



Australian Government

NWPTRT008 Operate and control iron and manganese removal processes

Release: 1

NWPTRT008 Operate and control iron and manganese removal 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 iron and manganese removal processes.

It includes identifying faults, applying process adjustments, following instructions and reporting on processes.

This unit applies to those working as operational staff in treatment. 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 worksite
	1.3	Select, fit and use required safety equipment including personal protective equipment (PPE)
2 Operate and control processes for iron and manganese removal	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 Report on process	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 NWPTRT014 Operate and control iron and manganese removal 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 NWPTRT008 Operate and control iron and manganese removal processes

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Performance Evidence

- applying process formulae according to type of process
- completing documentation
- conducting routine process inspections
- identifying and reporting faults
- making process adjustments according to type of process
- monitoring test results and processes
- operating and controlling equipment and systems for removing iron and manganese
- reporting data outside of specified parameters to relevant personnel
- sampling and testing products

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 dosing processes
- chemical forms and occurrence of iron and manganese
- chemistry of common oxidation removal processes including aeration, chlorination, potassium permanganate
- components of iron and manganese systems
- impact of stratification in reservoirs
- ion exchange removal processes
- manganese coated filtration removal processes
- problems associated with iron and manganese in drinking water systems
- relevant legislation, regulations and workplace procedures
- sequestering with polyphosphates

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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