



Australian Government

NWPTRT038 Operate and control fixed film processes

Release: 1

NWPTRT038 Operate and control fixed film 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 fixed film processes.

It includes monitoring fixed film processes such as trickling filters, Moving Bed Bioreactor and rotating biological contactors. It also includes measuring and reporting on system performance and process quality control.

This unit applies to operational staff with a specific responsibility for fixed film processes in treatment assets. Those undertaking this unit would work under appropriate supervision, while performing routine tasks, within a range of familiar 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 Prepare for work

PERFORMANCE CRITERIA

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

1.1 Monitor test results and processes to maintain parameters of operation

1.2 Select and check equipment required to meet safety

		requirements of task and worksite
	1.3	Select, fit and use required safety equipment, including personal protective equipment (PPE)
2	Operate and control fixed film aerobic bioreactor processes	
	2.1	Conduct routine inspections according to workplace procedures
	2.2	Identify and report faults to relevant personnel
	2.3	Collect process samples and conduct standard tests according to workplace procedures
	2.4	Interpret data and make process adjustments to maintain operational parameters
3	Complete documentation	
	3.1	Collect, interpret and record process data according to workplace procedures and process requirements
	3.2	Identify data outside of normal operational parameters 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 NWPTRT083 Operate and control aerobic bioreactor 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 NWPTRT038 Operate and control fixed film processes

Modification History

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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 and completing required documentation
- completing reports
- conducting routine asset inspections
- identifying and correcting operational and control system problems
- identifying and reporting faults
- making process adjustments
- monitoring test results
- performing relevant process calculations
- taking samples and performing tests

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:

- asset layout
- equipment operation, capacity and limitations
- features and components of fixed film systems
- fixed film adjustment processes
- flow measurement
- operational problems
- principles of fixed film aerobic wastewater treatment
- process calculations
- process operation and monitoring
- recirculation principles
- relevant legislation, regulations and workplace procedures
- risk factors and potential hazards relating to fixed film systems
- types of fixed film processes and variations
- process calculations including:
 - hydraulic and organic loading rates

- recirculation ratios
- tests including:
 - dissolved oxygen
 - microscopic observation
 - pH
 - settling tests

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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