



**Australian Government**

# **NWPTRT041 Operate and control granular media filters**

**Release: 1**

## NWPTRT041 Operate and control granular media filters

### Modification History

| Release | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | <p>This unit was released in NWP Water Training Package release 1.0 and meets the Standards for Training Packages.</p> <p>This unit supersedes and is equivalent to NWP354B Monitor, operate and control granular media filtration processes.</p> <ul style="list-style-type: none"><li>• Unit code updated</li><li>• Content and formatting updated to comply with the new standards</li><li>• All PC transitioned from passive to active voice</li><li>• Unit title changed to better reflect unit outcomes</li></ul> |

### Application

This unit of competency describes the outcomes required to monitor, operate and control granular media filtration plant, 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 supports the attainment of skills and knowledge required for operational staff with a specific responsibility for granular media 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.

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.                                                     |
| <b>1. Monitor filtration plant performance</b>     | 1.1 Monitor test results and processes.<br>1.2 Identify and report process faults and the operational condition of plant.                                                                                                                                   |
| <b>2. Operate and control filtration processes</b> | 2.1 Carry out routine plant inspections.<br>2.2 Collect process samples and conduct standard tests.<br>2.3 Perform process calculations associated with granular media filtration.<br>2.4 Carry out basic system adjustments to enhance system performance. |
| <b>3. Complete documentation</b>                   | 3.1 Collect and record process data.<br>3.2 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 NWP354B Monitor, operate and control granular media 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 NWPTRT041 Operate and control granular media filters

## Modification History

| Release | Comments                                                                                                                                                                                                                                                                                      |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | <p>These Assessment Requirements were released in NWP Water Training Package release 1.0 and meet the Standards for Training Packages.</p> <ul style="list-style-type: none"><li>Assessment Requirements created drawing upon specified assessment information from superseded unit</li></ul> |

## 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.

- solving operational problems
- completing reports and logs
- using safety and personal protective equipment
- performing process calculations
- performing system calculations
- identifying control system faults
- monitoring test results and processes
- identifying and reporting faults
- conducting routine plant inspections
- taking samples and performing basic tests
- making basic process adjustments, including at least one of:
  - pH correction
  - filtration rate
  - backwash settings
  - filter aid dosing
- 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.

- pressure sand filter hydraulics, gravity sand filter hydraulics, backwash hydraulics
- system layout
- lockout procedures for mechanical and electrical installations
- hazardous materials handling
- risk factors and potential hazards relating to granular media filtration processes
- equipment operation, capacity and limitations
- pumping and valving systems
- control systems policies and procedures for storing and handling dangerous goods and chemicals
- interpretation and use of material safety data sheets
- principles that form the basis of granular media filtration processes

## 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.

Some components of this unit require assessment in a workplace environment therefore the unit is not suitable for fully external or electronic based assessment.

Consideration must be given to holistic assessment for this unit. Refer to advice in the companion volumes.

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

## Links

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