



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **FPPWEO210A Monitor and control wet end operations**

**Release: 1**

## FPPWEO210A Monitor and control wet end operations

### Modification History

Not Applicable

### Unit Descriptor

#### Unit descriptor

This unit describes the outcomes required to monitor and control wet end operations in the pulp and paper industry

General legislation, regulatory, licensing and certification requirements applicable to this unit are detailed in the range statement

Specific high risk (and non-high risk) load shifting licensing requirements for this unit may be applicable and are to be met separately and prior to the achievement of this unit

### Application of the Unit

#### Application of the unit

This unit applies to operators who monitor and control wet end operations in the pulp and paper industry. This work typically involves complex integrated equipment and continuous operations

This unit generally applies to those who:

- monitor and control process and systems
- control product quality
- conduct product grade change, and
- record process and system information

to meet safety, quality and productivity requirements

It does not include starting up, shutting down or troubleshooting and rectifying problems associated wet end operations

### Licensing/Regulatory Information

Refer to Unit Descriptor

## Pre-Requisites

Not Applicable

## Employability Skills Information

**Employability skills**      This unit contains employability skills

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Monitor and control process and systems	1.1.Process and systems are monitored and controlled within Occupational Health and Safety (OHS) regulations, environmental and safe working requirements/practices, Standard Operating Procedures (SOP), and housekeeping requirements 1.2.Production requirements are checked at start of shift to plan daily activities as required 1.3.Operational status is confirmed by inspection, observation and other information 1.4.Process supplies are maintained and controlled to meet production requirements 1.5.Systems are monitored to ensure wet end operations are within parameters 1.6.Process and system variations from operating parameters are identified, rectified and/or reported 1.7.Operator level preventative maintenance is undertaken as required 1.8.Changes to machine operations are communicated to relevant personnel 1.9.Sheet breaks are detected and sheet re-established as required
2. Control product quality	2.1.Controlling product quality is completed within OHS regulations, environmental and safe working requirements/practices, SOP, and housekeeping requirements 2.2.Sheet is monitored and controlled to quality requirements 2.3.Test samples taken and test results interpreted and recorded as required 2.4.Adjustments are made to control quality requirements 2.5.Changes to product requirements are communicated to relevant personnel 2.6.Routine observations and assessments are conducted on product and system operation
3. Conduct product grade change	3.1.Product grade change is completed within OHS regulations, environmental and safe working requirements/practices, SOP, and housekeeping requirements 3.2.Grade change requirements are determined and

ELEMENT	PERFORMANCE CRITERIA
	<p>planned</p> <p>3.3. Out of stock, chemical and water systems are co-ordinated and completed as required</p> <p>3.4. Wet end systems are shut down as required</p> <p>3.5. Flushing, draining and cleaning of stock, chemicals and water systems are completed as required</p> <p>3.6. Process setups and/or adjustments are implemented to meet new grade requirements</p> <p>3.7. Raw materials and supplies required for new grade requirements are staged ready for use</p> <p>3.8. Stock, chemical and water systems startups are coordinated with other sections and implemented for new grade requirements as required</p> <p>3.9. Grade change is coordinated with other sections and implemented on the run as required</p>
4. Record process and system information	<p>4.1. Recording process and system information is completed within OHS regulations, environmental and safe working requirements/practices, SOP, and housekeeping requirements</p> <p>4.2. Systems and production information is recorded</p> <p>4.3. Problems or variations in performance are recorded and communicated</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the skills and knowledge required for this unit.

#### Required skills

- Uses required forms of communication in monitoring and controlling wet end operations
- Reads and interprets required documentation, procedures and reports
- Accesses, navigates and enters computer-based information
- Interprets instruments, gauges and data recording equipment
- Identifies and actions problems within level of responsibility
- Takes samples, conducts tests, interprets and records results
- Uses measuring equipment as required
- Identifies and monitors process control points

## **REQUIRED SKILLS AND KNOWLEDGE**

- Maintains situational awareness in the work area
- Interprets and plans grade change requirements
- Co-ordinates and conducts grade changes
- Operates high risk (and non-high risk) load shifting equipment as required
- Analyses and uses sensory information to adjust process to maintain safety, quality and productivity
- Uses electronic and other control systems to control equipment and processes as required

### **Required knowledge**

- Procedures, regulations and legislative requirements relevant to wet end operations including OHS, environmental including relevant sustainability requirements/practices, SOP, isolation procedures, safe working requirements, risks and hazard identification and housekeeping
- Relevant forms of communication
- Basic problem-solving techniques consistent with level of responsibility
- Sampling and testing process for plant and system operations, and process monitoring - purpose, standards and procedures as per site agreements
- Wet end in-process tests and procedures
- Working knowledge of wet end plant, processes, layout and associated services including operating parameters, variation and associated adjustments within level of responsibility
- Quality requirements
- Grade requirements
- Materials and supplies and how they influence paper properties
- Grade change processes and co-ordination
- Timing for materials and supplies run out
- Application of high risk (and non-high risk) load shifting equipment, as required
- Sensory information that indicates a deviation from standard operating parameters
- Sufficient knowledge of electronic and other control systems, operation and application to make appropriate adjustments that control the wet end operations, within level of responsibility

# Evidence Guide

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence should be relevant to the work. It should satisfy the requirements of the elements and performance criteria and include consideration of:

