



Australian Government

NWPTRT007 Monitor and operate liquefied chlorine gas disinfection processes

Release: 1

NWPTRT007 Monitor and operate liquefied chlorine gas disinfection 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 liquefied chlorine gas disinfection processes.

It includes preparing to work with liquefied chlorine gas and performing liquefied chlorine gas container changeover procedures. It also includes completing documentation, reporting on process quality control and working safely. It also includes using self-contained breathing apparatus.

This unit applies to operational staff with specific responsibility for disconnecting and connecting liquefied chlorine gas containers in water and wastewater treatment plants. 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

MSMWHS216 Operate breathing apparatus

Competency Field

Treatment

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | |
|---|---|
| 1 Prepare to work | 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 Check first aid provisions for potential liquefied chlorine gas exposure hazards |
| | 1.4 Select, fit and use personal protective equipment (PPE), including breathing apparatus according to workplace procedures |
| 2 Perform liquefied chlorine gas container changeover procedures | 2.1 Handle liquefied chlorine gas containers according to workplace procedures |
| | 2.2 Conduct disconnection and connection of gas containers for chlorine gas draw or chlorine liquid draw systems according to workplace procedures |
| | 2.3 Check connections for leaks according to workplace procedures |
| | 2.4 Store tools and equipment according to workplace procedures |
| 3 Monitor processes | 3.1 Perform process tests and compare to process operational requirements |
| | 3.2 Check critical and operational control point values according to workplace procedures |
| | 3.3 Comply with relevant work, health and safety requirements and emergency procedures |
| | 3.4 Make process adjustments to maintain effectiveness of the disinfection system |
| 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 NWPTRT013 Operate and control liquefied chlorine gas disinfection.

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 NWPTRT007 Monitor and operate liquefied chlorine gas disinfection 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 correct liquefied chlorine gas container procedures for handling and storage
- collecting samples and conducting tests in at least one of the following:
 - free chlorine
 - measuring pH
 - temperature
 - total chlorine
 - turbidity
- complying with emergency procedures relating to liquefied chlorine gas hazards
- implementing relevant industry standards, safety data sheet (SDS) requirements and other legislative and organisational requirements
- operating safely and following workplace procedures when disconnecting and connecting liquified chlorine gas systems
- performing at least one of the following process calculations:
 - Ct calculation
 - dosage
 - feed rate
- selecting, fitting and using personal protective equipment (PPE) including air supplied breathing apparatus.

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:

- chlorine disinfection principles
- chlorine residuals
- codes of practice
- emergency equipment and its application
- functions and components of gas draw or liquid draw chlorinator systems

- handling procedures including:
 - container disconnection and connection procedures for chlorine gas or chlorine liquid draw systems
 - liquefied chlorine gas containers
 - storage of liquefied chlorine gas cylinders or drums
- hazards of liquefied chlorine gas handling
- microbiological guidelines
- national standards for the storage and handling of liquefied chlorine gas
- PPE and its application
- properties of liquefied chlorine gas
- relevant legislation, regulations and workplace procedures
- safety data sheet (SDS)
- self-contained breathing apparatus
- workplace policies, manuals and induction programs.

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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