



Australian Government

NWPTRT043 Operate and control membrane filters

Release: 1

NWPTRT043 Operate and control membrane filters

Modification History

Release	Comments
1	This unit was released in NWP Water Training Package release 1.0 and meets the Standards for Training Packages. This unit supersedes and is equivalent to NWP355B Monitor, operate and control membrane filtration processes. • Unit code updated • Content and formatting updated to comply with the new standards • All PC transitioned from passive to active voice • Unit title changed to better reflect unit outcomes

Application

This unit of competency describes the skills required to monitor, operate and control membrane filtration plant, including micro and ultrafiltration, and to measure and report on system performance and process quality control. The ability to identify faults, determine and apply technical adjustments and conduct chemical dosing procedures is essential to performance.

This unit applies to operational staff members with a specific responsibility for membrane filtration processes in treatment plants.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to, particularly those relating to WHS.

Those undertaking this unit would work under supervision, while performing routine tasks, within a familiar context.

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

Competency Field

Treatment

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Monitor membrane filtration plant performance	1.1 Monitor test results and processes to maintain the parameters of operation. 1.2 Identify and report process faults and the operational condition of plant. 1.3 Select, fit and use required safety equipment, including personal protective equipment.
2. Control chemical use	2.1 Use, handle and store chemicals. 2.2 Determine chemical dosing. 2.3 Maintain chemical supply and usage records.
3. Operate and control membrane filtration process	3.1 Carry out routine plant inspections. 3.2 Conduct and analyse process tests and determine performance against plant operational requirements. 3.3 Make integrated process adjustments to improve system performance.
4. Complete documentation	4.1 Collect and record process data. 4.2 Report observations outside defined parameters for further action.

Foundation Skills

The foundation skills demands of this unit have been mapped for alignment with the Australian Core Skills Framework (ACSF). The following tables outline the performance levels indicated for successful attainment of the unit.

ACSF levels indicative of performance:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Learning					Reading					Writing					Oral communication					Numeracy				

Performance variables:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Support					Context					Text complexity					Task complexity				

Further information on ACSF and the foundation skills underpinning this unit can be found in the Foundation Skills Guide on the GSA website.

Unit Mapping Information

This unit supersedes and is equivalent to NWP355B Monitor, operate and control membrane filtration 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 NWPTRT043 Operate and control membrane filters

Modification History

Release	Comments
1	These Assessment Requirements were released in NWP Water Training Package release 1.0 and meet the Standards for Training Packages. • Assessment Requirements created drawing upon specified assessment information from superseded unit

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- identifying and correcting operational problems
- producing reports and logs
- performing system calculations
- identifying control system faults
- monitoring test results and processes
- identifying and reporting faults
- taking samples and performing basic tests
- making basic process adjustments, including at least one of:
 - pH correction
 - backwash frequency
 - clean in place cycles
- collecting data and completing required documentation

Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- system layout
- system processes
- lockout procedures for mechanical and electrical installations
- hazardous materials handling

- risk factors and potential hazards involved with membrane filtration processes
- interpretation of safety data sheets
- equipment operation, capacity and limitations
- pumping and valving systems
- mechanical and electrical control systems
- principles that form the basis of membrane filtration processes for water or wastewater treatment

Assessment Conditions

Competency should be assessed in an actual workplace or in a simulated environment, with access to equipment and infrastructure appropriate to the outcome. Competency should be demonstrated over time to ensure the candidate is assessed across a variety of situations.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

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