



Australian Government

UEPOPS018 Conduct water conveyance and control

Release: 1

UEPOPS018 Conduct water conveyance and control

Modification History

Release 1. This is the first release of this unit of competency in the UEP Electricity Supply Industry – Generation Sector Training Package Release 2.0.

Application

This unit involves the skills and knowledge required for the operation of storage, conveyance and control systems of hydro generation water supplies.

Water storage, conveyance and control systems can include dams, canals, pipelines, tunnels and related hydraulic components and structures.

Competency in this unit requires the ability to plan work, supply water for power generation, implement flood control procedures and complete all documentation. Individuals will, in general, work as an operator in a power generation facility.

Power generation plant operators are trained and authorised to isolate, prepare plant and issue permits to work.

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

Pre-requisite Unit

There are no prerequisite units

Competency Field

Operations

Unit Sector

Electricity generation

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Plan and prepare

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Work health and safety (WHS)/occupational health and safety (OHS) regulations, legislative requirements, codes

- of practice, manufacturers' recommendations and specifications, environmental requirements and workplace procedures are identified, applied and monitored
- 1.2** Work requirements are identified from relevant personnel and site inspection in accordance with workplace procedures
 - 1.3** Resources are identified and obtained in accordance with workplace procedures
 - 1.4** Potential hazards are identified, and risk control measures are selected in accordance with workplace procedures
 - 1.5** Storage, conveyance and control hydro system work is sequenced and prioritised in accordance with workplace procedures
- 2 Supply water for power generation**
- 2.1** Inspections of hydro storage and conveyance systems are scheduled, and problems are reported and monitored, in accordance with workplace procedures
 - 2.2** Water quality is monitored and recorded in accordance with workplace procedures
 - 2.3** Water flow regulating systems are monitored and adjusted to meet power generation needs and other user requirements in accordance with workplace procedures
 - 2.4** Water flow diversions are determined to facilitate maintenance and emergency activities in accordance with workplace procedures
 - 2.5** Dam surveillance procedures are performed in accordance with workplace procedures
 - 2.6** Dam levels are maintained and monitored to power generation system requirements in accordance with workplace procedures
 - 2.7** Functional tests of equipment are undertaken in accordance with manufacturers' recommendations and specifications, and workplace procedures
- 3 Implement flood control procedures**
- 3.1** Potential flood conditions are determined using data collected and reports communicated in accordance with workplace procedures

- 3.2** Flood control procedures are implemented in accordance with workplace procedures
 - 3.3** Flood control outcomes are monitored, recorded and reported to relevant personnel and are reviewed in accordance with workplace procedures
- 4 Complete documentation**
 - 4.1** Equipment problems, movements and status are reported in accordance with workplace procedures
 - 4.2** Documentation is updated in accordance with workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEP Electricity Supply Industry – Generation Sector Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEPOPS344 Conduct water conveyance and control.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1715b9fa-e7bd-441c-bb8d-cf22c9c825a8>

Assessment Requirements for UEPOPS018 Conduct water conveyance and control

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least two separate occasions and include:

- applying work health and safety (WHS)/occupational health and safety (OHS) requirements, including:
 - emergency procedures
 - risk control measures
 - safe working practices
- communicating with personnel
- completing documentation using documenting, reporting and recording procedures
- implementing regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- interpreting manuals
- managing water supplies for hydro power generation
- planning and preparing for work
- responding to abnormal storage, conveyance and control hydro system operating conditions
- using flood control
- utilising testing and diagnostic techniques
- working with water control systems.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and include knowledge of:

- arrangements of hydro power production plant
- hydro equipment operation, including capacity and limitations
- hydro power generating plant and equipment, location and operating parameters
- hydroelectric generation, including hydro turbine, hydro turbine governor and hydro generator types and characteristics
- implementation of flood control
- manuals

- regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- water control systems
- WHS/OHS requirements, including:
 - emergency procedures
 - risk control measures
 - safe working practices
- workplace documentation
- workplace policies and procedures.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

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