

**Modification history**

Release	Comments
Release 1	This version released with PPM Pulp and Paper Manufacturing Training Package Version 3.0.

<b>PPMPUL4XX</b>	<b>Troubleshoot and rectify pulping processes</b>
<b>Application</b>	<p>This unit of competency describes the skills and knowledge required to troubleshoot, rectify and report on process, equipment and quality in faults in the pulping processes of a pulp and paper manufacturing facility.</p> <p>The unit applies to operators, technicians and senior technicians who work in the pulp and paper troubleshoot and rectify plant and quality faults that occur in continuous pulping operations.</p> <p>No licensing, legislative or certification requirements apply to this unit at the time of publication.</p>
<b>Prerequisite Unit</b>	Nil
<b>Unit Sector</b>	Pulping operations (PUL)

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify and analyse causes of plant and quality faults	1.1 Prepare for rectification of pulping processes according to productivity requirements and work health and safety and environmental procedures 1.2 Identify safety hazards and determine risk control measures with relevant personnel 1.3 Interpret alarm systems and make physical inspections on processes, plant, and equipment to determine faults and location 1.4 Conduct systemic sampling and testing and interpret results and interpret results to identify variations from specifications or schedule 1.5 Access and analyse relevant data and check for recent work undertaken to assist analysis 1.6 Analyse collected information to identify and locate cause and source of problem 1.7 Report fault and proposed corrective actions to relevant personnel
2. Rectify plant faults	2.1 Conduct operator level on-line adjustments 2.2 Shut down and isolate plant according to work health and safety and operating procedures 2.3. Isolate, by-pass, repair or replace faulty plant according to manufacturer specifications 2.4. Return plant to normal operations 2.5 Verify and communicate operations restoration to relevant personnel
3. Rectify product quality faults	3.1 Conduct further testing and interpret results to determine required operational adjustments 3.2 Rectify faults and causes or recommend further action according to operating procedures 3.3 Manage out-of-specification product
4. Record and report troubleshooting and rectification activities	4.1 Document process performance and product faults according to workplace requirements 4.2 Record and report diagnostic and corrective action processes to relevant personnel

<b>Foundation Skills</b>	
<i>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.</i>	
<b>Skill</b>	<b>Description</b>
Reading	<ul style="list-style-type: none"> <li>Interpret information from a range of documentation</li> </ul>
Writing	<ul style="list-style-type: none"> <li>Complete accurate detailed records and reports for system and product faults, diagnostic and corrective action processes using the required format</li> </ul>
Oral communication	<ul style="list-style-type: none"> <li>Interpret basic numerical settings on instruments, gauges and data recording equipment</li> <li>Interpret system and product data</li> <li>Record detailed numerical data for system and product test results</li> <li>Use measuring equipment to measure and undertake calculations</li> </ul>
Numeracy	<ul style="list-style-type: none"> <li>Complete accurate detailed records and reports for system and product faults, diagnostic and corrective action processes using the required format</li> </ul>

<b>Unit Mapping Information</b>			
<b>Code and title current version</b>	<b>Code and title previous version</b>	<b>Comments</b>	<b>Equivalence status</b>
PPMPUL4XX Troubleshoot and rectify pulping processes	PPMPUL440 Troubleshoot and rectify pulping processes	Changes to elements, performance criteria, foundation skills, performance and knowledge evidence. Assessment conditions updated.	Equivalent

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

<b>TITLE</b>	<b>Assessment requirements for PPMPUL4XX Troubleshoot and rectify pulping processes</b>
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### Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has carried out troubleshooting and rectification activities for pulping process, on at least two occasions according to operational requirements, including for each occasion:

- selected and used appropriate troubleshooting and testing methods to identify system and product quality faults
- diagnosed causes and sources of faults on system and associated processes
- identified and taken timely corrective action to rectify and maximise safety, quality and productivity
- communicated effectively and worked safely with others when undertaking troubleshooting and rectification activities
- completed accurate detailed records for system and product faults, diagnostic and corrective action processes on completion of fault rectification activity.

### 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:

- workplace and legislative health and safety requirements and risk measures relevant to operating, troubleshooting and rectifying pulping operations, including emergency procedures, handling chemical and hazardous substances, high risk load shifting, licensing requirements, plant clearance and permit systems
- relevant workplace and legislative environmental sustainability requirements and practices for pulping operations, including workplace biotechnological applications and processes considerations for troubleshooting and rectification activities
- manufacturer specifications and operating procedures for pulping plant and equipment, including shut and isolation procedures
- pulping plant, processes and associated services sufficient to troubleshoot including:
  - plant layout
  - operating principles
  - causes and effects of adjustments made to pulping plant and processes
- maintenance system as it applies to pulping operations
- purpose, standards and procedures used for troubleshooting across the system, including routine physical inspections and sampling and testing for quality checks
- causes and effects of unplanned shutdown and appropriate responses
- electronic and other control systems, operation and application to make appropriate adjustments that control pulping operations.

### Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
  - skills must be demonstrated in a pulp or paper manufacturing facility or an environment that accurately represents workplace conditions
- resources, equipment and materials:
  - tools, equipment and resources used to troubleshoot and rectify faults in pulping operations
  - electronic control systems which include portable, touch screens or robotics
  - personal protective equipment required for troubleshooting and operating pulping processes and systems
- specifications:
  - workplace and standard operating procedures relating to troubleshooting and rectifying pulping operations including health and safety, environmental, risks and hazards identification, plant isolation and quality requirements
  - manufacturer specifications and operating procedures.
- relationships:

<b>Assessment Conditions</b>	
<ul style="list-style-type: none"><li>• relevant personnel for the purposes of communicating information.</li></ul> <p>Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.</p>	
<b>Links</b>	Companion Volumes, including Implementation Guides, are available at VETNet: <a href="https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=12998f8d-d0ac-40bc-a69e-72a600d4fd93">https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=12998f8d-d0ac-40bc-a69e-72a600d4fd93</a>

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