



Australian Government

RIIBLA602E Establish and maintain explosives safety and security management systems

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 7.0.

Application

This unit describes the skills and knowledge required to establish and maintain an explosives safety and security management system in the extractive, coal mining and metalliferous mining sectors. It includes establishing systems for managing safety and security throughout activities covering the explosives lifecycle, and supporting relevant processes and procedures, training requirements, and audit and review systems. The explosives lifecycle includes all activities undertaken during explosives operations, including delivery, storage, manufacture, transport, use, misfire management and disposal, incident management and maintenance processes for plant and equipment.

The unit applies to those working in management roles or technical specialist roles. They generally perform complex, non-routine tasks involving strategic and planning activities and are responsible for establishing and maintaining operational systems and plans.

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

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. Determine blasting objectives and prepare to establish and	1.1 Obtain, interpret and confirm blasting objectives 1.2 Access, interpret and apply documentation required to

ELEMENT	PERFORMANCE CRITERIA
maintain explosives safety and management systems	establish and maintain explosives safety and security management systems 1.3 Develop organisational safety and security policies, objectives and procedures that outline organisational commitment to explosives safety and security, and proposed implementation of required legislation 1.4 Define, allocate and include job descriptions and duty statements for required positions 1.5 Identify, obtain and allocate resources for operation of explosives safety and security management system 1.6 Communicate information on explosives safety and security management system and procedures in a format accessible to required personnel
2. Establish and maintain participative arrangements for management of explosives	2.1 Establish and maintain consultative processes with required personnel 2.2 Confirm issues raised through participation and consultation are addressed according to organisational procedures 2.3 Confirm information about the outcomes of participation and consultation is provided in a format accessible to required personnel
3. Establish and maintain processes for identifying safety and security hazards throughout explosives lifecycle	3.1 Develop and maintain process for ongoing identification of existing and potential safety and security hazards throughout explosives lifecycle for the operation 3.2 Monitor activities to confirm that safety and security hazard identification procedures are adopted throughout explosives lifecycle 3.3 Confirm safety and security hazard identification procedures are applied at planning, design and evaluation stages of any change to explosives activities
4. Establish and maintain procedures for assessing safety and security risk throughout explosives lifecycle	4.1 Develop procedures for ongoing assessment of safety and security risks throughout activities encompassing explosives lifecycle for the operation 4.2 Monitor activities to confirm risk assessment procedure is adopted effectively throughout the organisation 4.3 Confirm appropriate assessment of safety and security risks identified throughout activities encompassing explosives lifecycle for the operation 4.4 Confirm procedures are in place for safety and security risk assessment to be addressed at the planning, design and evaluation stages of any change to explosives

ELEMENT	PERFORMANCE CRITERIA
	activities within the organisation
5. Establish and maintain procedures for treating safety and security risks throughout explosives lifecycle	5.1 Develop measures to control assessed safety and security risks according to legislative requirements, industry standards and codes of practice, and trends identified from organisational records management system 5.2 Confirm implementation of interim solutions, until permanent control measure is developed, when measures that treat identified safety and security risks at their source are not immediately practicable 5.3 Monitor activities to confirm that safety and security risk treatment procedure is adopted throughout organisational activities that cover explosives lifecycle 5.4 Confirm safety and security risk treatment is addressed at planning, design and evaluation stages of any change to explosives activities in the organisation, and confirm inclusion of required safety and security risk control measures 5.5 Identify inadequacies in existing safety and security risk treatment measures, and provide resources to implement new measures according to organisational procedures
6. Establish and maintain organisational procedures for addressing unplanned explosives safety and security incidents	6.1 Identify range of most likely, potential, unplanned, safety and security incidents according to analysis of likely risks relating to activities covering explosives lifecycle 6.2 Develop procedures for addressing safety and security risks associated with identified potential events according to legislative, emergency services and explosives supplier requirements 6.3 Provide safety and security information and training to required personnel implementing procedures covering explosives lifecycle activities according to legislative, organisational and explosives supplier requirements
7. Establish and maintain explosives training program	7.1 Develop training program addressing training needs of required personnel according to explosives activities being undertaken 7.2 Confirm implementation of training program according to organisational requirements
8. Establish and maintain system for explosives records	8.1 Establish system for recording explosives lifecycle activities and outcomes according to legislative and organisational requirements 8.2 Monitor explosives record system and confirm system

