



Australian Government

Department of Education, Employment and Workplace Relations

AHCEXP303A Prepare and use explosives

Release: 1

AHCEXP303A Prepare and use explosives

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers carrying out explosive procedures including preparation, mixing, detonation and clean up safely in the field and defines the standard required to: obtain the appropriate permits and licenses for blasting; inform neighbours and post notices for blasting; prepare the blast site to place the explosive; prepare explosives and the initiator device according to best safety practice and regulations; place and fire charges according to best safety practice and regulations; conduct post-firing procedures for misfires; site checks; the disposal of surplus, unserviceable and defective explosives; recording procedures.
------------------------	---

Application of the Unit

Application of the unit	The preparation and use of explosives is likely to be under limited supervision with checking related to overall progress. Responsibility for the notification of others, and the duty of care for their safety, is also involved.
--------------------------------	--

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
-----------------------------	--

Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for blasting	1.1. Permits/ licences are obtained and approved warning signs installed and prominently displayed according to legislative requirements. 1.2. Property manager and relevant controlling authorities are notified of blasting plans and timing as required by legislation. 1.3. The area where the charges are to be used is cleared of stones and other potential missiles. 1.4. The blast site is cleared and made safe prior to charges being placed. 1.5. All explosive products are placed at the required safety distance from any identified hazards. 1.6. Appropriate holes are drilled/dug to place the charge(s) in line with blasting plans. 1.7. Drilling/digging equipment is removed to the prescribed safe distance in accordance with Australian Standards, Acts and Regulations. 1.8. Neighbours and members of the public likely to be concerned or disturbed by shock effects are advised of the blasting program.
2. Prepare explosives	2.1. Quantities of explosives components required are calculated to match the application and prevailing conditions. 2.2. Required explosives are assembled on site, or an explosives mix (of homogenous composition) is calculated precisely to ensure minimum residual mix to be destroyed, and is prepared in accordance with defined requirements. 2.3. Required fusing and detonating components are assembled to match the established explosive requirements in preparation for blasting.
3. Place charges	3.1. Explosives elements are placed in holes or packed using safe working procedures and methods and in accordance with Australian Standards, Acts and Regulations. 3.2. All holes are stemmed and tamped prior to the attachment of the firing system to maximise safety to all personnel and the efficiency of the blasting. 3.3. Electrical firing circuits or fire fuses are checked for continuity and/or earthing as required. 3.4. All extraneous materials are cleared from the site to safe distances in accordance with enterprise

ELEMENT	PERFORMANCE CRITERIA
	standards. 3.5. Routine re-checks of the site and surrounds are performed to ensure that no non-essential personnel are endangered. 3.6. Blasting mats or other control devices are placed as appropriate according to the blasting plan. 3.7. Blast area is guarded according to legislative requirements and enterprise practices.
4. Fire charges	4.1. Prescribed warning notification procedures are carried out in accordance with enterprise and industry standards. 4.2. The blasting site is re-checked to ensure correct placement of explosives and ensure that all safety procedures have been implemented according to supervisor or shot firer's instructions. 4.3. Warning signals including audible and visual signals are issued to ensure that the site is clear. 4.4. Firing procedures are initiated through manual or electric firing systems.
5. Conduct post-firing procedures	5.1. Charges are counted as they fire or are inspected safely post blasting to ensure that misfires are readily identified prior to all clear signals being given. 5.2. Misfire procedures are implemented after prescribed timing and/or practice drills conducted using water jets or additional charges in accordance with Australian Standards, Acts and Regulations. 5.3. Site checks are carried out to ensure that the site is safe and the all-clear signal is given in line with industry practice and legislative requirements. 5.4. Surplus, unserviceable and defective explosives and detonators are destroyed or discarded or stored in line with prescribed procedures and in consideration of the environmental impact. 5.5. Accurate records are completed and kept in line with enterprise and legislative requirements.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- use explosives safely and effectively according to enterprise requirements
- dispose of surplus, defective or unwanted detonators or explosives safely
- correctly and uniformly mix explosives components
- apply the regulations relating to explosives use according to enterprise requirements
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- fire precautions and prevention procedures
- appropriate explosives mixing procedures
- the calculation of explosives quantities
- explosives preparation, placement, firing and post firing procedures
- the regulations relating to explosives use in the enterprise
- relevant standards issued by Standards Association of Australia
- related environmental issues and risks to livestock (including poisoning).

Evidence Guide

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	The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following: • obtain the appropriate permits and licenses for blasting • inform neighbours and post notices for blasting • prepare the blast site to place the explosive • prepare explosives and the initiator device according to best safety practice and regulations • place and fire charges according to best safety practice and regulations • conduct post-firing procedures for misfires, site checks, the disposal of surplus, unserviceable and defective explosives, and recording procedures.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Requirements and scope may include:	• the Australian Standard relating to preparing and using explosives (AS 2187, Part 2 1993) which includes: • operations prior to charging • charging • preparation for firing

RANGE STATEMENT

	• firing • misfires • preparation of primers.
--	---

Unit Sector(s)

Unit sector	Explosives
--------------------	------------

Co-requisite units

Co-requisite units		

Competency field

Competency field	
-------------------------	--