



Australian Government

Assessment Requirements for PPMEPG320 Manage a power generation system startup

Release: 2

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Modification History

Release	Comments
Release 2	This version released with PPM Pulp and Paper Manufacturing Training Package Version 2.0.
Release 1	This version released with PPM Pulp and Paper Manufacturing Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria of this unit. There must be evidence that the individual has:

- identified production requirements and managed power generation startup at least twice in line with required enterprise intervals, to suit power generation levels over different operating periods
- completed pre-startup safety checks
- completed routine maintenance when preparing for system startup
- followed safe working practices when starting up a power generation system
- used electronic and other control systems to control equipment during operations
- communicated effectively, through written and verbal means, with others, in the work area when starting up a power generation system
- recorded system startup processes and power generation performance data in the operating log on completion of each of the above system startups.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- organisational procedures relevant to workplace health and safety with particular emphasis on:
 - use of personal protective equipment (PPE)
 - equipment lock out and isolation procedures
 - handling chemicals and hazardous substances, including spill and disposal guidelines
 - plant clearance requirements
 - emergency procedures and responses
 - job safety analysis documentation and processes

- plant permit systems and processes
- high risk load shifting licensing requirements where relevant
- major hazard facility requirements where relevant
- local power authority regulations and reporting requirements for starting up power generation systems
- power generation plant layout
- purpose, features and operation of power generation and distribution systems, operating parameters and allowable variations
- operation and application of electronic and other control systems
- electrical isolation procedures
- principles of operation of transformers and circuit protection systems
- AC/DC generation principles
- electrical output control and regulation principles
- power factor characteristics and effects
- effect of steam quality on turbine operation
- operational tolerances of the turbine system and effects of operating outside these tolerances
- key features and purpose of the full range of processes involved in starting up power generation systems, including pre-startup safety checks
- pre-start limitations and run-up limitations
- methods used to test power systems and diagnose deviations from operational specifications
- organisational procedures:
 - standard operating procedures (SOP) specific to power generation system startup
 - communication reporting lines
 - recording and reporting startup processes and power generation performance.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or a productive environment that accurately reflects performance in a workplace
- resources, equipment and materials:
 - chemical products and systems
 - high and low voltage transformers
 - steam or gas turbine driven alternators
 - switchboards
 - water systems and auxiliary plant
 - circuit breakers
 - AC/DC generation and distribution systems
 - maintenance tools and equipment and consumables for power generation systems

- PPE suitable for starting up and operating power generation systems
- specifications:
 - local power authority regulations for starting up power generation systems
 - details of production requirements to plan power generation levels
 - template operating log for recording startup processes and power generation performance
 - organisational workplace health and safety and SOP for power generation system startup.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=12998f8d-d0ac-40bc-a69e-72a600d4fd93>