



Australian Government

NWPTRT066 Assess and improve wastewater processes to control microbial impacts

Release: 1

NWPTRT066 Assess and improve wastewater processes to control microbial impacts

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 assess and improve wastewater processes to control microbial impacts.

It includes identifying wastewater microorganisms and selecting appropriate measures to optimise the growth of beneficial microorganisms.

This unit applies to those working as wastewater treatment operational specialists. Those undertaking this unit would work autonomously, usually with supervisory responsibilities, while performing complex tasks in a range of contexts.

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 Investigate wastewater microorganisms

PERFORMANCE CRITERIA

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

1.1 Identify a range of typical wastewater microorganisms

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| | 1.2 | Identify the general characteristics of different types of microorganisms |
| | 1.3 | Identify wastewater characteristics that impact on microorganism growth |
| | 1.4 | Identify the problems caused by microorganisms in specific wastewater treatment processes |
| 2 | Select strategies to optimise the growth of beneficial microorganisms | |
| | 2.1 | Investigate the cause of effluent quality issues |
| | 2.2 | Investigate the operational status of the wastewater treatment process |
| | 2.3 | Assess the effectiveness of various process control strategies to optimise the growth of beneficial microorganisms |
| | 2.4 | Identify hazards, assess risks and control measures according to workplace procedures |
| 3 | Identify and report on appropriate process controls | |
| | 3.1 | Identify treatment process conditions for optimising the growth of beneficial microorganisms |
| | 3.2 | Compile report with recommendations for optimising the growth of beneficial microorganisms |

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 NWPTRT085 Assess and improve wastewater processes

and microbial impacts.

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for NWPTRT066 Assess and improve wastewater processes to control microbial impacts

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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:

- compiling reports with recommendations for optimising the growth of beneficial microorganisms
- identifying a range of beneficial wastewater microorganisms
- identifying a range of wastewater microorganisms and their general characteristics and types of problems caused
- identifying and responding to risks and hazards associated with wastewater microorganisms
- identifying and selecting strategies for optimising the beneficial growth of microorganisms
- interpreting a range of complex and technical documents including at least one of the following:
 - codes of practice
 - national and industry standards
 - organisational policies
 - regulatory, legislative, licensing and organisational requirements
 - specifications
- investigating causes of effluent quality issues

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 include knowledge of:

- effluent quality problems caused by wastewater microorganisms
- operational problems caused by wastewater microorganisms
- principles of maintaining beneficial organisms in wastewater treatment processes
- relevant legislation, industry standards and workplace policies and procedures
- risk and hazard management principles
- types and applications of chemical additives
- types, lifecycle, characteristics of wastewater microorganisms
- workplace reporting 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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