



Australian Government

NWPTRT053 Operate and control UV processes

Release: 1

NWPTRT053 Operate and control UV 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 NWP273A Monitor, operate and report ultraviolet irradiation disinfection 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 • Element 4 all PC revised • PC 2.4 renumbered

Application

This unit describes the skills required to monitor and operate ultraviolet (UV) irradiation disinfection processes and to report on microbiological quality control.

This unit applies to those working as operational staff with specific responsibility for ensuring that UV irradiation disinfection systems 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 operating electrical equipment and working with high energy UV light sources.

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 the essential outcomes	Performance criteria describe the performance needed to demonstrate 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 as outlined in the standard operating procedure. 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 UV irradiation disinfection processes. 2.2 Collect process samples and conduct standard tests. 2.3 Maintain and monitor relevant WHS requirements.
3. Maintain and operate UV irradiation disinfection system	3.1 Carry out routine inspections of system components. 3.2 Clean and replace system components as required. 3.3 Operate UV lamp sequencing.
4. Complete documentation	4.1 Collect and report process data. 4.2 Report observations outside defined parameters for further action.

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 NWP273A Monitor, operate and report ultraviolet irradiation disinfection 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 NWPTRT053 Operate and control UV 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.

- using cleaning chemicals
- applying policies, standard operating procedures and regulatory standards
- performing calculations
- identifying control system faults and operational problems
- identifying hazards
- interpreting safety data sheets (SDS)
- monitoring, operating and reporting on UV irradiation disinfection systems
- scheduling work
- selecting and using appropriate tools and equipment, including personal protective equipment
- monitoring UV irradiation disinfection systems
- collecting process samples
- performing standard tests, including at least one of:
 - UVT
 - turbidity
 - suspended solids
 - iron
 - lamp intensity
 - hardness
 - total organic carbon
- maintaining and operating UV irradiation disinfection systems

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 of UV irradiation
- microbiological water quality guidelines
- UV irradiation disinfection system layout, including components
- lockout procedures for mechanical and electrical installations
- policies, standard operating procedures and legislation
- communication systems
- safe use of cleaning chemicals and prevention of associated hazards
- risk factors and potential hazards associated with UV irradiation systems
- UV irradiation generation equipment operation, capacity and limitations
- effects of weather and conditions on operation of site or plant
- SDS

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.

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>