



Australian Government

Assessment Requirements for NWPTRT009 Operate and control 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.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes:

- applying optimised jar test results to the process
- completing required documentation including at least one of the following:
 - process set point changes
 - routine maintenance reports
 - routine plant inspection and safety checks
 - water quality and safety incident reports
 - water quality sampling and test results
- conducting routine plant inspections
- identifying and reporting system faults
- making system adjustments including at least one of the following:
 - coagulant or flocculant dosing
 - pH correction
- preparing and applying chemical dosing
- preparing jar test solutions and solutions strengths
- producing reports
- performing process calculations for at least one of the following:
 - dry and liquid chemical feed rates
 - jar test dosages
 - mixing intensity
 - preparation of dosing solutions
- taking samples, performing a jar test and at least two of the following:
 - alkalinity
 - true colour
 - dosage feed rate review and checks
 - drop tests
 - flocculation growth and size
 - flocculation time

- mixing energy
- mixing time
- pH
- residual aluminium or iron
- turbidity

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of:

- chemical dosing procedures
- chemical handling and storage procedures
- chemicals including:
 - coagulants
 - flocculants
 - pH correction
- coagulation and flocculation control systems
- effects of weather and conditions on operation of site or plant
- features and components of coagulation and flocculation systems including mixing
- jar testing principles
- plant layout
- principles of coagulation and flocculation processes
- safety data sheets
- relevant legislation, regulations and workplace procedures
- risk factors and controls for potential hazards related to coagulation and flocculation systems

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry

- applicable documentation including legislation, regulations, codes of practice, workplace procedures and operation manuals.

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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