



Australian Government

NWPTRT060 Assess and improve membrane bioreactor processes

Release: 1

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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 membrane bioreactor (MBR) processes.

It includes evaluating MBR process performance, investigating MBR plant configuration and options for process optimisation. It also includes developing and recording a plan for process optimisation.

This unit applies to workers responsible for operating an MBR plant ensuring system operations are coordinated and monitored to ensure compliance with organisational and statutory requirements. 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

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PERFORMANCE CRITERIA

Elements describe the essential outcomes.

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

1 Evaluate membrane bioreactor processes

1.1 Review existing process performance and maintenance data against relevant organisational and legislative

	requirements
	1.2 Identify the impact of changing influent water quality on membrane processes
	1.3 Identify any additional sampling and testing required for valid evaluation of current process performance
	1.4 Identify the impact of mixed liquor on membrane processes
2 Investigate membrane bioreactor plant configuration	2.1 Review existing fault reports and other plant asset information
	2.2 Investigate the operational status of plant components with reference to manufacturer and plant design specifications
	2.3 Contribute to plant configuration investigations to identify potential operational improvements
	2.4 Identify hazards, assess risks and control measures according to workplace procedures
3 Investigate options for membrane process optimisation	3.1 Review current membrane processes with reference to organisational protocol to identify potential deficiencies
	3.2 Identify and investigate new or additional chemicals and related dosing options
4 Develop and record a plan for process optimisation	4.1 Plan a trial to test the performance of the determined optimisation options
	4.2 Compile report with recommendations on optimisation options

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 NWP - National Water Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This is a new unit. No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -

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