



Australian Government

Department of Education, Employment and Workplace Relations

DEFCA303B Assist in the preparation, construction, operation and maintenance of a field water-point

Release: 1

DEECA303B Assist in the preparation, construction, operation and maintenance of a field water-point

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

This unit covers the competency required to assist in testing for water quality, selecting a suitable work site and preparing, constructing and operating a field water-point.

The unit also includes the assembly and operation of water purification equipment, and the production and storage of potable water under **field conditions** to meet the requirements of personnel and equipment deployed into an area without adequate water supply.

The individual will work under supervision in a team, but may be responsible for completing individual tasks relating to the production of potable water.

Application of the Unit

Application of the Unit

The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite Unit/s	BCG1004A Carry out measurements and calculations BCG1006A Use small plant and equipment BCG1011A Handle construction materials and safely dispose of waste BSBCMN311A Maintain workplace safety
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Employability Skills Information

Employability Skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.	Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Locate a supply of water	1.1 A water supply within a designated area is located 1.2 Water is collected and tested for compliance with quality standards in accordance with standard procedures 1.3 Water sources are assessed for suitability to be used for collection, treatment and storage 1.4 The suitability of the water as a source of supply is determined and if approved, the site is prepared
2. Prepare a field water-point	2.1 Personal protective equipment is selected and worn in accordance with standard procedures 2.2 Equipment, tools and materials are selected and checked for serviceability and any faults are reported to the supervisor 2.3 Local utility assets such as water, electricity and gas pipelines are located and marked to prevent damage, and liaison is undertaken with local authorities as required 2.4 Water-point chemicals are correctly handled, prepared, tested and stored in accordance with standard procedures and any faults are reported to the supervisor 2.5 When mechanical excavation equipment is required, contact with appropriate agencies is established and maintained to facilitate construction activities 2.6 Manual or mechanical equipment is used, where required, to construct the water-point and to compact/backfill the site in accordance with standard procedures 2.7 Structures such as water towers and storage tanks are constructed/established, as required, in accordance with standard procedures 2.8 Field water supply equipment and accessories are assembled, operated and maintained in accordance with standard procedures
3. Operate a water-point to produce potable water	3.1 Potable water is produced, stored and distributed in accordance with standard procedures 3.2 Water treatment and testing equipment is calibrated, serviced, operated and maintained in accordance with standard procedures 3.3 Water samples are collected and tested in accordance with standard procedures

4. Refurbish water-point site

- 3.4 Chemicals are used in accordance with standard procedures
- 3.5 Information related to chemical supply, usage and disposal is recorded in accordance with standard procedures
- 3.6 Process and performance data is collected, recorded, maintained and reported in accordance with standard procedures
- 3.7 Equipment is inspected and maintained in accordance with manufacturer's instructions and standard procedures
- 4.1 Work site is restored to normal, when required, in accordance with standard procedures
- 4.2 Chemicals are disposed of in accordance with standard procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- assemble, operate and disassemble water supply and purification equipment
- calculate and record water flows
- follow instructions/directives and report information
- participate in team
- encourage other team members
- use a variety of verbal and non-verbal communication techniques including language style, active listening

Required Knowledge

- OH&S requirements
- effects of weather on water quality and the operation of the site and plant
- risk factors and potential hazards of surface water systems
- safe handling and disposal of chemicals
- team work principles and strategies
- techniques for supporting others
- composition of teams and roles and responsibilities of team members
- verbal and non-verbal communication techniques including language style, active listening
- written communication to a level required to complete workplace forms and reports
- basic numeracy, such as addition, subtraction and multiplication
- formula and method for calculating water flow and volume

Evidence Guide

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to assist in the construction, operation and maintenance of a field water-point over a period of time sufficient for the individual to be assessed as competent in all aspects of the production, storage and distribution of water
Assessment must also confirm the ability to:

- operate a field water-point
- analyse water quality data
- handle water purification chemicals
- communicate effectively and work in a team

Consistency in performance

Competency should be demonstrated over a time frame that allows the individual to be observed in all aspects of the construction, operation and maintenance of a field water-point

Context of and specific resources for assessment

Context of assessment

Competency should be assessed under field conditions. Evidence should be gathered by observing the individual assisting in the construction, operation and maintenance of a field water-point in accordance with standard procedures and job instructions.

Specific resources for assessment

Access to:

- field water supply equipment and accessories relevant to the task
- hand tools, power tools, plant and other equipment appropriate to the supply of water
- suitable training area for water supply.

Range Statement

RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Field conditions may include	A range of terrain, soil and vegetation Under all weather conditions By day or night and under illumination
Standard procedures include	OH&S regulations Water quality requirements Written and verbal orders and job instructions Procedures manuals, job guides, field engineering pamphlets and other publications Manufacturer's handbooks, industry specifications and technical instructions Local government by-laws governing water supply
Suitability of water supply may include	Water quality, flow and volume Access Availability of storage Ease of distribution Security of site
Work site preparation may include	Establishment of boundaries and fences Clearance of debris and access Excavation for storage Provision of hard standing Protecting equipment such as generators and pumps
Personal protective equipment may include	Boots Safety glasses/goggles Ear plugs/muffs Dust masks/respirators Gloves Hard hat Cap
Equipment, tools and materials may include	Water supply and purification equipment Electronic monitoring and metering systems Manual chart recording systems Chemical testing and analysis equipment Hand and power tools Communication equipment Watercraft Manual/hydraulic and pneumatic flow control and

RANGE STATEMENT

adjustment equipment Pumping systems, eg submersible, centrifugal, multiple stage deep well Valuing systems, eg sluice, blade, gate, non-return, pressure reducing Improvised storage equipment
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Unit Sector(s)

Not applicable.

Corequisite Unit/s

Co-requisite Unit/s	Nil
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