



Australian Government

AHCEXP303 Prepare and use explosives

Release: 1

AHCEXP303 Prepare and use explosives

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to prepare a blasting site and notify stakeholders of blasting work, mix explosives, detonate explosives using fuses, and render the blast site safe following legislative, regulatory and workplace procedures.

The unit applies to individuals who work under broad direction and take responsibility for their own work. This includes using discretion and judgement in the selection and use of available resources for blasting.

State or territory licensing, legislative or certification requirements apply in some jurisdictions. Users are advised to check with the relevant regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Explosives (EXP)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for blasting	1.1 Obtain permits/licences and approved warning signs installed and prominently displayed according to legislative requirements 1.2 Notify property manager, neighbours and controlling authority and other stakeholders of blasting plan and timing according to legislation 1.3 Clear blast site of stones and other potential missiles and ensure the site is made safe 1.4 Place explosive products at required safety distance from

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	identified hazards 1.5 Prepare holes for charge(s) according to blasting plan 1.6 Remove equipment used for preparing holes to prescribed safe distance according to Australian Standards, legislation and regulations
2. Prepare explosives	2.1 Calculate quantities of explosive components required to achieve the desired blast for prevailing conditions 2.2 Transport explosives or explosive mix to site according to workplace health and safety procedures and legislative requirements 2.3 Calculate the precise explosive components to ensure minimum residual mix to be destroyed 2.4 Prepare explosives according to defined recipe and requirements according to workplace procedures 2.5 Assemble fusing and detonating components for explosive requirements in preparation for blasting
3. Place charges	3.1 Place or pack explosives elements in prepared holes according to safe working procedures, Australian Standards, legislation and regulations 3.2 Stem and tamp holes prior to the attachment of the firing system according to blasting requirement and safety procedures 3.3 Check electrical firing circuits or fire fuses for continuity and/or earthing 3.4 Clear extraneous materials from blast site to safe distances in accordance with workplace standards 3.5 Re-check blast site and surrounds to ensure that non-essential personnel are not endangered 3.6 Place blasting mats or other control devices according to blasting plan 3.7 Guard blast area according to legislative requirements and workplace procedures
4. Fire charges	4.1 Implement prescribed warning notification procedures according to workplace procedures and industry standards 4.2 Re-check blasting site to ensure correct placement of explosives and all safety procedures have been implemented according to supervisor or shot firer instructions

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.3 Implement audible and visual warning signals according to workplace safety procedures 4.4 Initiate firing procedures using manual or electric firing system according to blasting plan
5. Conduct post-firing procedures	5.1 Ensure misfires are identified prior to all-clear signals being given by count charges during firing procedure or inspection of blast site 5.2 Implement misfire procedures according to workplace and regulatory requirements 5.3 Ensure site is safe and all-clear signal is given according to industry practice and legislative requirements 5.4 Discard, destroy or store surplus, unserviceable and defective explosives and detonators according to workplace and environmental procedures 5.5 Maintain records according to workplace and legislative requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	Interpret permits, regulations and explosive documentation and consolidate information to determine requirements for the safe use of explosives
Writing	Legibly and accurately complete permit applications, signage and notifications for explosive use
Oral communication	Communicate with neighbours and stakeholders about blasting works including active listening and responding to questions or concerns
Numeracy	Calculate quantities for explosive materials

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCEXP303 Prepare and use explosives	AHCEXP303A Prepare and use explosives	Reinstated previously deleted unit Updated to meet Standards Minor changes to Performance Criteria Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCEXP303 Prepare and use explosives

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Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least one occasion, the individual has:

- obtained permits and licenses for blasting
- informed neighbours and posted notices for blasting
- prepared blast site to place the explosive
- prepared explosives and initiator device according to best safety practice and regulations
- placed and fired charges according to best safety practice and regulations
- conducted post-firing procedures for misfires, site checks, the disposal of surplus, unserviceable and defective explosives, and recording procedures
- used explosives safely and effectively according to workplace requirements
- disposed of surplus, defective or unwanted detonators or explosives safely
- mixed explosives components correctly and uniformly
- applied regulations relating to explosives used according to workplace requirements
- maintained records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- fire precautions and prevention procedures
- explosives mixing procedures and safe handling
- calculations required for mixing explosives for size of blast
- explosives preparation, placement, firing and post-firing procedures
- prescribed timing and/or practice drills for misfire, including the use of water jets and additional charges
- regulations relating to explosives use in the workplace and applications and permits required

- use, storage and detonation of explosives
- environmental issues and risks to livestock, natural landscape and contamination
- the Australian Standard relating to preparing and using explosives, which includes:
 - operations prior to charging
 - charging
 - preparation for firing
 - firing
 - misfires
 - preparation of primers.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions and that exposes individuals to live detonation conditions
 - safe transport and storage facilities suitable for explosives
- resources, equipment and materials:
 - explosives, detonators and fuses
 - safety equipment
- specifications:
 - policies, procedures, processes for the safe use of explosives
 - explosives safety data sheets
 - workplace instructions/job specifications for a blasting operation
 - legislation and Australian Standards for the use of explosives
- relationships:
 - neighbours and stakeholders
 - supervisor, shot firer.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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