



Australian Government

Department of Education, Employment and Workplace Relations

NWP342A Commission, decommission and monitor hydrometric sites, stations and facilities

Release: 2

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Modification History

NWP342A Release 2: Layout adjusted. No changes to content.
NWP342A Release 1: Primary release.

Unit Descriptor

This unit of competency describes the outcomes required to commission, decommission and monitor hydrometric sites, stations and facilities to organisational standards. The ability to interpret and apply technical specifications and undertake the commissioning of sites to support the collection of hydrometric data are central to successful performance.

Application of the Unit

This unit supports the attainment of skills and knowledge required for hydrographers and related staff.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Where <i>bold italicised</i> text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Plan the commissioning of hydrometric sites, stations and facilities.	1.1 Identify and confirm the commissioning procedures for the site, station or facility. 1.2 Identify the monitoring requirements supported by the site, station or facility. 1.3 Conduct site investigations and surveys in accordance with organisational procedures in order to select appropriate sites. 1.4 Prepare plans for the commissioning or decommissioning of the site, station or facility and secure appropriate authorisation.
2 Commission hydrometric sites, stations and ancillary facilities.	2.1 Identify, assemble and check the equipment required for the task prior to use. 2.2 Prepare the site, station or facility according to the work plan and in accordance with organisational standards and safe work practices. 2.3 Commission and register hydrometric stations and ancillary infrastructure. 2.4 Complete records of the commissioning process in accordance with organisational procedures.
3 Support hydrometric data collection.	3.1 Apply instrument and site maintenance schedules. 3.2 Apply testing schedules. 3.3 Put in place processes to monitor instrument performance and take corrective action as required in accordance with organisational and industry standards. 3.4 Maintain test records in accordance with organisational requirements. 3.5 Compile and store reports and documentation according to organisational requirements.
4 Decommission and restore hydrometric sites.	4.1 Demolish or decommission structures in accordance with organisational standards and safe work practices. 4.2 Restore sites in accordance with organisational standards, safe work practices and environmental requirements. 4.3 Identify and address potential or actual problems and report to appropriate personnel.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required skills:

- interprets and applies technical documentation to commissioning and decommissioning of hydrometric sites, stations and facilities
- applies construction and mechanical skills to the effective commissioning and decommissioning of hydrometric sites, stations and facilities
- uses appropriate work practices to minimise environmental impact of the commissioning and decommissioning process
- uses safety equipment and personal protective equipment appropriately
- uses hand and power tools and other relevant equipment effectively and safely
- identifies potential or actual operational problems
- conducts inspections
- produces reports
- reads and interprets plans, specifications, maps and job instructions
- communicates with employees and customers
- uses communication systems
- gives and receives instructions
- applies skills specific to the industry and for working safely in remote locations including:
 - remote area survival
 - water safety
 - high voltage work
 - hazardous environments

Required knowledge:

- mathematics, atmospheric physics and hydrology relevant to the role
- operating parameters, processes and capacity limitations of hydrometric sites, stations and facilities
- risk factors and potential hazards involved with commissioning and decommissioning sites, stations and facilities
- occupational health and safety procedures
- policies and standard operating procedures
- relevant utilities and service bodies
- communication systems
- Standards relevant to the installation tasks including:
 - AS 3778 for water measurement installations
 - WMO / Bureau of Meteorology guidelines for siting of meteorological sensors and systems
- application of best practice methodology where standards not applicable or available
- relevant construction standards and codes (Federal, State and Local)

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The candidate should demonstrate the ability to commission, decommission and monitor hydrometric sites, stations and facilities including:

- gathering, interpreting and applying construction and technical documentation related to the commissioning and decommissioning of hydrometric sites, stations and facilities
- commissioning hydrometric sites, stations and facilities
- closely adhering to organisational and industry standards for the testing and monitoring of instruments
- preparing clear and accurate reports
- working safely
- minimising environmental impacts from the commissioning and decommissioning process
- identifying, reporting and (within scope of job function) solving potential or actual problems

Context of and specific resources for assessment

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards, and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and/or assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence should only be made when the assessor has complete confidence in the person's competence over time and in various contexts
- all assessment that is part of a structured learning

experience must include a combination of direct, indirect and supplementary evidence

- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator, any cultural issues that may affect responses to the questions, and reflecting the requirements of the competency and the work being performed.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Monitoring is conducted for a range of data collection purposes including:

- stage and discharge
- surface water and ground water measurement, assessment and management
- snow pack measurement
- estuarine monitoring
- water quality
- other purposes relevant to the specific requirements of the monitoring site

Equipment required for installation and maintenance may include:

- personal protective equipment
- hand and power tools
- portable power supplies
- computer equipment
- pumping equipment
- test equipment
- communications equipment
- signage
- 4WD vehicles
- bore drilling rig
- surveying equipment (staffs, levels, GPS, EDM)

Organisational standards and safe work practices may include reference to:

- by-laws and organisational policies
- standard operating procedures
- environment protection standards and requirements
- occupational health and safety standards and requirements, including use of personal protective equipment
- safe handling of hazardous substances
- appropriate use of road and worksite signage

The compilation of ***reports and documentation*** requires:

- rigorous application of appropriate industry standards for the collection and reporting of data
- the application of knowledge appropriate to the task across a broad range of areas including hydrology, physics and mathematics to ensure appropriate and accurate analysis and reporting of hydrometric data

Unit Sector(s)

Not applicable.

Competency field

Hydrography.