



Australian Government

NWPNET028 Monitor and operate network systems

Release: 1

NWPNET028 Monitor and operate network systems

Modification History

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

Application

This unit involves the skills and knowledge required to monitor and operate network systems.

It includes planning and preparing the worksite, monitoring performance and usage of distribution systems.

This unit applies to those working as field and operational staff with responsibility for water distribution systems including practical delivery, monitoring and regulation of reticulated water distribution services. Those undertaking this unit would work under appropriate supervision, while performing routine tasks, in a familiar context, 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 Establish network systems and prepare worksite

PERFORMANCE CRITERIA

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

1.1 Conduct risk assessment for environmental, safety and water quality factors according to authorities and workplace procedures

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| | 1.2 | Identify network system layout and determine operational problem areas from job specifications, plans and charts |
| | 1.3 | Operate and adjust water reticulation system according to standard operating procedures and manufacturer instructions |
| | 1.4 | Select and check relevant equipment and personal protective equipment to meet safety requirements of task and worksite |
| | 1.5 | Identify and locate isolation valves and hydrants according to workplace maps and plans |
| | 1.6 | Collect and report data on system performance and usage |
| 2 | Operate pump station | |
| | 2.1 | Identify and set or adjust pump station components |
| | 2.2 | Check and report on storage levels |
| | 2.3 | Identify faults and adjust system according to manufacturer instructions |
| 3 | Monitor performance and usage of distribution systems | |
| | 3.1 | Identify fluctuations in supply, system changes, community demands and water quality complaints |
| | 3.2 | Collect, calculate and report data on system performance and usage |
| | 3.3 | Collect and record water samples to monitor water quality |
| 4 | Regulate flow and pressure and identify issues | |
| | 4.1 | Inspect flow regulating systems and adjust to meet demand requirements |
| | 4.2 | Regulate and divert flows to facilitate repair or emergency activities |
| | 4.3 | Monitor and adjust pressure to meet optimum delivery |
| | 4.4 | Investigate and report pressure fluctuations to relevant personnel |
| | 4.5 | Document and report reticulation and distribution information to relevant personnel |

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 NWPNET004 Monitor and operate network 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 NWPNET028 Monitor and operate network 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:

- collecting data
- collecting samples
- conducting risk assessment and identifying hazards
- following plans, charts and instructions
- identifying and responding to operational problems
- identifying conditions of system
- identifying system faults
- implementing remedial action to maintain supply
- installing and operating a stand pipe or fire plug
- monitoring and adjusting pressure
- monitoring and diverting flow
- monitoring system performance and usage
- operating reticulation and distribution systems
- performing work-related calculations
- preparing worksite
- producing reports
- recording water losses
- using tools and machinery

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:

- conditions for connection to live water mains
- control systems
- effects of weather conditions on systems, site or plant
- electrical safety for disconnecting and changing meters and fittings
- environmental aspects of operation
- equipment operation, capacity and limitations including water hammer

- impact of the principles of hydraulics on the operation of flows
- isolation procedures
- relevant legislation, regulations and workplace procedures
- risk factors and potential hazards of operating water distribution systems
- standard operating procedures and manufacturer instructions
- system layout and performance
- water hammer
- water pumping stations and reservoirs
- water quality

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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