



Australian Government

UEPOPS361 Operate and monitor hydro plant auxiliary systems

Release: 1

UEPOPS361 Operate and monitor hydro plant auxiliary 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, inspect and monitor hydro plant auxiliary systems.

A variety of auxiliary plant systems and related controls are used in power generation facilities to support the operation of hydro generating units. Auxiliary plant systems may include ancillary equipment such as pumps, valves, screens and seals.

Competency in this unit requires the ability to plan work, operate hydro plant auxiliary system, test hydro plant auxiliary system, analyse hydro plant auxiliary faults, monitor and inspect hydro 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.

1 Plan and prepare work

2 Test hydro plant auxiliary system operation

PERFORMANCE CRITERIA

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

- 1.1** Safety issues related to operating and monitoring hydro plant auxiliary system 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 tasks, hydro plant auxiliary system requirements are identified, in accordance with workplace procedures, from appropriate personnel and documentation
- 1.3** Hydro plant auxiliary system running-up and loading schedule are ascertained, in accordance with workplace procedures, and from relevant documentation
- 1.4** Inspection, preoperational tests and field preparation for hydro plant auxiliary system service are carried out, in accordance with workplace procedures and manufacturers' recommendations
- 1.5** Hydro plant auxiliary system operational prerequisites are established, in accordance with workplace procedures and manufacturers' recommendations
- 1.6** Sequence for recommissioning of hydro plant auxiliary system is determined, in accordance with workplace procedures and site requirements
- 2.1** Hydro plant auxiliary system is operated, in accordance with workplace procedures and manufacturers' operating recommendations
- 2.2** Operational tests are performed, in accordance with workplace procedures
- 2.3** Hydro plant auxiliary system plant is observed, in accordance with workplace procedures, for correct operational response
- 2.4** Corrective action is taken, in accordance with workplace procedures, when response does not meet with documentation, hydro plant auxiliary system integrity or personnel safety requirements

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| | 2.5 | Hydro plant auxiliary system is returned to required operational status upon completion of testing, in accordance with workplace procedures |
| 3 Analyse hydro plant auxiliary system faults | 3.1 | Cause of abnormal hydro plant auxiliary system operating conditions are identified, in accordance with workplace procedures, and by analysing technical and operational information |
| | 3.2 | Corrective actions to rectify faults are determined, in accordance with workplace procedures |
| | 3.3 | Hydro plant auxiliary system integrity and personnel safety is maintained, in accordance with workplace procedures, and in consultation with appropriate personnel and technical and operational documentation |
| 4 Monitor and inspect hydro plant auxiliary system | 4.1 | Hydro plant auxiliary system to be monitored and inspected is physically identified, in accordance with workplace procedures |
| | 4.2 | Hydro plant auxiliary system is monitored and inspected, in accordance with workplace procedures, for normal operation or to detect deviations |
| | 4.3 | Appropriate personnel are notified when defects are detected, in accordance with workplace procedures |
| 5 Complete documentation | 5.1 | Hydro plant auxiliary system problems, abnormalities and status are reported, in accordance with workplace procedures |
| | 5.2 | 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 UEPOPS361A Operate and monitor hydro plant auxiliary 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 UEPOPS361 Operate and monitor hydro plant auxiliary systems

Modification History

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

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 hydro plant auxiliary system 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 hydro plant auxiliary system status
- monitoring and inspecting hydro plant auxiliary system operations
- operating hydro plant auxiliary system and equipment including when under the influence of high water pressures and or flows
- organising resources
- preparing and planning work
- recognising and responding to abnormal hydro plant auxiliary system operating conditions
- testing hydro plant auxiliary system operationally using diagnostic and test techniques
- using permit to work system
- working with hydro plant auxiliary system 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:

- hydro plant auxiliary system and equipment, its location and operating parameters
- hydro plant auxiliary system including equipment behaviours under the influence of high water pressure and/or flows
- legislation, industry standards, codes of practice and regulations

- manufacturers' specifications and manuals
- permit to work system
- typical arrangements of power production plant including hydro generator types and characteristics
- WHS/OHS legislated requirements including:
 - emergency procedures
 - risk control measures
 - safe working procedures
- 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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