



**Australian Government**

# **NWPGEN013 Apply principles of chemistry to water systems and processes**

**Release: 1**

## NWPGEN013 Apply principles of chemistry to water systems and processes

### Modification History

Release	Comments
1	<p>This unit was released in NWP Water Training Package release 1.0 and meets the Standards for Training Packages.</p> <p>This unit supersedes and is equivalent to NWP404A Apply principles of chemistry to water systems and processes.</p> <ul style="list-style-type: none"> <li>• Unit code updated</li> <li>• Content and formatting updated to comply with the new standards</li> <li>• All PC transitioned from passive to active voice</li> </ul>

### Application

This unit describes the skills required to identify and apply to water systems and processes the principles of chemistry, and to select the relevant and effective chemicals required for specific processes.

This unit applies to a range of operational roles within the water industry and is fundamental to all quality monitoring and treatment processes.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to.

Those undertaking this unit would work independently while performing complex tasks within a range of contexts.

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

### Competency Field

General

### Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the	Performance criteria describe the performance needed to demonstrate

essential outcomes	achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
<b>1. Apply chemistry to water processes</b>	1.1 Apply relevant chemistry principles to improve performance of specific water processes. 1.2 Identify and describe chemical reactions specific to water processes.
<b>2. Identify the use of chemicals in water industry processes</b>	2.1 Assess the functions of the range of industry chemicals in relation to their use in water processes. 2.2 Identify and describe factors influencing the effectiveness of chemical use. 2.3 Store, handle and prepare chemicals.
<b>3. Select chemicals for specific water industry processes</b>	3.1 Identify the range of chemicals available for specific water industry processes. 3.2 Evaluate the factors affecting the selection of chemicals for particular water industry applications. 3.3 Select suitable chemicals and calculate correct usage for a range of specific water industry processes.

## Foundation Skills

The foundation skills demands of this unit have been mapped for alignment with the Australian Core Skills Framework (ACSF). The following tables outline the performance levels indicated for successful attainment of the unit.

ACSF levels indicative of performance :

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Learning					Reading					Writing					Oral communication					Numeracy				

Performance variables

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Support					Context					Text complexity					Task complexity				

Further information on ACSF and the foundation skills underpinning this unit can be found in the Foundation Skills Guide on the GSA website.

## Unit Mapping Information

This unit supersedes and is equivalent to NWP404A Apply principles of chemistry to water systems and processes.

## Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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