



Australian Government

NWPTRT040 Operate and control digestion processes

Release: 2

NWPTRT040 Operate and control digestion processes

Modification History

Release 2. Performance evidence point 4 reworded and moved to knowledge evidence.

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 digestion processes.

It includes reporting on system performance within domestic and industrial wastewater treatment plants. It also includes conducting inspections, identifying process faults and collecting samples.

This unit applies to operational staff with specific responsibility for operating anaerobic processes in treatment plants and checking that the processes comply with organisational requirements. Those undertaking this unit would work under appropriate supervision, 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

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 site
	1.3	Select, fit and use required safety equipment, including personal protective equipment (PPE)
2	Operate and control processes	
	2.1	Conduct routine inspections according to workplace procedures
	2.2	Identify and report process faults to relevant personnel
	2.3	Collect process samples and conduct standard tests according to workplace procedures
	2.4	Interpret data and make process adjustments to maintain operational parameters
3	Complete documentation	
	3.1	Collect, interpret and record process data according to workplace procedures and process requirements
	3.2	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 NWPTRT092 Operate and control digestion processes.

Links

Companion Volume implementation guides are found in VETNet -

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

Companion Volume implementation guides are found in VETNet -

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

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for NWPTRT040 Operate and control digestion processes

Modification History

Release 2. Performance evidence point 4 reworded and moved to knowledge evidence.

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 process formulae of at least one of the following:
 - solids loading
 - solids retention time
 - volatile acids to alkalinity ratio
- collecting data and completing documentation
- making process adjustments according to instructions including at least one of the following:
 - feed rate
 - mixing
 - pH
 - sludge withdrawal
- planning and conducting routine inspections
- taking samples and performing at least one of the following tests:
 - alkalinity (anaerobic)
 - gas composition
 - pH
 - Redox
 - total solids
 - volatile acids
 - volatile solids

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 and biological principles of anaerobic digestion
- chemicals used for pH control, odour control, nutrient addition

- detention times
- operation of anaerobic processes
- relevant legislation, regulations and workplace procedures
- risk factors and potential hazards relating to anaerobic bioreactor systems including hazards related to explosives, hydrogen sulphide and carbon dioxide

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>

Companion Volume implementation guides are found in VETNet -

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

Companion Volume implementation guides are found in VETNet -

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