



Australian Government

NWPTRT024 Operate and control chloramination processes

Release: 1

NWPTRT024 Operate and control chloramination processes

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 operate and control chloramination processes.

It includes monitoring chloramination processes, measuring and reporting on system performance and process quality control. It also includes identifying faults, determining and applying technical adjustments.

This unit applies to operational staff with a specific responsibility for chloramination processes. Those undertaking this unit would work under appropriate supervision, while performing routine tasks, within a range of familiar 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

Elements describe the essential outcomes.

1 Prepare for work

PERFORMANCE CRITERIA

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

1.1 Determine work requirements from job specifications and plans

	1.2	Select and check equipment required to meet safety requirements of task and worksite
	1.3	Select, fit and use required safety equipment, including personal protective equipment (PPE)
2 Operate and control chloramination processes	2.1	Conduct routine inspections according to workplace procedures
	2.2	Identify and report process to relevant personnel
	2.3	Collect process samples and conduct chlorine residual tests according to workplace procedures
	2.4	Interpret data and make process adjustments to maintain operational parameters
3 Apply chloramination chemical dosing	3.1	Use, handle and store chemicals according to workplace procedures
	3.2	Determine and apply chemical dosing according to system specifications and organisational requirements
	3.3	Maintain information related to chlorine and ammonia supply and usage
4 Complete documentation	4.1	Collect, interpret and record process data according to workplace procedures and process requirements
	4.2	Identify data outside of normal operational parameters and report 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 NWPTRT054 Operate and control chloramination

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 NWPTRT024 Operate and control chloramination processes

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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:

- analysing tests
- collecting samples and conducting at least one of the following tests:
 - ammonia and hypochlorite strength
 - free chlorine
 - monochloramine
 - pH
 - total chlorine
- identifying and reporting process and operational faults
- making at least one of the following appropriate system adjustments:
 - ammonia feed rate
 - calibration of chemical dosing equipment
 - chlorine feed rate
 - chlorine to ammonia ratio
 - flow rate
- monitoring chloramination systems
- operating control and chemical dosing equipment
- performing at least one of the following chloramination process calculations:
 - chlorine and ammonia dosage rate
 - chlorine to ammonia ratio
 - dichloramine concentration
- preparing and applying at least one of the following chloramination chemical dosings:
 - anhydrous ammonia
 - aqua ammonia
 - liquefied chlorine gas
 - pH correcting chemicals including lime soda ash
 - sodium hydroxide
 - sodium hypochlorite

Knowledge Evidence

- chloramination process theory
- chlorine and ammonia dosing equipment
- control systems
- equipment operation, capacity and limitations
- microbiological aspects of water quality
- operational problems including nitrification
- reasons for chloramination
- risk factors and potential hazards associated with chloramination processes
- workplace policies and procedures, legislation and industry codes of practice

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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