



Australian Government

NWPCAD003 Identify and confirm blue-green algae outbreaks

Release: 1

NWPCAD003 Identify and confirm blue-green algae outbreaks

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 identify and confirm blue-green algae outbreaks.

It includes confirming and conducting algae sampling, preparing samples for testing, identifying and enumerating blue-green algae. It also includes completing documentation.

This unit applies to those working as operational staff with a specific responsibility for ensuring that water and/or wastewater quality conforms to organisational standards and complies with statutory requirements. Those undertaking this unit would work under appropriate supervision, while performing routine tasks within a familiar context.

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

Pre-requisite Unit

Not applicable.

Competency Field

Catchment and Dams

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Confirm and conduct algae sampling

PERFORMANCE CRITERIA

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

1.1 Determine work requirements for identifying and confirming algae outbreaks in line with specifications and instructions

	1.2	Select and prepare sampling equipment according to specified samples required
	1.3	Select, fit and use personal protective equipment
	1.4	Perform algae sampling according to workplace procedures
	1.5	Maintain integrity of samples during sampling and testing
	1.6	Label samples according to workplace procedures
2	Receive and prepare samples for testing	
	2.1	Receive, handle and prepare samples for testing according to workplace procedures
	2.2	Prepare and check testing equipment for blue-green algae identification and enumeration
	2.3	Handle algae samples using correct safety procedures
3	Identify and enumerate blue-green algae	
	3.1	Conduct microscopic examination of algae sample according to workplace procedures
	3.2	Determine number of cells and calculate cell concentration
4	Complete documentation	
	4.1	Complete data report of the blue-green algae test results
	4.2	Identify and report observations outside defined parameters to relevant personnel for further action

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 NWPSOU003 Identify and confirm blue-green algae

outbreaks.

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 NWPCAD003 Identify and confirm blue-green algae outbreaks

Modification History

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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:

- conducting blue-green algae identification and enumeration tests
- identifying algae types
- interpreting instructions
- interpreting policies, procedures and standards
- maintaining integrity of samples
- performing algae sampling
- performing calculations including:
 - cell concentration
 - Sedgwick-Rafter Counting Chamber
- recording information and reporting data
- reporting test results
- using at least one of the following sampling techniques:
 - concentrated
 - grab
 - integrated
- using safety and personal protective equipment

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:

- characteristics of algae
- effects of weather on algae blooms
- environmental factors which favour the growth of algae
- hazards associated with collection and handling of blue-green algae samples
- impact of blue-green algae on water and/or wastewater treatment processes
- problems caused by algal blooms
- procedures and techniques for all algae sampling

- relevant legislation, regulations and workplace procedures
- sampling and testing of water quality parameters related to algae growth
- types and purposes of algae samples

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.

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