



Australian Government

NWPTRT091 Operate and control solids handling processes

Release: 1

NWPTRT091 Operate and control solids handling 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 NWP360B Monitor, operate and control dewatering 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 water and wastewater dewatering and sludge thickening plant and to measure and report on system performance and process quality control. The ability to identify faults, determine and apply technical adjustments and conduct chemical dosing procedures is essential to performance.

This unit applies to those working as operational staff with a specific responsibility for water and/or wastewater dewatering and sludge thickening processes in a treatment plant.

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 storing and handling dangerous goods and chemicals and WHS.

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

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 dewatering process 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. Control chemical use	2.1 Use, handle and store chemicals. 2.2 Determine and carry out chemical dosing. 2.3 Maintain chemical supply and usage records. 2.4 Select, fit and use required safety equipment, including personal protective equipment.
3. Operate and control dewatering processes	3.1 Carry out routine plant inspections. 3.2 Conduct and analyse process tests and determine performance against plant operational requirements. 3.3 Make integrated process adjustments to optimise system performance. 3.4 Collect, interpret and record process data.
4. Complete documentation	4.1 Compile reports from plant and system 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 NWP360B Monitor, operate and control dewatering 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 NWPTRT091 Operate and control solids handling 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.

- performing system calculations
- monitoring test results and processes
- identifying and reporting faults
- conducting routine plant inspections
- taking samples and performing basic tests including at least one of:
 - solids analysis
 - jar testing
 - sludge density
 - centrate clarity
 - dewatering process efficiency
- preparing and applying chemical dosing
- making basic process adjustments according to instructions, including at least one of:
 - loading rates
 - chemical dosing rates
 - dewatering polymers
 - centrifuge settings
- 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.

- process layout
- features and components of thickening and dewatering systems
- theory of process operation
- chemicals used for sludge conditioning including synthetic and organic polymers
- chemical dosing processes
- risk factors and potential hazards relating to thickening and dewatering systems
- risk control requirements including safety equipment and safety data sheets
- equipment operation, capacity and limitations
- hazardous materials handling
- environmental aspects of water and/or wastewater treatment
- interpretation and use of safety data sheets
- principles that form the basis of dewatering processes

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.

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