



Australian Government

UEPOPS325 Operate and monitor water quality monitoring systems

Release: 1

UEPOPS325 Operate and monitor water quality monitoring systems

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 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 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 to operating and monitoring water quality monitoring system 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 appropriate personnel and documentation
- 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 workplace procedures and manufacturers' recommendations
- 1.5 Water quality monitoring system plant operational prerequisites are established, in accordance with workplace procedures and manufacturers' recommendations
- 1.6 Sequence for recommissioning of water quality monitoring system plant is determined, in accordance with workplace procedures and site requirements

2 Operate water quality monitoring system plant

- 2.1 Water quality monitoring system plant is operated, in accordance with workplace procedures and manufacturers' operating recommendations
- 2.2 Water quality monitoring system 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 water quality monitoring system plant, in accordance with workplace procedures and manufacturers'

- recommendations
- 3 Test water quality monitoring system plant operation**
- 3.1** Operational tests are performed, in accordance with workplace procedures
- 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, in accordance with workplace procedures, and by analysing technical and operational information
- 4.2** Corrective action is taken, in accordance with workplace procedures, when response does not meet with documentation, water quality monitoring system plant integrity or personnel safety requirements
- 4.3** Water quality monitoring system 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 quality monitoring system plant**
- 5.1** Water quality monitoring system plant to be monitored and inspected is physically identified, in accordance with workplace procedures
- 5.2** Water quality monitoring system 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 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 Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEPOPS325B 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 UEPOPS325 Operate and monitor water quality monitoring systems

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 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)/Material Safe Handling Data Sheets (MSDS)
- communicating with personnel
- completing documentation using recording procedures
- identifying water quality monitoring system plant status
- interpreting manufacturers' specifications and manuals
- legislation, industry standards, codes of practice and regulations
- 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 test techniques
- using permit to work system
- working with water quality monitoring system plant and/or equipment

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 including general responsibilities for power production plant operations
- water quality monitoring system plant and equipment, its location and operating parameters
- water quality monitoring system plant status
- WHS/OHS legislated requirements including:
 - emergency procedures
 - risk control measures
 - safe working practices including use of Safety Data Sheets (SDS)/Material Safe Handling Data Sheets (MSDS)
- 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.

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