



Australian Government

UEPOPS109 Operate and monitor water quality monitoring systems

Release: 1

UEPOPS109 Operate and monitor water quality monitoring systems

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 and monitor water quality monitoring systems in a power generation facility. These systems include all analytical devices used to monitor process chemical conditions.

Water quality refers to the chemical, physical, biological and/or radiological characteristics of water. Water quality is a crucial factor for avoiding corrosion and scaling of turbines, boilers and pipes in power generating plant.

Competency in this unit requires the ability to plan work, operate water quality monitoring systems plant, test water quality monitoring systems plant, analyse water quality monitoring systems plant faults, monitor and inspect water quality monitoring systems 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

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

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

1 Plan and prepare work

- 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 documentation in accordance with workplace procedures
- 1.3** Documentation to determine water quality monitoring system plant status is assessed and evaluated in accordance with workplace procedures
- 1.4** Water quality monitoring system plant inspection is carried out in accordance with manufacturers' recommendations and specifications, and workplace procedures
- 1.5** Water quality monitoring system plant operational prerequisites are established in accordance with manufacturers' recommendations and specifications, and workplace procedures
- 1.6** Sequence for recommissioning of water quality monitoring system plant is determined in accordance with workplace procedures

2 Operate water quality monitoring system plant

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

3 Test water quality monitoring system plant operation

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

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| | 3.2 | Water quality monitoring system plant is observed for correct operational response in accordance with workplace procedures |
| | 3.3 | Water quality monitoring system plant is returned to required operational status upon completion of testing in accordance with workplace procedures |
| 4 Analyse water quality monitoring system plant conditions | 4.1 | Cause of abnormal water quality monitoring system plant conditions are identified by analysing technical and operational information in accordance with workplace procedures |
| | 4.2 | Water quality monitoring system 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 quality monitoring system plant | 5.1 | Water quality monitoring system 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 quality monitoring systems plant problems, movements, abnormalities 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 UEPOPS325 Operate and monitor water quality monitoring systems.

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 UEPOPS109 Operate and monitor water quality monitoring systems

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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 quality monitoring system 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, including use of safety data sheets (SDS)
- communicating with personnel
- completing documentation using recording procedures
- identifying water quality monitoring system plant status
- implementing with regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- interpreting manuals
- monitoring and inspecting water quality monitoring system plant operation
- operating water quality monitoring system plant
- organising resources
- preparing and planning work
- recognising and responding to abnormal water quality monitoring system plant operating conditions
- testing water quality monitoring system plant operationally using diagnostic and testing techniques
- using permit to work system
- working with water quality monitoring system plant and equipment.

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, including general responsibilities for power production plant operations
- manuals
- permit to work system
- regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- water quality monitoring system plant and equipment, location and operating parameters
- water quality monitoring system plant status
- WHS/OHS requirements, including:
 - emergency procedures
 - risk control measures
 - safe working practices, including use of SDS
- 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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