



Australian Government

NWPTRT057 Assess and improve coagulation and flocculation 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 coagulation and flocculation processes.

It includes reviewing, coordinating and optimising coagulation and flocculation processes and evaluating and reporting on system performance and process quality control.

This unit applies to those working as technical staff with a responsibility for optimising chemical addition processes in water treatment plants and processes. 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

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

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

1 Evaluate coagulation and flocculation process

1.1 Review existing process performance data against coagulation and flocculation organisational operating

performance	protocol
	1.2 Identify the impact of changing raw water quality on coagulation and flocculation processes
	1.3 Identify any additional sampling and testing required for valid evaluation of current process performance
2 Investigate coagulation and flocculation configuration	2.1 Assess 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 coagulation and flocculation for process optimisation	3.1 Review current coagulation and flocculation practices with reference to organisational protocol to identify potential deficiencies
	3.2 Investigate dosing options for current chemicals
	3.3 Identify and investigate tests to assess effectiveness of existing or alternative chemicals and related dosing options
4 Develop and record a plan for process optimisation	4.1 Determine plant configuration or chemical options for process optimisation
	4.2 Plan a trial to test the performance of the determined optimisation options
	4.3 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 Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to NWPTRT011 Assess and improve chemical dosing process.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>