



Australian Government

Department of Education, Employment and Workplace Relations

NWP368A Respond to blue green algae incidents

Revision Number: 2

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Modification History

NWP368A Release 2: Layout adjusted. No changes to content.

NWP368A Release 1: Primary release.

Unit Descriptor

This unit of competency describes the outcomes required to respond to blue green algae blooms. The ability to identify problems, determine and apply technical adjustments and produce technical reports are essential to performance.

Application of the Unit

This unit supports the attainment of skills and knowledge required for operational staff with a specific responsibility for ensuring that water and/or wastewater quality conforms to organisational standards and complies with statutory requirements.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Where <i>bold italicised</i> text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Confirm blue green algae outbreaks.	1.1 Receive and confirm reports of blue green algal bloom in accordance with <i>organisational and statutory requirements</i> . 1.2 Verify the extent and locations of blue green algae outbreaks.
2 Respond to blue green algae incidents.	2.1 Evaluate potential blue green algae <i>control methods</i> and select and implement appropriate actions according to organisational procedures. 2.2 Collect, interpret and report <i>process data</i> according to organisational and plant requirements. 2.3 Implement <i>response plans</i> according to organisational requirements.
3 Compile blue green algae reports.	3.1 Compile <i>reports</i> to meet organisational requirements. 3.2 Report observations outside defined parameters for further action.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required skills:

- identify and respond to blue green algae problems
- produce reports and logs
- use safety and personal protective equipment
- interpret instructions
- interpret policies, procedures and standards
- communicate with employees and/or customers
- use communication equipment
- give and receive instructions
- work effectively as part of a team
- determine process requirements
- operate control equipment
- perform system calculations

Required knowledge:

- characteristics of blue green algae
- problems caused by blue green algae blooms
- methods of blue green algae control
- strategy and emergency planning
- policies, procedures and legislation
- relevant utilities and service bodies
- communication systems
- hazardous materials handling for algicides
- material safety data sheets
- impact of blue green algae on water and/or wastewater treatment processes
- risk factors and potential hazards
- equipment operation, capacity and limitations

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The candidate should demonstrate the ability to implement response plans and report blue algae incidents according to organisational and statutory requirements.

Context of and specific resources for assessment

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards, and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and/or assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence only taken at the point when the assessor has complete confidence in the person's competence over time and in various contexts
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the

underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator, any cultural issues that may affect responses to the questions, and reflecting the requirements of the competency and the work being performed.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Control methods may include:

- use of alternative water supplies
- changes to off take levels
- flow and water level control
- land utilisation of wastewater effluent
- mixing
- scum barriers
- mechanical removal processes
- micro straining
- dissolved air flotation
- chemical treatment
- activated carbon
- algicides
- nutrient removal
- oxidation

Organisational and statutory requirements may include:

- by-laws and organisational policies
- standard operating procedures including for:
 - chemicals
 - dangerous goods
 - lifts and cranes
- environment protection
- occupational health and safety, including use of personal protective equipment
- Australian Drinking Water Guidelines
- National Water Quality Management strategy
- World Health Organisation standards
- licensing agreements
- Environment Protection Authority regulations

Process data may include:

- cell counts
- blue green algae type
- toxicity
- odour
- location of bloom
- water clarity
- flow rates

Response plans may include:

- contingency plans
- nutrient control plans
- emergency management plans

Reports may include:

- organisational reports:
 - alert levels
 - government agencies
 - water users/special consumers
 - media
- environmental reports
- chemical usage
- plant performance data

Unit Sector(s)

Not applicable.

Competency field

Treatment.