



Australian Government

Assessment Requirements for PPMWAS210 Operate water systems

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 in this unit. There must be evidence that the individual has:

- inspected, started up and monitored water systems, at least twice in line with required enterprise intervals, and conducted required testing and sampling to maintain optimum production capacity
- followed safe working practices when operating water systems
- responded to planned and unplanned shutdowns with water systems
- 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 operating water systems.

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
- workplace documentation and procedures relevant to water systems, in the pulp and paper industry and covering:
 - standard operating procedures (SOP) and housekeeping procedures for plant manufacturing, including confined space requirements
 - production instructions including maintenance logs, job sheets and operating logs
 - quality procedures and environmental sustainability requirements and practices
 - process for plant shutdowns and unplanned shutdowns
 - safety data sheets
- impact of different types of water sources including raw, mains or recycled water on water systems
- appropriateness of sampling and testing checks for:
 - sludge consistency
 - pH
 - conductivity
 - flocculation
 - colour
 - suspended solids
 - caustic strength
 - alkalinity
 - impurities
 - brine
 - bacteria
 - colour
 - acid strength
- operating parameters, variation and associated adjustments for water system, plant, processes, layout and associated services, sufficient to carry out start up and shutdown activities
- required responses to all unplanned shutdowns, including:
 - power outage
 - mechanical breakdown
 - blockages
 - jamming
 - air supply
 - control system failure, to ensure safety quality and productivity
- purpose, standards and procedures as per site agreements for sampling and testing process for plant and system operations, and process monitoring
- implications of the use of water types including:
 - fresh water
 - treated water
 - de-mineralised water

- softened water
- filtrate-clarified water
- potable water
- dilution water (filtrate) ex-vacuum system
- waste water (effluent)
- white water (ex-machine)
- cloudy water, on water systems
- how to identify and respond to hazards and risks of water systems including:
 - confined space
 - biological hazards and environmental hazards
 - heat, height and slippery surfaces
 - pressures, fumes and electrical equipment
 - compressed air, nip points and flooding
- key features of maintenance systems including:
 - operator level maintenance as per site agreements
 - operator maintenance schedules
 - maintenance suppliers
 - pro-active maintenance strategies
- use of equipment and electronic and other control systems, operation and application to make appropriate adjustments that control the water system within level of responsibility
- productivity requirements including:
 - energy efficiency
 - waste minimisation
 - evaporation minimisation
 - landfill and waste water reduction
- consideration of resource utilisation including:
 - fibre efficiency
 - minimising delays
 - chemical recovery maximisation
 - line speed
 - handovers
- water systems including:
 - de-alkalinisation plant
 - de-mineralisation plant
 - water softening plant
 - chemical treatment plant
 - reverse osmosis plant
 - clarifier plant chillers
 - water storage systems
 - filtration systems

- cooling towers
- condensers
- potable water plant
- materials and supplies including chemicals and filtering mediums.

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:
 - access to the full range of equipment required to operate water systems in a pulp or paper manufacturing facility
 - test and diagnostic equipment
 - PPE required for operating water systems
- specifications:
 - template operating log and documents for recording operation of the water system and maintenance requirements
 - organisational workplace health and safety and SOPs.

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>