



Australian Government

NWPNET053 Test and commission water distribution systems

Release: 1

NWPNET053 Test and commission water distribution systems

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Application

It includes planning and implementing the testing and commissioning of water distribution systems. It includes interpreting technical information, identifying and assessing hazards and performing technical testing procedures.

This unit applies to those working as field staff and operators with specific responsibility for commissioning water distribution systems, post-installation or repair, and for ensuring that the functioning of the system complies with relevant specifications and organisational requirements. Those undertaking this unit would work under appropriate supervision, while performing routine tasks, in a familiar context, and ensuring minimum damage to the environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Networks

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare for testing and

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Locate section of distribution system to be tested using

commissioning		plans and diagrams
	1.2	Identify and interpret system operation requirements according to workplace procedures
	1.3	Identify and assess potential hazards and take preventive measures according to workplace procedures
	1.4	Select and use tools and equipment according to manufacturer instructions
	1.5	Check testing equipment for accuracy and identify and correct malfunctions
2	Maintain water system hygiene	2.1 Arrange disinfection of construction asset according to workplace procedures
	2.2	Isolate and flush the relevant section of the distribution system according to workplace procedures
	2.3	Dispose of discharged water according to workplace procedures
3	Test the pipeline system	3.1 Determine the correct test pressure for the pipeline according to workplace procedures
	3.2	Locate and report failed pipes, joints and fittings and reschedule testing
4	Commission the distribution system	4.1 Ensure the distribution system is operational according to workplace procedures
	4.2	Check, maintain and store equipment, tools and materials according to manufacturer instructions
	4.3	Restore worksite according to workplace procedures
5	Record and report results	5.1 Maintain workplace and calibration records and certificates
	5.2	Collect and store all testing and compliance results

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to NWPNET044 Test and commission water distribution systems.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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Assessment Requirements for NWPNET053 Test and commission water distribution systems

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes:

- cleaning a water distribution system using at least one of the following techniques:
 - air scouring
 - flushing
 - pigging
 - swabbing
- commissioning the distribution system
- completing required reports and records
- conducting test procedures
- identifying and addressing hazards
- identifying and analysing system requirements
- identifying system faults
- maintaining the quality of water in the system
- monitoring work processes and ensuring safe work practices
- planning the testing of water distribution systems
- restoring worksite and equipment
- testing and commissioning water distribution systems
- testing pipes

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of:

- characteristics of pipes, materials and fittings
- environmental aspects of flushing and test procedures
- relevant legislation, regulations and workplace procedures
- risk factors and potential hazards of test procedures
- testing equipment operation
- testing methods used for water distribution systems

- water hygiene and system disinfection requirements.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including legislation, regulations, codes of practice, workplace procedures and operation manuals.

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