Modification history

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

| PPMSTM320 | Manage steam boiler start up |
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| Application | This unit of competency describes the outcomes required to plan, prepare, manage and report on steam boiler start ups, in the pulp and paper industry.  This unit applies to production operators and technicians who manage steam boiler startups, in a pulp and paper manufacturing facility. This typically involves working in a facility with complex integrated equipment and continuous operations.  No licensing, legislative or certification requirements apply to this unit at the time of publication. |
| 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. Conduct pre-operational safety checks | 1.1. Confirm plant status and boiler types through inspections, observation and other information.  1.2. Plan operational safety checks according to work health and safety (WHS), productivity requirements, environmental and safe working requirements, Standard Operating Procedures (SOP) and house keeping requirements.  1.3. Identify and report potential work area hazards and implement control measures.  1.4. Establish work and output requirements.  1.5. Conduct pre operational and safety checks on equipment.  1.6. Remove isolations.  1.7. Confirm availability of process supplies. |
| 2. Conduct startup procedures | 2.1. Establish pre-light conditions.  2.2. Start boiler and bring on-line.  2.3. Monitor boiler condition during startup to detect abnormal conditions.  2.4. Observe system and plant for correct operational response.  2.5. Detect deviations from required operating conditions and rectify using corrective action. |
| 3. Record and report start up activities | 3.1. Document responses to corrective actions, as required.  3.2. Record and report on start up information, as required. |

| 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 instruments, gauges and data recording equipment * use measuring equipment. |
| Oral communication skills to: | * select and use appropriate spoken communication strategies with work colleagues and other personnel on site to manage steam boiler start up. |
| Reading skills to: | * read and interpret documentation, procedure manuals and customer orders relevant to steam boilers. |
| Writing skills to: | * record start up activities accurately and legibly, using correct technical vocabulary. |
| Problem solving skills to: | * maintain situational awareness in the work area * analyse and use sensory information to adjust process to maintain and co-ordinate safety, quality and productivity. |
| Technology skills to: | * use electronic and other control systems to control equipment and processes. * access, navigate and enter computer based information. |

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| Unit Mapping Information | | | |
| Code and title current version | Code and title previous version | Comments | Equivalence status |
| PPMSTM320 Manage steam boiler start up | FPPSTM320A Manage steam boiler start up |  | 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 PPMSTM320 Manage steam boiler start up |
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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:   * manage a steam boiler startup, at least twice in line with required enterprise intervals, in a pulp and paper manufacturing facility, by: * checking, setting up and starting the boiler within an appropriate time frame * implementing isolation and access procedures * identifying and actioning problems * identifying and monitoring process control points * maintaining a clean and hazard free work area * recording and reporting on operational data * communicating effectively, through written and verbal means, and working safely with others, in the work area. | |

| 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 * implications of pre operational checks including low water level alarm, high water level alarm, low water level, alarm lockout, hydrostatic test, burner management system and safety valve test * documentation and procedures relevant to steam boiler startups, in the pulp and paper industry including: * appropriate boiler/pressure vessel operator certification * confined space standards and regulations * productivity requirements * quality procedures * Standard Operating Procedures (SOP) * environmental sustainability requirements and practices * machinery and plant manufacturing operating manuals * enterprise policies and procedures * job sheets and operator's log * manufacturer's specifications and maintenance documentation * Material Safety Data Sheets (MSDS) * incidents reports * the use of materials and supplies for boiler startups including chemicals, coal, oil, gas, additives, air, water, wood waste, steam recovery process products and power * maintenance systems including operator level maintenance as per site agreements, operator maintenance schedules, maintenance suppliers and pro-active maintenance strategies * processes, layout and associated services relevant to steam generation plant and sufficient to carry out startup activities within level of responsibility * boiler water treatment system and reasons for treatment * electronic and other control systems, operation and application to make appropriate adjustments that control steam generation systems |

| Assessment Conditions |
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| The following resources must be made available:   * access to the full range of equipment required to start up steam boiler operations in a pulp or paper manufacturing facility * electronic control systems which includes Digital Control System (DCS), touch screens or robotics required for steam boiler startup * personal protective equipment suitable for managing a steam boiler startup * applicable WHS and isolation work place procedures, environmental guidelines and safe working requirements, risks and hazard identification and workplace housekeeping requirements * relevant personnel for the purposes of communicating information * sample workplace documentation, procedures and reports including SOP, quality procedures, environmental sustainability requirements/practices, plant manufacturing operating manuals, enterprise policies and procedures, oil or chemical spills and disposal guidelines, plant isolation documentation, safe work documentation.   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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