



Australian Government

Department of Education, Employment and Workplace Relations

NWP332B Monitor and control drainage operations

Revision Number: 2

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Modification History

NWP322B Release 2: Layout adjusted. No changes to content.

NWP322B Release 1: Primary release.

Unit Descriptor

This unit of competency describes the outcomes required to monitor, operate and control drainage systems. The ability to identify faults, gather data, interpret technical information and operate technical equipment are essential to performance.

Application of the Unit

This unit supports the attainment of skills and knowledge required for field staff with a responsibility for inspecting and reporting faults in drainage systems and for operating, integrating and regulating drainage system processes.

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 Inspect drainage systems.	<p>1.1 Schedule and conduct routine inspections of <i>drainage systems</i> and monitor fault reports according to <i>organisational and statutory requirements</i>.</p> <p>1.2 Collect, analyse and report data on drainage system performance and usage according to organisational and statutory requirements.</p> <p>1.3 Control water sample collecting and recording according to organisational procedures.</p> <p>1.4 Monitor and maintain water according to organisational requirements.</p> <p>1.5 Correctly select, fit and use required safety equipment, including personal protective equipment.</p>
2 Regulate flows.	<p>2.1 Inspect <i>flow regulating systems</i> and apply adjustments necessary to achieve discharge requirements.</p> <p>2.2 Monitor discharge flows and apply diversions required to facilitate repair or emergency.</p>
3 Control and operate processes.	<p>3.1 Control processes to maintain parameters of operation.</p> <p>3.2 Identify, address and report problems and operational conditions of the drainage network according to organisational requirements.</p> <p>3.3 Integrate processes to improve drainage network performance according to organisational requirements.</p>
4. Compile process records.	<p>4.1 Maintain workplace records according to organisational and statutory requirements.</p>

Required Skills and Knowledge

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

Required skills:

- solve operational problems
- produce reports and logs
- use safety equipment and personal protective equipment
- interpret plans, topographic drawings, charts, service diagrams, service search diagrams and instructions
- interpret policies, standard operating procedures and standards
- communicate with employees and customers
- use communication equipment
- give and receive instructions
- identify control system faults

Required knowledge:

- inspection of drainage systems
- coordination processes
- system layout
- system processes
- environmental aspects of drainage systems
- safety procedures
- lock out procedures for mechanical and electrical installations
- policies and standard operating procedures
- procedures and legislation
- relevant utilities and service bodies
- communication systems
- risk factors and potential hazards involved in drainage systems
- equipment operation, capacity and limitations
- effects of weather and conditions on operation of drainage systems
- pipes and fittings
- pumping and valving systems
- gravity systems
- control systems

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 monitor, operate and control drainage systems including:

- monitoring fault reports
- scheduling and conducting inspections
- collecting performance and usage data
- collecting samples
- monitoring water quality
- inspecting and adjusting flow regulating systems
- monitoring discharge flows
- applying diversions as required
- controlling and integrating processes
- identifying and addressing problems
- completing required documentation

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/or 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, any cultural issues that may affect responses to the questions, and reflecting 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.

Drainage systems may include:

- urban and rural locations
- pumping stations
- discharge outlets
- drainage inlets
- open channel and canal systems

Organisational and statutory requirements may include:

- by-laws and organisational policies
- standard operating procedures
- environment protection
- equal employment opportunity
- occupational health and safety, including use of personal protective equipment
- electrical and mechanical procedures
- dangerous goods
- World Health Organisation and National Health and Medical Research Council (NHMRC) guidelines

Flow regulating systems may include:

- pumping systems
- valving systems
- gravity systems
- emergency overflow and diversion systems
- metered pits
- flow chambers
- control systems

Unit Sector(s)

Not applicable.

Competency field

Collection and distribution.