- the required knowledge and skills tailored to the needs of the specific workplace
- applicable OHS regulations, environmental and safe working requirements/practices, SOP and housekeeping requirements
- applicable aspects of the range statement
- practical workplace demonstration of skills in monitoring and controlling wet end operations

#### Context of and specific resources for assessment

A workplace assessment must be used to assess:

- the application of required knowledge on the job
- the application of skills on the job, over time and under a range of typical conditions that may be experienced in wet end operations

Access to the full range of equipment involved in integrated continuous manufacturing wet end operations in a pulp or paper mill is required

#### Method of assessment

A combination of assessment methods should be used. The following examples are appropriate for this unit:

- observation of applied skills and knowledge on the job
- workplace demonstrations via a mock-up or simulation that replicate part/s of the job
- answers to written or verbal questions about specific skills and knowledge
- third-party reports from relevant and skilled personnel
- written evidence e.g. log sheet entries, checklist entries, test results

Assessment processes and techniques must be culturally appropriate and in keeping with the language and literacy capacity of the learner and the work being

## EVIDENCE GUIDE

performed. This includes conducting an assessment in a manner that allows thoughts to be conveyed verbally so that the learner can both understand and be understood by the assessor (e.g. use plain English and terminology used on the job)

A holistic assessment with other units relevant to the pulp and paper industry, mill and job role is recommended

Additional information on approaches to assessment for the pulp and paper industry is provided in the Assessment Guidelines for this Training Package

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Productivity requirements may include:

- energy efficiency
- waste minimisation
- evaporation minimisation, including landfill and waste water reduction
- environmentally safe waste disposal
- consideration of resource utilisation, including fibre efficiency
- minimising delays
- chemical recovery maximisation
- meeting key performance indicators
- line speed
- handovers
- quality checks
- meeting output targets i.e. net tonnes per employee per annum
- machine/process time availability i.e. time the machine or process is making product
- machine/process production rate



## RANGE STATEMENT

Systems and functions in wet end operations may include:

- stock approach systems
- forming system
- pressing systems
- cleaning and screening system

Materials and supplies may include:

- water
- air
- stock
- chemicals
- additives
- steam
- machine clothing
- baled pulp

Equipment may include:

- screens
- forming section
- water, chemical, vacuum or stock systems
- former
- pumps
- consistency meter
- flow meter
- refiner
- control valves
- cleaning showers
- chemical showers
- presses
- cleaners
- waste hood recovery unit
- computer systems
- electronic screens and alarms
- process control systems
- fully automated, semi-automated, manually operated plant and equipment appropriate to the wet end process

Electronic control systems may include:

- Digital Control System (DCS)
- touch screens
- robotics

Hazards and risks involved in wet end operations may include:

- steam and/or gas leaks
- fires
- nip points
- compressed air
- hot surfaces

## RANGE STATEMENT

- electrical
  - entanglement
  - vehicle movement
  - slip hazards/falls
  - energy
  - pressures
  - chemicals
  - fumes
  - confined spaces
  - dust
- Legislation, regulatory, licensing and certification requirements may include:
- OHS and environmental requirements (local, state and commonwealth)
  - activity or task specific high risk (and non-high risk) load shifting licensing requirements
- Documentation, procedures and reports may include:
- SOP
  - site policy and procedures
  - environmental sustainability requirements/practices
  - plant manufacturing operating manuals
  - confined space requirements
  - vendor documentation
  - reference manual
  - grade specifications
  - quality procedures
  - oil or chemical spills and disposal guidelines
  - plant isolation documentation
  - housekeeping
  - safe work documentation e.g. plant clearance, job safety analysis, permit systems
  - maintenance logs
  - job sheets
  - operating log
  - production instructions
  - Materials Safety Data Sheets (MSDS)
  - process and instrument diagrams
- Maintenance may include:
- operator level maintenance as per site agreements
  - operator maintenance schedules
  - maintenance systems
  - maintenance suppliers
  - pro-active maintenance strategies e.g. Total

**RANGE STATEMENT**

	Productive Maintenance (TPM), Reliability Centred Maintenance (RCM)
Actions may include:	<ul style="list-style-type: none"> <li>• process adjustments</li> <li>• reporting to authorised person</li> <li>• rectifying problem within level of responsibility</li> </ul>
Communications may include	<p>interaction with:</p> <ul style="list-style-type: none"> <li>• team members</li> <li>• production/service co-ordinators</li> <li>• internal/external customers and suppliers</li> <li>• maintenance services</li> <li>• operational management</li> <li>• statutory authorities</li> </ul>
Situational awareness may include	<p>awareness of:</p> <ul style="list-style-type: none"> <li>• traffic</li> <li>• pedestrians</li> <li>• location of equipment</li> <li>• product</li> <li>• hazards</li> <li>• obstructions</li> <li>• unexpected movement</li> </ul>
Sensory information may include:	<ul style="list-style-type: none"> <li>• visual</li> <li>• sound</li> <li>• feel</li> <li>• touch</li> <li>• smell</li> <li>• vibration</li> <li>• temperature</li> </ul>
Forms of communications may include:	<ul style="list-style-type: none"> <li>• written e.g. log books, emails, incident and other reports, run sheets, data entry</li> <li>• reading and interpreting documentation e.g. standard operating procedures, manuals, checklists, drawings</li> <li>• verbal e.g. radio skills, telephone, face to face, handover</li> <li>• signage e.g. safety, access</li> </ul>

## **Unit Sector(s)**

Not Applicable