ELEMENT	PERFORMANCE CRITERIA
	allows for identification of patterns of occupational injury, incidents and security breaches in the organisation
9. Evaluate explosives safety and security management system and related policies, procedures and programs	9.1 Assess effectiveness of explosives safety and security management system and related policies, procedures and programs 9.2 Develop and confirm implementation of improvements to explosives safety and security management system, and confirm resultant achievement of improved blasting outcomes 9.3 Assess and confirm compliance with legislative requirements relating to explosives and relevant industry sector, industry standards and codes of practice, guidance notes and guidelines

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 resourcing requirements
Oral communication	Conveys information and requirements clearly and listens carefully
Reading	Identifies and interprets relevant information from workplace procedures, documentation and legislation
Writing	Prepares specific information that complies with a range of requirements, using sector-specific vocabulary, grammatical structures and conventions

Unit Mapping Information

Supersedes and is not equivalent to RIIBLA602D Establish and maintain a blasting system.

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 RIIBLA602E Establish and maintain explosives safety and security management systems

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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:

- establish and maintain an explosives safety and security management system on at least one occasion that addresses hazard and risk identification, risk assessment and risk controls across the explosives lifecycle for an organisation, including:
 - security of people and access to explosives, assets and information systems
 - delivery of explosives to location
 - manufacture of explosives (either static plant or mobile mixing)
 - storage of explosives, including Class 1 and Class 5.1 security sensitive ammonium nitrate (SSAN)
 - use of explosives
 - misfire management
 - disposal of explosives
 - incident management
 - record management
 - training requirements
 - audit and review of systems and procedures.

During the above, the candidate must:

- locate and apply required legislation, industry standards and codes of practice, and organisational policies and procedures, and confirm safety and security of explosives and compliance of work activity
- implement requirements for establishing and maintaining explosives safety and security management systems, including:
 - identifying, forecasting, obtaining, allocating and scheduling resources required to implement explosives safety and security management systems, including financial and human resources

- defining, allocating and including job descriptions and duty statements that allow implementation and integration of explosives safety and security management systems
- establishing and maintaining consultative processes with employees and their representatives
- work with others to establish and maintain an explosives safety and security management system in a manner that meets required outcomes, including:
 - receiving, conveying and clarifying work activity requirements
 - determining coordination requirements for confirming developed system is compliant with legislative requirements.

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:

- legislative requirements relating to establishing and maintaining an explosives safety and security management system
- policies, procedures, industry standards and codes of practice required to establish and maintain an explosives safety and security management system, including those relating to:
 - security of explosives, including requirements relating to:
 - people, assets and information
 - triggers to review security controls
 - maintenance of security controls
 - explosives manufacture processes (static or mobile), including requirements relating to:
 - quality assurance and quality control processes to ensure authorised explosive is manufactured
 - hazards and risks associated with ammonium nitrate contacting copper and brass compounds
 - decontamination processes
 - maintenance programs for required plant and equipment
 - storage of explosives (Class 1 and Class 5.1 SSAN), including requirements relating to:
 - magazine construction requirements
 - storage facility layouts and locations, including segregation between incompatible products and sufficient external separation to nearby sensitive receivers.
 - inspection regimes
 - explosives and product reconciliation, including those relating to ordered, used and disposed product
 - transport, including requirements relating to:
 - product quantity limits for specific vehicles and licence categories
 - carry box construction

- documentation
- marking of packaging and vehicles
- transport routes, including crossfall and gradients of roads
- licencing
- explosives use activities, including requirements relating to:
 - objectives of blasting activities
 - types of blasts to be undertaken
 - blast management plan
 - blast design requirements
 - drill plans and drill hole accuracy
 - differences between concept design and actual drilled pattern
 - hazards, risks and limitations of selected explosives and initiation systems
 - elevated temperature, reactive ground and spontaneous combustion where applicable
 - geological, geotechnical and hydrological issues
 - vibration and overpressure limits, including calibration and maintenance of monitoring equipment
 - flyrock
 - explosives loading activities, including traffic management, priming, bulk product loading and stemming
 - initiation system type connection
 - management of blast exclusion zones
 - management of blast outcomes and reconciliation against design outcomes
- misfire management, including requirements relating to:
 - remediation processes
 - hazards and risks of handling misfired products
- disposal processes, including requirements relating to:
 - manufacturer and supplier recommendations
 - record management, including type, quantity, location and destruction method employed, and reconciliation to demonstrate product accountability
- training procedures, including requirements relating to:
 - training standards for personnel in the management structure
 - competency of people involved in explosives lifecycle work activity
 - manufacturer specific initiation systems
 - working in proximity to explosives activities
- incident management procedures, including requirements relating to:
 - safety
 - security
 - reporting
 - investigation.

Assessment Conditions

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

- include access to:
 - blasting design criteria
- 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 Companion Volume 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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