



Australian Government

Department of Education, Employment and Workplace Relations

NWP243B Operate bore fields and groundwater source systems

Revision Number: 2

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Modification History

NWP243B Release 2: Layout adjusted. No changes to content.

NWP243B Release 1: Primary release.

Unit Descriptor

This unit of competency describes the outcomes required to operate bore fields and groundwater source systems. Monitoring the availability and quality of supply, and control of water flows from the source are also required, in conjunction with the ability to apply legislative and organisational requirements.

Application of the Unit

This unit supports the attainment of skills and knowledge required for field staff operating bores and groundwater sources in urban or rural areas.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

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 range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Monitor water quality and supply of bore field or groundwater source.	<p>1.1 Determine work requirements or specifications, including required <i>equipment</i>.</p> <p>1.2 <i>Monitor designated locations</i> within groundwater sources area according to agreed schedule and <i>legislative and organisational requirements</i>.</p> <p>1.3 Monitor water depths according to agreed schedule and procedures.</p> <p>1.4 Collect and record water samples according to organisational requirements.</p> <p>1.5 Take water flow measurements to determine demand and usage rates.</p>
2 Check source areas.	<p>2.1 Identify potential hazards to public and environment and report them to relevant personnel.</p> <p>2.2 Identify and report breaches of legislative and organisational requirements.</p> <p>2.3 Respond to public enquiries in line with organisational requirements.</p>
3 Regulate and report flows.	<p>3.1 Regulate flow control mechanisms according to organisational requirements to maintain system supply.</p> <p>3.2 Produce data relating to system demand adjustments according to organisational requirements.</p>

Required Skills and Knowledge

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

Required skills:

- identify and respond to operational problems
- operate communications equipment
- use tools and equipment
- interpret plans, instructions and standard operating procedures
- perform work-related calculations
- follow procedures and standards
- use safety equipment and personal protective equipment
- identify hazards
- give and receive instructions
- communicate with customers and other employees
- operate effectively as part of a team
- measure water flows and water table levels
- select and collect samples
- identify control system faults
- identify and prevent well contamination
- adjust mechanical and electrical systems
- use literacy skills in regard to verbal and written communication in the workplace
- isolate mains and waterways

Required knowledge:

- OHS standards and requirements
- public and site safety
- system hydraulics and flushing
- system layout
- lock-out procedures for mechanical and electrical installations
- relevant utilities and service bodies
- communication systems
- environmental, landscape and ground structure of work area
- risk factors and potential hazards of groundwater source systems
- well contaminants
- equipment operation, capacity and limitations
- effects of weather and conditions on operation of site or plant
- sampling procedures
- water flow measurement
- control systems
- basic types of bore construction and principles

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for the Training Package.

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

The candidate should demonstrate the ability to operate bore fields and groundwater source systems including:

- monitoring groundwater depth
- taking and processing water samples ready for testing
- taking and recording flow measurements
- monitoring groundwater sources and surrounding area
- reporting environmental problems and breaches
- operating flow control and regulation devices
- recording and reporting work activities

Context of and specific resources for assessment

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence only taken at the point when the assessor has complete confidence in the person's competence over time and in various contexts
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency

demonstrated over a period of time

- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator and cultural issues that may affect responses to the questions, and will reflect the requirements of the competency and the work being performed.

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, if used in the performance criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Equipment used may include:

- electronic digital monitoring and metering systems
- recording systems
- communication equipment, including:
 - two-way radio
 - telephone
 - fax
- basic hand and power tools
- on- and off-road vehicles
- flow control and adjustment equipment
- pumping systems, including:
 - submersible
 - centrifugal
 - multiple stage
 - deep well pumps
- valving systems, including:
 - sluice
 - blade
 - gate
 - non-return
 - pressure reducing
- water table level measuring devices
- personal protective equipment

Monitoring designated locations may require:

- interaction and communication with other employees, other authorities and general public
- visual observation
- directing traffic and the public
- implementation of reporting procedures that may also include procedures for implementation of by-laws, organisational policies and statutory requirements

Legislative and organisational requirements may include:

- relevant federal and state or territory legislation and regulations
- codes of practice, associated standards and guidance material
- documented organisational policies, manuals and induction programs

- relevant community planning and development agreements, such as land care agreements

Unit Sector(s)

Not applicable.

Competency field

Collection and distribution.