



Australian Government

NWPTRT016 Operate and control dissolved air flotation processes

Release: 1

NWPTRT016 Operate and control dissolved air flotation 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 dissolved air flotation (DAF) processes.

It includes measuring and reporting on system performance and processing quality control of DAF processes. It also includes identifying faults, determining and applying process adjustments and producing reports.

This unit applies to those working as operational staff with a specific responsibility for DAF processes. 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

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 to meet safety requirements of task and worksite
	1.3	Select, fit and use safety equipment including personal protective equipment (PPE)
2	Operate and control dissolved air flotation processes	
	2.1	Conduct routine inspections according to workplace procedures
	2.2	Identify and report process faults to relevant people
	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 NWPTRT033 Operate and control DAF 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 NWPTRT016 Operate and control dissolved air flotation 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:

- applying a relevant dissolved air flotation (DAF) process on at least one of the following categories of water including:
 - drinking water
 - industrial water
 - wastewater
- collecting samples and conducting tests including at least one of the following:
 - colour
 - flotation tests
 - jar testing
 - solids
 - turbidity
- completing documentation
- conducting routine plant inspections
- identifying and reporting faults
- making at least one of the following process adjustments:
 - recycled flow rate
 - saturator pressure
 - water level
- monitoring test results and processes
- performing process calculations including:
 - hydraulic loading rate
 - recycle ratio

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:

- chemicals used for coagulation and flocculation or thickening

- DAF process operations theory
- features and components of DAF systems
- feed water quality impacts and characteristics
- process adjustments
- range of appropriate measuring and testing procedures including:
 - float solids content
 - true colour
 - turbidity
- relevant legislation, regulations and workplace procedures
- types of DAF processes including:
 - dissolved air flotation
 - dissolved air flotation filtration (DAFF)
 - dissolved air flotation sludge thickening

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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