



Australian Government

NWPTRT031 Operate and control sedimentation and clarification processes

Release: 1

NWPTRT031 Operate and control sedimentation and clarification processes

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 NWP348B Monitor, operate and control sedimentation and clarification 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 outcomes required to monitor, operate and control sedimentation and clarification plant; and to measure and report on system performance and process quality control. The ability to identify faults, determine and apply technical adjustments, conduct chemical dosing procedures and produce technical reports are essential to performance.

This unit supports the attainment of skills and knowledge required for operational staff with a specific responsibility for sediment and clarification processes in water 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 safety.

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

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 sedimentation and clarification 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.
2. Control chemical use	2.1 Use, handle and store chemicals. 2.2 Prepare and apply chemical dosing. 2.3 Maintain chemical supply and usage records.
3. Operate and control sedimentation and clarification processes	3.1 Carry out routine plant inspections. 3.2 Collect process samples and conduct standard tests. 3.3 Perform process calculations associated with sedimentation and clarification processes. 3.4 Carry out system adjustments to enhance system performance.
4. Complete documentation	4.1 Collect and report 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 NA					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 NWP348B Monitor, operate and control sedimentation and clarification 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 NWPTRT031 Operate and control sedimentation and clarification processes

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.

- producing reports and logs
- performing process calculations
- preparing and applying chemical dosing
- identifying control system faults
- sampling and testing products
- conducting routine plant inspections
- taking samples and performing basic tests
- making basic system adjustments
- 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
- lockout procedures for mechanical and electrical installations
- relevant utilities and service bodies
- settling aids
- theory of enhanced particle settling including chemical and physical processes
- hazardous materials handling
- environment, landscape and ground structure of work area

- risk factors and potential hazards relating to water and/or wastewater treatment
- chemical dosing processes
- equipment operation, capacity and limitations
- effects of weather and conditions on operation of site or plant
- pumping and valving systems
- control systems' policies and procedures for storing and handling dangerous goods and chemicals
- SDS
- coagulation/flocculation theory and operation
- chemical and/or biological principles that form the basis of sedimentation and clarification 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.

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

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