Modification history

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

| PPMREC440 | Troubleshoot and rectify chemical recovery operations |
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| Application | This unit of competency describes the outcomes required to analyse, rectify and report on chemical recovery operations, in the pulp and paper industry.  The unit applies to senior operators and production specialists who troubleshoot and rectify chemical recovery operations, in the pulp and paper industry. 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. Identify and analyse causes of faults | 1.1. Identify faults in chemical recovery processes in accordance with productivity requirements, relevant workplace health and safety (WHS) procedures, risks and hazards identification and environmental workplace procedures.  1.2. Interpret warning devices to determine fault type and location.  1.3. Identify by observation, systematic sampling and testing, quality faults and variations.  1.4. Take samples for tests to detect quality faults and variations  1.5. Interpret sampling and testing results to identify variations from specifications or schedule.  1.6. Identify, locate and analyse causes and sources of process problems or equipment faults.  1.7. Access and interpret relevant sources of information to assist analysis. |
| 2. Rectify process problems and equipment faults | 2.1. Conduct operator level on-line adjustments.  2.2. Implement isolation procedures and plant shut down prior to fault rectification.  2.3. Identify hazardous conditions, take appropriate action and communicate the conditions to relevant personnel.  2.4. Isolate, by-pass, repair or replace faulty equipment as required.  2.5. Return plant and equipment to normal operation as required.  2.6. Communicate rectification to relevant personnel. |
| 3. Rectify product quality faults | 3.1. Conduct further tests as required.  3.2. Rectify faults and causes or make recommendations for further action.  3.3. Manage out-of-specification product. |
| 4. Record and report system performance and product quality data | 4.1. Record variations from process specifications.  4.2. Record actions undertaken to troubleshoot and rectify faults.  4.3. Document details of hazardous conditions or situations, as required.  4.4. Communicate relevant information to appropriate personnel. |

| 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, with chemicals, as required. |
| Oral communication skills to: | * select and use appropriate spoken communication strategies with work colleagues and other personnel on site during operations. |
| Reading skills to: | * read and interpret specifications, procedure manuals and test results. |
| Writing skills to: | * record and report test results and rectifications 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: | * access, navigate and enter computer based information * use electronic and other control systems to control equipment and processes and make appropriate adjustments for troubleshooting processes. |

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| Unit Mapping Information | | | |
| Code and title current version | Code and title previous version | Comments | Equivalence status |
| PPMREC440 Troubleshoot and rectify chemical recovery operations | FPPREC440A Troubleshoot and rectify chemical recovery operations |  | 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 PPMREC440 Troubleshoot and rectify chemical recovery operations |
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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:   * follow safe working practices when troubleshooting and rectifying chemical recovery operations, at least twice in line with required enterprise intervals, which requires the ability to: * monitor chemical processes and plant operations * identify causes and effects of faults and corrective action on associated processes * identify and rectify faults in processes and plant, relevant to chemical recovery operations * undertake timely corrective action to maximise safety, quality and productivity * use and interpret electronic control systems, including Digital Control System (DCS), touch screens or robotics to control equipment and processes as required during operations * communicate effectively and work safely with others, in the work area when undertaking troubleshooting and rectification of chemical recovery operations. | |

| 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 * chemical recovery plant, processes, layout and associated services to carry out shutdown activities, within level of responsibility * chemical recovery processes and associated services sufficient to monitor and control operations * electronic and other control systems, operation and application to make appropriate adjustments that control the chemical recovery operations within level of responsibility |

| Assessment Conditions |
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| The following resources must be made available:   * access to the full range of chemicals and equipment required to troubleshoot and rectify chemical recovery operations in a pulp or paper manufacturing facility * personal protective equipment required for operating chemical recovery systems * pumps and transfer equipment * relevant personnel for the purposes of communicating information * mechanical, hydraulic and electrical systems * process monitoring and management equipment * 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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