



Australian Government

UEPOPS321 Operate and monitor water treatment plant

Release: 1

UEPOPS321 Operate and monitor water treatment plant

Modification History

Release 1. This is the first release of this unit of competency in the UEP Generation Training Package.

Application

This unit involves the skills and knowledge required to operate, inspect and monitor water treatment and purification plant.

Water treatment plants are typically used to clean waste water 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 the completion of all documentation. Individuals will, in general, work under supervision, in a power generation facility as an operator.

Power generation plant operators are typically 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.

Note: Workplace practice

The application of the skills and knowledge described in this unit may require a licence or training permit to practice in the workplace where work is carried out on gas and electrical installations. Additional conditions may apply under state and territory legislative and regulatory licensing requirements.

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.

1 Plan and prepare work

- 1.1** Safety issues related operating and monitoring water treatment plant are identified, in accordance with workplace procedures and Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) regulations and legislative requirements
- 1.2** Work requirements are identified, in accordance with workplace procedures, from relevant personnel and documentation
- 1.3** Documentation to determine water treatment plant status is assessed and evaluated, in accordance with workplace procedures
- 1.4** Inspection and field preparation for water treatment plant service are carried out, in accordance with workplace procedures and manufacturers' recommendations
- 1.5** Water treatment plant operational prerequisites are established, in accordance with workplace procedures and manufacturers' recommendations
- 1.6** Sequence for recommissioning of water treatment plant is determined, in accordance with workplace procedures and site requirements

2 Operate water treatment plant

- 2.1** Water treatment plant is operated, in accordance with workplace procedures and manufacturers' operating recommendations
- 2.2** Water treatment plant is monitored and observed, in accordance with workplace procedures, to detect deviations from normal operating conditions
- 2.3** Corrective actions are taken to rectify abnormalities, in accordance with workplace procedures and manufacturers' recommendations

3 Test water treatment plant operation

- 3.1** Operational tests are performed, in accordance with workplace procedures

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| | 3.2 | Water treatment plant is observed for correct operational response, in accordance with workplace procedures |
| | 3.3 | Corrective action is taken, in accordance with workplace procedures, when response does not meet with documentation, water treatment plant integrity or personnel safety requirements |
| | 3.4 | Water treatment plant is returned to required operational status upon completion of testing, in accordance with workplace procedures |
| 4 Analyse water treatment plant faults | 4.1 | Causes of abnormal water treatment plant operating conditions are identified, in accordance with workplace procedures, and by analysing technical and operational information |
| | 4.2 | Corrective action is taken, in accordance with workplace procedures |
| | 4.3 | Water treatment plant integrity and personnel safety is maintained, in accordance with workplace procedures, and in consultation with appropriate personnel and technical and operational documentation |
| 5 Monitor and inspect water treatment plant | 5.1 | Water treatment plant to be monitored and inspected is physically identified, in accordance with workplace procedures |
| | 5.2 | Water treatment plant is monitored and inspected, in accordance with workplace procedures for normal operation or to detect deviations |
| | 5.3 | Corrective action is taken, in accordance with workplace procedures |
| | 5.4 | Appropriate personnel are notified, in accordance with workplace procedures, when defects are detected |
| 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 Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEPOPS321B 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 UEPOPS321 Operate and monitor water treatment plant

Modification History

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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, performance criteria and range of conditions on at least two separate occasions and includes:

- 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 legislation, industry standards, codes of practice and regulations
- interpreting manufacturers' specifications and 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 test 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, performance criteria and range of conditions and includes knowledge of:

- legislation, industry standards, codes of practice and regulations
- manufacturers' specifications and manuals
- permit to work system

- typical arrangements of power production plant
- water treatment plant and equipment, its location and operating parameters
- water treatment plant status
- WHS/OHS legislated requirements including:
 - emergency procedures
 - risk control measures
 - safe working practices
- workplace documentation
- workplace policies and procedures

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

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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.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

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 currently used in industry
- applicable documentation including workplace procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

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