and application of the site/organisation risk management system according to legislative and site requirements 1.4 Identify and resource appropriate personal protective equipment according to manufacturer specifications and legislative and site requirements 1.5 Obtain and interpret emergency procedures and confirm steps required to respond to emergencies 1.6 Manage explosives security according to legislative and site requirements 1.7 Manage blasting records according to legislative and site requirements 1.8 Record and report explosives incidents according to legislative and site requirements
2. Manage the storage, handling and transport of explosives	2.1 Apply procedures for safe handling of explosives according to legislative and site requirements 2.2 Apply procedures for transporting explosives according to legislative and site requirements 2.3 Apply procedures for storage of explosives according to legislative and site requirements
3. Manage the implementation of blasting activities	3.1 Identify environmental hazards and analyse risks associated with blasting 3.2 Access, interpret and validate the blast design criteria 3.3 Implement the blast plan according to site requirements 3.4 Apply blast monitoring according to site requirements 3.5 Apply site inspection regime according to legislative and site requirements 3.6 Manage and coordinate support activities according to legislative and site requirements 3.7 Apply site procedures for setting up and securing the blast area 3.8 Apply procedures for monitoring quality assurance and quality control processes and confirm authorised explosives are being manufactured 3.9 Apply and manage blast clearance processes according to site requirements 3.10 Apply and manage blast initiation process according to site requirements 3.11 Apply special requirements for secondary blasting operations 3.12 Apply and manage post-blasting coordination and inspection requirements 3.13 Complete statutory and site-required documents according to

ELEMENT	PERFORMANCE CRITERIA
	site requirements
4. Manage misfires	4.1 Apply site procedures for re-assessment of the blast site for potential hazards and risks and confirm work area is safe 4.2 Inspect blast area and identify misfires or potential misfires and their cause 4.3 Secure misfire area according to legislative and site requirements and communicate information to other affected personnel 4.4 Apply procedures to for washing-out or re-charging, and manage refiring, according to site requirements 4.5 Communicate safety of the area to affected persons according to site requirements 4.6 Record and report misfires according to legislative and site requirements
5. Manage the disposal of explosives	5.1 Identify damaged, deteriorated and out of date explosives and detonators 5.2 Select disposal method for explosives and detonators according to manufacturer specifications and legislative and site requirements 5.3 Plan for disposal of damaged, deteriorated and out of date explosives and detonators according to manufacturer specifications and legislative and site requirements 5.4 Dispose of damaged, deteriorated and out of date explosives and detonators according to legislative and site requirements 5.5 Manage and maintain disposal records according to legislative and site requirements
6. Manage maintenance of blasting equipment	6.1 Identify manufacturer specified maintenance schedules for all plant and equipment associated with blasting operations 6.2 Manage inspection schedules for all plant and equipment associated with blasting operations according to manufacturer specifications and site requirements 6.3 Apply and manage procedures for decontaminating plant and equipment used for manufacturing explosives and transferring explosives precursors and security-sensitive ammonium nitrate (SSAN) before maintenance is performed 6.4 Manage maintenance record keeping according to legislative and site requirements

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	Calculates measurements, products and ratios
Oral communication	Conveys information and requirements clearly and listens carefully
Reading	Identifies and interprets information from workplace documentation and legislation
Writing	Completes workplace and legislative documentation using sector-specific vocabulary, grammatical structures and conventions

Unit Mapping Information

Supersedes and is equivalent to RIIBLA401D Manage blasting operations.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for RIIBLA401E Manage blasting operations

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- manage blasting operations on at least one occasion, including:
 - validating blast design criteria
 - obtaining required permits, licenses or authorities
 - applying legislative and site requirements and procedures for:
 - purchase of explosives
 - set-up and security of explosives
 - reporting
 - site access
 - handling, transport and storage of explosives
 - site inspections
 - type and quality of explosives used
 - coordination of support vehicles, personnel and other equipment
 - setting up and securing the blast area
 - secondary blasting
 - re-assessment of blast site
 - misfires or potential misfires
 - disposal of explosives
 - identifying and analysing environmental risks
 - implementing blast plans
 - monitoring blasts
 - coordinating post-blast inspection
 - monitoring maintenance and routine inspection of blast and blast monitoring equipment.

During the above, the candidate must:

- locate and apply legislation, documentation and procedures
- work effectively with others to plan, prepare and conduct blasting operations, including:
 - complying with reporting requirements and procedures
 - communicating clearly and concisely with others to receive and clarify work instructions
 - providing clear and timely instruction and supervision of those involved in blasting operations.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- key legislation required to manage blasting operations, including those relating to:
 - dangerous goods requirements
 - storage, segregation and transportation of explosives
 - misfires
 - records and reporting requirements
- key procedures and documentation required to manage blasting operations, including:
 - blast plan
 - safety and security management system
 - Australian standards and codes of practice relating to blasting operations
 - blast site procedures
 - emergency procedures
 - environmental procedures
 - explosives disposal methods
 - manufacturer specifications
- techniques for applying basic geological and technical information
- site environmental requirements and constraints, including those relating to:
 - chemicals
 - airborne contaminants, including dust and fumes
 - noise, vibration and airblast overpressure
 - hot, reactive and fibrous ground
- types, physical and technical characteristics, uses and limitations of explosives precursors, security sensitive ammonium nitrate, explosives, initiation systems and associated equipment
- key principles and techniques relating to managing blasting operations, including:
 - density, velocity and relationships between variables
 - techniques for assimilating, interpreting and applying information and technical data
 - key mathematical processes and applications
- principles and techniques for managing misfires and identifying its causes

- principles and techniques for identifying and responding to relevant safety and environmental hazards and emergencies, including those relating to climatic and electrostatic conditions
- site requirements for completing maintenance records and reporting requirements
- techniques for coordinating job activities with vehicles, personnel and relevant equipment.

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - personal protective equipment
 - equipment required to manage blasting operations
- be conducted in a safe environment; and,
- be assessed in the context of this sector's work environment; and,
- be assessed in compliance with relevant legislation/regulation and using policies, procedures and processes directly related to the industry sector for which it is being assessed; and,
- confirm consistent performance can be applied in a range of relevant workplace circumstances.

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work 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.

Assessor requirements

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory regulatory standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/Australian Quality Training Framework mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements. This includes:

- possessing and maintaining a current shotfirer's licence issued by a state/territory regulatory body endorsed for the applicable type of blasting
- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment
- formal relevant qualifications in training and assessment
- having knowledge of and/or experience using the latest techniques and processes
- possessing the required level of RII training product knowledge
- having an understanding and knowledge of legislation and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence outlined in this unit of competency, and

- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must have current industry skills directly relevant to the training and assessment being provided. This means the industry subject matter expert must demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	1	1 year
	2	2 years
Drilling, Coal Mining, Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure	3-6	3 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.	

*Guidance on simulated environments has been stipulated in the RII implementation guide located on VETNet.

**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 a minimum number of site assessments as determined by the relevant industry sector, across various locations.

*** While a unit of competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

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