



Australian Government

NWPTRT027 Monitor and operate wastewater treatment processes

Release: 1

NWPTRT027 Monitor and operate wastewater treatment processes

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 operate and control wastewater processes. It includes monitoring and operating wastewater treatment plants, reporting system performance and process quality control. It also includes ensuring wastewater disposal or re-use meets state or territory legislative requirements.

This unit applies to operational staff in wastewater treatment plants with responsibility for the practical and safe operation of plant, equipment and processes. Those undertaking this unit would work under appropriate supervision, performing routine tasks within a familiar context.

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

Pre-requisite Unit

Not applicable.

Competency Field

Treatment

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare for work

PERFORMANCE CRITERIA

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

1.1 Determine work requirements from job specifications and plans

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|--------------------------------------|------------|--|
| | 1.2 | Select and check equipment required to meet safety requirements task and worksite |
| | 1.3 | Select, fit and use required safety equipment including, personal protective equipment (PPE) |
| 2 Monitor treatment processes | 2.1 | Inspect plant according to workplace procedures |
| | 2.2 | Collect process samples and conduct standard tests according to workplace procedures |
| | 2.3 | Operate wastewater treatment processes according to workplace procedures |
| | 2.4 | Perform adjustments to enhance system performance |
| 3 Complete documentation | 3.1 | Collect, record and complete process data according to workplace procedures and process requirements |
| | 3.2 | Identify, data outside of operational parameters and report to relevant personnel for further action |

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 NWPTRT061 Operate and control wastewater processes.

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 NWPTRT027 Monitor and operate wastewater treatment processes

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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:

- applying workplace procedures
- completing documentation
- conducting routine plant inspections
- operating and adjusting at least one of the following processes:
 - primary treatment
 - secondary treatment
 - tertiary treatment
 - solids management
- taking samples and performing standard tests

Knowledge Evidence

- chemical and biological principles of wastewater treatment
- hydraulics and organic loading in wastewater plants
- physical, chemical and microbiological characteristics of wastewater treatment
- preliminary treatment, primary treatment, secondary treatment, tertiary treatment and solids management
- reasons for wastewater treatment
- relevant workplace procedures, guidelines and industry standards
- state or territory legislative requirements for wastewater treatment processes
- risk factors and potential hazards relating to wastewater treatment
- sources of wastewater
- types of components
- water cycle

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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