



Australian Government

NWPTRT025 Monitor and operate chlorine dioxide processes

Release: 1

NWPTRT025 Monitor and operate chlorine dioxide 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 monitor and operate chlorine dioxide processes.

It includes monitoring and operating chlorine dioxide systems, preparing and applying chemical dosing and reporting on process quality control.

This unit applies to operational staff with specific responsibility for ensuring chlorine dioxide system processes comply with organisational requirements. Those undertaking this unit would work under appropriate supervision while performing routine tasks in 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

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|--|------------|--|
| | 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 Monitor processes | 2.1 | Monitor chlorine dioxide processes according to workplace procedures |
| | 2.2 | Collect process samples and conduct standard tests according to workplace procedures |
| | 2.3 | Maintain and monitor relevant work health and safety requirements |
| 3 Prepare and apply chemical dosing | 3.1 | Handle, use and store chemicals safely according to workplace procedures |
| | 3.2 | Maintain information relating to chemical supply and usage according to workplace procedures |
| 4 Complete documentation | 4.1 | Collect, record and complete 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 NWPTRT055 Operate chlorine dioxide 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 NWPTRT025 Monitor and operate chlorine dioxide 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:

- collecting and reporting on at least one of the following data processes:
 - chlorine dioxide residuals
 - pH
- collecting process samples and performing standard tests
- conducting chlorine dioxide residual sampling
- identifying control system faults and operational problems
- interpreting safety data sheets
- monitoring chlorine dioxide disinfection processes
- performing chlorine dioxide calculations
- preparing and applying chemical dosing, including at least one of:
 - generation of chlorine dioxide (sodium chlorite, hydrochloric acid, sodium hypochlorite and/or liquefied chlorine)
 - pH adjustment (lime, soda ash or caustic)
- selecting and using appropriate tools and equipment, including personal protective equipment

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:

- automatic feed rate control systems
- chlorine dioxide including:
 - chlorine dioxide generation equipment operation, capacity and limitations
 - chlorine dioxide system layout
 - dosing processes
 - properties and chemistry
- hazardous substances handling
- impact of pH
- microbiological water quality guidelines

- relevant legislation, regulations and workplace procedures
- risk factors and potential hazards associated with chlorine dioxide
- safety data sheets

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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