



Australian Government

NWPTRT055 Operate chlorine dioxide processes

Release: 1

NWPTRT055 Operate chlorine dioxide processes

Modification History

Release	Comments
1	This unit was released in NWP Water Training Package release 1.0 and meets the Standards for Training Packages. This unit supersedes and is equivalent to NWP275A Monitor, operate and report chlorine dioxide systems. • Unit code updated • Content and formatting updated to comply with the new standards • All PC transitioned from passive to active voice • Unit title changed to better reflect unit outcomes

Application

This unit describes the skills required to monitor and operate chlorine dioxide systems and to report on process quality control.

This unit applies to those working as operational staff with specific responsibility for ensuring chlorine dioxide system processes comply with organisational requirements.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to, particularly those relating to WHS and hazardous substance handling.

Those undertaking this unit would work under supervision while performing routine tasks in a range of familiar contexts.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Competency Field

Treatment

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe	Performance criteria describe the performance needed to demonstrate

the essential outcomes	achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Plan and prepare for work	1.1 Determine work requirements from standard operating procedures. 1.2 Select and check equipment and tools required to meet safety requirements of task and site. 1.3 Select, fit and use personal protective equipment.
2. Monitor system performance	2.1 Monitor chlorine dioxide processes. 2.2 Collect process samples and conduct standard tests. 2.3 Maintain and monitor relevant WHS requirements.
3. Prepare and apply chemical dosing	3.1 Handle, use and store chemicals. 3.2 Prepare chemical dosing. 3.3 Maintain information relating to chemical supply and usage according to statutory requirements.
4. Complete documentation	4.1 Collect and report process data. 4.2 Review information and contribute to enterprise processes for continuous improvement and incident management.

Foundation Skills

The foundation skills demands of this unit have been mapped for alignment with the Australian Core Skills Framework (ACSF). The following tables outline the performance levels indicated for successful attainment of the unit.

ACSF levels indicative of performance:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Learning					Reading					Writing					Oral communication					Numeracy				

Performance variables:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Support					Context					Text complexity					Task complexity				

Further information on ACSF and the foundation skills underpinning this unit can be found in the Foundation Skills Guide on the GSA website.

Unit Mapping Information

This unit supersedes and is equivalent to NWP275A Monitor, operate and report chlorine dioxide systems.

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>

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for NWPTRT055 Operate chlorine dioxide processes

Modification History

Release	Comments
1	These Assessment Requirements were released in NWP Water Training Package release 1.0 and meet the Standards for Training Packages. Assessment Requirements created drawing upon specified assessment information from superseded unit

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- applying policies, regulatory standards and standard operating procedures
- giving and receiving instructions
- performing chlorine dioxide calculations
- identifying control system faults and operational problems
- identifying hazards
- conducting microbiological and chlorine dioxide residual sampling
- using literacy skills in regard to verbal and written communication in the workplace
- interpreting material safety data sheets (SDS)
- scheduling work
- selecting and using appropriate tools and equipment, including personal protective equipment
- monitoring chlorine dioxide disinfection processes
- collecting process samples and performing standard tests
- collecting and reporting process data, including at least one of:
 - pH
 - chlorine dioxide residuals
- preparing and applying chemical dosing, including at least one of:
 - pH adjustment (lime, soda ash or caustic)
 - generation of chlorine dioxide (sodium chlorite, hydrochloric acid, sodium hypochlorite and/or liquefied chlorine)

Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- properties and chemistry of chlorine dioxide
- pH
- microbiological water quality guidelines
- chlorine dioxide system layout
- lockout procedures for mechanical and electrical installations
- policies, standard operating procedures and legislation
- communication systems
- hazardous substances handling
- risk factors and potential hazards associated with chlorine dioxide
- work-related chlorine dioxide calculations
- chlorine dioxide dosing processes
- chlorine dioxide generation equipment operation, capacity and limitations
- effects of weather and conditions on operation of site or plant
- pumping and valving systems
- automatic feed rate control systems
- SDS
- understanding of the risk management principles of ADWG and/or AGWR

Assessment Conditions

Competency should be assessed in an actual workplace or in a simulated environment, with access to equipment and infrastructure appropriate to the outcome. Competency should be demonstrated over time to ensure the candidate is assessed across a variety of situations.

Some components of this unit require assessment in a workplace environment therefore the unit is not suitable for fully external or electronic based assessment.

Consideration must be given to holistic assessment for this unit. Refer to advice in the companion volumes.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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>

Companion Volume implementation guides are found in VETNet -

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