



**Australian Government**

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

# **FPPPUL210A Monitor and control pulping operations**

**Release: 1**

## **FPPPUL210A Monitor and control pulping operations**

### **Modification History**

Not Applicable

### **Unit Descriptor**

#### **Unit descriptor**

This unit describes the outcomes required to monitor and control pulping 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 pulping 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 processes
- monitor and maintain the plant, and
- record and report process data

to meet safety, quality and productivity requirements

It does not include starting up, shutting down or troubleshooting and rectifying pulping plant 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 processes	1.1. Processes 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 day's activities as required 1.3. Operational status is confirmed by inspection, observations and other information 1.4. Supplies and supply systems are monitored to ensure availability and suitability 1.5. Sampling and testing is conducted 1.6. Storage levels are monitored and controlled 1.7. Process variables are monitored and controlled to ensure efficient operation 1.8. Discharges are monitored to meet environmental requirements
2. Monitor and maintain plant	2.1. Plant is monitored and maintained within OHS regulations, environmental and safe working requirements/practices, SOP, and housekeeping requirements 2.2. Plant variations are interpreted and actioned if required 2.3. Plant inspections are undertaken to maintain production 2.4. Test equipment is calibrated and maintained if required 2.5. Plant adjustments are made to maintain production and quality schedules 2.6. Operator level preventative maintenance schedules are carried out as required
3. Record and report process data	3.1. Process data is recorded and reported within OHS regulations, environmental and safe working requirements/practices, SOP, and housekeeping requirements 3.2. Process data is interpreted and recorded 3.3. Process problems and equipment faults are reported 3.4. Problems or variations with systems or product are communicated to relevant personnel 3.5. Hazardous conditions are documented and

**ELEMENT****PERFORMANCE CRITERIA**

- communicated to relevant personnel
- 3.6. Problems with environmental releases are recorded and reported as required

## 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 pulping 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 if required
- Uses measuring equipment as required
- Identifies and monitors process control points
- Maintains situational awareness in the work area
- Operates high risk (and non-high risk) load shifting equipment as required
- Carries out operator level maintenance 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 pulping 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
- Causes and effects of process variation between upstream and downstream customers
- Basic problem-solving techniques consistent with level of responsibility
- Sampling and testing processes for plant and system operations, and process monitoring - purpose, standards and procedures as per site agreements
- Pulping in-process tests and procedures

**REQUIRED SKILLS AND KNOWLEDGE**

- Working knowledge of pulping plant, processes, layout and associated services including operating parameters, variation and associated adjustments within level of responsibility
- Quality requirements
- Application of high risk (and non-high risk) load shifting equipment, as required
- Sensory and other 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 pulping 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 pulping 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 pulping operations

Access to the full range of equipment involved in integrated continuous manufacturing of pulping plant 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

Operational parameters may include:

- flows
- temperatures
- pressures
- through put
- consistencies
- amps
- set points
- valve settings
- levels
- interlocks

Storage levels may include:

- vats
- chests
- silos
- tanks
- bins
- piles

Pulping processes - chemical, mechanical and semi-chemical pulping may include:

- bleaching plant operations
- refining
- chip preparation
- cleaning or washing systems
- chemical preparation and treatment
- pulp lapping production
- stock distribution and storage
- digester operations
- mechanical pulping systems

Products of these processes may include:

- bleached or unbleached pulp
- fluff pulp
- crumbed pulp
- baled, rolled or sheet pulp
- slushed pulp

Materials and supplies may include:

- woodchips
- pulp
- steam
- water
- chemicals
- power

Equipment may include:

- power and steam systems
- hydraulic and electrical systems
- chemical delivery and processing systems
- conveyors and pump distribution equipment

## RANGE STATEMENT

- pneumatic systems
  - process plant
  - materials handling equipment
  - hand and power tools
  - computer systems
  - electronic screens and alarms
  - process control systems
  - analogue and digital instruments
  - fully automated, semi-automated, manually operated plant and equipment appropriate to pulping operations
- Electronic control systems may include:
- Digital Control System (DCS)
  - touch screens
  - robotics
- Legislation, regulatory, licensing and certification requirements may include:
- OHS and environmental requirements (local, state and commonwealth)
  - as applicable, activity or task specific high risk (and non-high risk) load shifting licensing requirements
  - relevant endorsed licences
  - hazardous chemical handling
  - air and gas discharges
  - safety instructions
- Documentation, procedures and reports may include:
- SOP
  - work instructions or purchase orders
  - environmental sustainability requirements/practices
  - plant manufacturing operating manuals
  - quality procedures
  - oil or chemical spills and disposal guidelines
  - plant isolation documentation
  - safe work documentation e.g. plant clearance, job safety analysis, permit systems
  - log sheets and shift reports
  - work orders
  - delivery or distribution documentation
  - tally or production records
  - incident reports
  - Materials Safety Data Sheets (MSDS)
  - process and instrumentation diagrams

**RANGE STATEMENT**

Maintenance may include:

- operator level maintenance as per site agreement
- operator maintenance schedules
- calibrating test equipment
- maintenance systems
- maintenance suppliers
- proactive maintenance strategies e.g. Total Productive Maintenance (TPM), Reliability Centred Maintenance (RCM)

## RANGE STATEMENT

- |                                      |  |
|--------------------------------------|--|
| 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>• internal or external</li> <li>• customers and suppliers</li> <li>• team members</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>• obstruction</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. SOP, manuals, checklists, drawings</li> <li>• verbal e.g. radio skills, telephone, face to face, handover</li> <li>• non-verbal e.g. hand signals, alarms, observations</li> <li>• signage e.g. safety, access</li> </ul> |

## Unit Sector(s)

Not Applicable

