



Australian Government

RIIBLA403 Design blasts

Release: 2

RIIBLA403 Design blasts

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 5.0.
Release 2	Minor amendment to Performance Criteria to correct typographical error.

Application

This unit describes the skills and knowledge required to design blasts in civil construction, coal and metalliferous mining and extractive sectors. It includes planning, preparing and documenting blast plans and budgets and monitoring and evaluating blast results.

It applies to those working in technical specialist roles. They generally contribute to the development of technical solutions to complex and non-routine problems.

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

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. Plan and prepare for design of blast	1.1 Access, interpret and clarify requirements relevant to blast design and implementation 1.2 Access, interpret and apply blast plan documentation and confirm work activity is compliant 1.3 Identify, address and report potential risks, hazards and

ELEMENT	PERFORMANCE CRITERIA
	environmental issues, determine acceptable levels of risk and implement control measures according to site requirements 1.4 Confirm geological and survey data relevant to blast design and implementation 1.5 Identify operational limitations relating to blast design and implementation 1.6 Identify available explosives and their characteristics relating to blast design and implementation 1.7 Identify available initiation options and their characteristics relating to blast design and implementation
2. Prepare blast plan	2.1 Apply blast design parameters according to legislative and site requirements 2.2 Confirm blast plan meets blast requirements and parameters 2.3 Document blast plan
3. Implement, monitor and adjust blast plans	3.1 Issue, communicate, explain and clarify blast plan to personnel involved in blast 3.2 Provide support and advice to personnel involved in blast plan 3.3 Confirm reports are maintained and issued to relevant personnel according to blast plan and site conditions 3.4 Monitor and confirm results of blast against blast design requirements and parameters 3.5 Identify and resolve variances in consultation with relevant stakeholders and issue instructions for adjustments to future plans and/or their implementation

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 RIIBLA601E Design blasts.

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 RIIBLA403 Design blasts

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Release 2	Minor amendment to Performance Criteria to correct typographical error.

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:

- design blasts on at least two occasions, including:
 - preparing blast plan
 - preparing and presenting blast plan budget
 - communicating, explaining and clarifying blast plan to personnel involved in blast
 - monitoring and confirming blast results against blast design requirements, parameters and budget
 - identifying and resolving variances to blast plan
 - documenting blast plan activity, variances and outcomes.

During the above, the candidate must:

- locate and apply relevant legislation, documentation and procedures
- work effectively with others to design blasts in a manner that meets required outcomes, including communicating clearly and concisely with others to:
 - receive and clarify work instructions
 - resolve coordination requirements within scope of own role.

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 design blasts
- key procedures and documentation required to design blasts, including those relating to:
 - environment and quality
 - health and safety

- communications
- risk management
- techniques for interpreting geological and survey data
- blast plan principles and components, including:
 - blast design parameters
 - recording and reporting systems
 - work monitoring methods
- types, characteristic, technical capabilities and limitations of plant, equipment and materials required for blasting operations, including:
 - explosives
 - initiation options
- techniques for coordinating job activities with others, including those relating to:
 - stakeholder coaching and consultation
 - team leadership
 - work planning.

Assessment Conditions

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

- include access to:
 - blast plan
- 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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