



Australian Government

UEPOPS323 Operate and monitor reverse osmosis plant

Release: 1

UEPOPS323 Operate and monitor reverse osmosis 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 reverse osmosis plant.

Reverse osmosis is a water purification technology that uses a semipermeable membrane to remove dissolved inorganic solids such as salts, ions, molecules and larger particles from water.

Competency in this unit requires the ability to plan work, operate reverse osmosis plant, test reverse osmosis plant, analyse reverse osmosis plant faults, monitor and inspect reverse osmosis 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 to operating and monitoring reverse osmosis 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 reverse osmosis plant status is assessed and evaluated, in accordance with workplace procedures
- 1.4 Inspection and field preparations for reverse osmosis plant service are carried out, in accordance with workplace procedures and manufacturers' recommendations
- 1.5 Reverse osmosis plant operational prerequisites are established, in accordance with workplace procedures and manufacturers' recommendations
- 1.6 Sequence for recommissioning of reverse osmosis plant is determined to suit existing circumstances, in accordance with workplace procedures and site requirements

2 Operate reverse osmosis plant

- 2.1 Reverse osmosis plant is operated in accordance with workplace procedures and manufacturers' operating recommendations
- 2.2 Reverse osmosis 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 reverse osmosis plant, in accordance with workplace procedures and manufacturers' recommendations
- 2.4 Reverse osmosis plant is identified and removed from service, in accordance with workplace procedures and

		site requirements
	2.5	Corrective actions are taken, in accordance with workplace procedures, when abnormalities are identified during the removal of reverse osmosis plant from service
3 Test reverse osmosis plant operation	3.1	Operational tests are performed, in accordance with workplace procedures
	3.2	Reverse osmosis 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, reverse osmosis plant integrity or personnel safety requirements
	3.4	Reverse osmosis plant is returned to required operational status upon completion of testing, in accordance with workplace procedures
4 Analyse reverse osmosis plant faults	4.1	Causes of abnormal reverse osmosis plant operating conditions are identified, in accordance with workplace procedures, by analysing technical and operational information
	4.2	Corrective action is taken, in accordance with workplace procedures
	4.3	Reverse osmosis 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 reverse osmosis plant	5.1	Reverse osmosis plant to be monitored and/or inspected is physically identified, in accordance with workplace procedures
	5.2	Reverse osmosis plant is monitored and/or 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** Reverse osmosis 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 UEPOPS323B Operate and monitor reverse osmosis 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 UEPOPS323 Operate and monitor reverse osmosis 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 reverse osmosis plant faults using data analysis techniques and tools
- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements including:
 - chemical use and hazards
 - emergency procedures
 - risk control measures
 - safe working practices
- communicating with personnel
- completing documentation using recording procedures
- determining permit to work
- identifying and responding to abnormal reverse osmosis plant operating conditions
- identifying reverse osmosis plant status
- implementing legislation, industry standards, codes of practice and regulations
- interpreting manufacturers' specifications and manuals
- monitoring and inspecting reverse osmosis plant operation
- operating reverse osmosis plant
- organising resources
- preparing and planning work
- testing reverse osmosis plant operationally using diagnostic and test techniques
- working with reverse osmosis 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
- reverse osmosis plant and equipment, its location and operating parameters
- reverse osmosis plant status
- typical arrangements of power production plant
- WHS/OHS legislated requirements including:
 - emergency procedures
 - risk control measures
 - safe working practices
 - chemical use and hazards
- 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.

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

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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