



Australian Government

UEPOPS111 Operate and monitor water treatment plant

Release: 1

UEPOPS111 Operate and monitor water treatment plant

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 to operate, inspect and monitor water treatment and purification plant.

Water treatment plants are used to clean wastewater for reuse or discharge in power generation facilities. The water treatment process involves the purification of water through the removal of undesirable chemicals, contaminants, solids and gases.

Competency in this unit requires the ability to plan work, operate water treatment plant, test water treatment plant, analyse water treatment plant faults, monitor and inspect water treatment plant, and complete all documentation. Individuals will, in general, work under supervision, in a power generation facility as an operator.

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.

PERFORMANCE CRITERIA

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

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| 1 Plan and prepare work | <ul style="list-style-type: none">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 monitored1.2 Work requirements are identified from relevant personnel and documentation in accordance with workplace procedures1.3 Documentation to determine water treatment plant status is assessed and evaluated in accordance with workplace procedures1.4 Inspection and field preparation for water treatment plant service are carried out in accordance with manufacturers' recommendations and specifications, and workplace procedures1.5 Water treatment plant operational prerequisites are established in accordance with manufacturers' recommendations and specifications, and workplace procedures1.6 Sequence for recommissioning of water treatment plant is determined in accordance with workplace procedures |
| 2 Operate water treatment plant | <ul style="list-style-type: none">2.1 Water treatment plant is operated in accordance with manufacturers' recommendations and specifications, and workplace procedures2.2 Water treatment plant is monitored and observed to detect deviations from normal operating conditions in accordance with workplace procedures2.3 Corrective actions are taken to rectify abnormalities in accordance with manufacturers' recommendations and specifications, and workplace procedures |
| 3 Test water treatment plant operation | <ul style="list-style-type: none">3.1 Operational tests are performed in accordance with workplace procedures3.2 Water treatment plant is observed for correct operational response in accordance with workplace procedures3.3 Water treatment plant is returned to required operational status upon completion of testing in accordance with workplace procedures |

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| 4 Analyse water treatment plant faults | 4.1 | Causes of abnormal water treatment plant operating conditions are identified by analysing technical and operational information in accordance with workplace procedures |
| | 4.2 | Water treatment plant integrity and personnel safety is maintained in consultation with relevant personnel and technical and operational documentation in accordance with workplace procedures |
| 5 Monitor and inspect water treatment plant | 5.1 | Water treatment plant is monitored and inspected for normal operation and to detect deviations in accordance with workplace procedures |
| | 5.2 | Relevant personnel are notified when defects are detected in accordance with workplace procedures |
| 6 Complete documentation | 6.1 | Water treatment plant problems, movements and status are reported in accordance with workplace procedures |
| | 6.2 | 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 UEPOPS321 Operate and monitor water treatment plant.

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 UEPOPS111 Operate and monitor water treatment plant

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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:

- analysing water treatment plant faults using data analysis techniques and tools
- 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 recording procedures
- identifying water treatment plant status
- implementing regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- interpreting manuals
- monitoring and inspecting water treatment plant operation
- operating water treatment plant
- organising resources
- planning and preparing work
- preparing water treatment plant or equipment for operation
- recognising and responding to abnormal water treatment plant operating conditions
- testing water treatment plant operationally using diagnostic and testing techniques
- working with permit to work system.

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 power production plant
- manuals
- permit to work system

- regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- water treatment plant and equipment, location and operating parameters
- water treatment plant status
- 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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