Modification history

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| Release | Comments |
| Release 1 | This version released with PPM Training Package Version 1.0. |

| PPMEPG210 | Monitor and control power generation system |
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| Application | This unit of competency describes the outcomes required to operate, monitor and maintain power generation systems and record and report operating data.  The unit applies to production support operators who monitor and control power generation systems, in a pulp or paper manufacturing facility. This typically involves working in a facility with complex integrated equipment and continuous operations.  Licensing, legislative, regulatory, or certification requirements apply to this unit in some states and territories at the time of publication and may differ according to jurisdiction. |
| Prerequisite Unit | Nil |
| Unit Sector | Pulp and Paper Manufacturing (PPM) |

| Elements | Performance Criteria |
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| Elements describe the essential outcomes. | Performance criteria describe the performance needed to demonstrate achievement of the element. |
| 1. Confirm operational status | 1.1. Check production requirements at start of shift and plan daily work activities in line with organisational safety and standard operating procedures.  1.2. Confirm power generation processes are within operational specifications by observation and inspection.  1.3. Maintain process supplies to meet production requirements.  1.4. Record turbine performance in operational log.  1.5. Communicate operational status to relevant personnel. |
| 2. Monitor and control power generation plant operation | 2.1. Confirm operational status by inspection and routine observation.  2.2. Monitor and maintain continuing process supplies to meet production requirements.  2.3. Measure turbine pressures, temperatures and flows, as required.  2.4. Adjust turbine and generation controls to maintain operation within specifications.  2.5. Monitor and maintain power output demand and distribution system to meet production requirements. |
| 3. Record and report power generation performance | 3.1. Record pressures, temperatures and flows.  3.2. Record power generation processes and data in operating log.  3.3. Record and report maintenance requirements. |

| Foundation Skills  This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria. | |
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| Skill | Description |
| Numeracy skills to: | * interpret basic numerical settings on instruments and gauges involving pressures, flows and temperatures * monitor, assess and interpret power generation data * record basic numerical data for power generation performance |
| Oral communication skills to: | * provide clear basic information about operational status of power generation plant |
| Reading skills to: | * interpret workplace health and safety and standard operating procedures |
| Writing skills to: | * complete accurate basic records for power generation processes and maintenance requirements |
| Problem solving skills to: | * use and assess sensory information (sight, sound, touch, smell, vibration, temperature) to adjust process to maximise safety and productivity |

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| Unit Mapping Information | | | |
| Code and title current version | Code and title previous version | Comments | Equivalence status |
| PPMEPG210 Monitor and control power generation system | FPEPG210A Monitor and control power generation system |  | Equivalent unit |

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

| TITLE | Assessment requirements for PPMEPG210 Monitor and control power generation system |
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| Performance Evidence | |
| A person demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit, and must be able to provide evidence that they can:   * operate a power generation system within a pulp and paper manufacturing facility, at least twice in line with required enterprise intervals * follow safe working practices when operating power generation system * use electronic and other control systems to control equipment during operations * communicate effectively, through written and verbal means, with others, in the work area when operating power generation system * for each of the above operational periods, complete these records: * operating log * record of steam generation processes and maintenance requirements. | |

| Knowledge Evidence |
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| A person competent in this unit must be able to demonstrate 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 * characteristics and dangers of heat and energy generated by 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 * data used to evaluate power generation system performance including: * heat levels * pressure levels * energy generation levels * heat build-up * system overload information * test outcomes for fuel * past performance records * organisational procedures: * standard operating procedures specific to power generation operations * communication reporting lines * recording and reporting power generation processes and maintenance requirements |

| Assessment Conditions |
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| The following resources must be made available:   * access to the full range of equipment involved in integrated continuous manufacturing of power generation systems in a pulp or paper manufacturing facility, including chemical products: * high and low voltage transformers * steam or gas turbine driven alternators * switchboards * water systems and auxiliary plant * circuit breaker * AC/DC generation and distribution systems * analogue and digital instrumentation * personal protective equipment suitable for operating a power generation system * template operating log and documents for recording power generation processes and maintenance requirements * organisational workplace health and safety and standard operating procedures * relevant personnel for the purposes of communicating information   Competency is to be assessed in the workplace or in a productive environment that accurately reflects performance in a workplace.  Assessor requirements  Assessors must:   * hold the appropriate assessor competency standards as outlined in regulations; and * be able to demonstrate vocational competencies at least to the level being assessed; and * be able to demonstrate how they are continuing to develop their VET knowledge and skills as well as maintaining their industry currency and assessor competence. |

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