



Australian Government

NWPTRT035 Operate and control ion exchange and softening processes

Release: 1

NWPTRT035 Operate and control ion exchange and softening 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 NWP356B Monitor, operate and control ion exchange processes. • 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, operate and control ion exchange plant, and to measure and report on system performance and process quality control. The ability to identify faults and determine and apply technical adjustments is essential to performance.

This unit applies to those working as operational staff with a specific responsibility for ion exchange processes in treatment plants.

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.

Those undertaking this unit would work under supervision within a familiar context while performing routine tasks.

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. Monitor ion exchange plant performance	1.1 Monitor test results and processes to maintain the parameters of operation. 1.2 Identify and report process faults and the operational condition of plant.
2. Operate and control ion exchange processes	2.1 Carry out routine plant inspections. 2.2 Conduct and analyse process tests and determine performance against plant operational requirements. 2.3 Make integrated process adjustments to optimise system performance. 2.4 Collect, interpret and record process data according to organisational and plant requirements. 2.5 Select, fit and use required safety equipment.
3. Compile process reports	3.1 Compile reports from plant and system data. 3.2 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 NWP356B Monitor, operate and control ion exchange 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 NWPTRT035 Operate and control ion exchange and softening 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.

- solving operational problems
- producing reports and logs
- using safety and personal protective equipment
- operating computerised equipment
- performing system calculations
- monitoring test results and processes
- identifying and reporting faults
- conducting routine plant inspections
- taking samples and performing basic tests
- making basic process adjustments according to instructions
- collecting data and completing required documentation

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.

- system layout
- system processes
- lockout procedures for mechanical and electrical installations
- communication systems
- hazardous materials handling

- interpretation of material safety data sheets
- chemical principles of water treatment processes
- risk factors and potential hazards
- equipment operation, capacity and limitations
- pipes and fittings
- pumping and valving systems
- mechanical and electrical control systems

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.

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

Links

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