

**FPP01**  
**Pulp & Paper Manufacturing**  
**Industry Training Package**  
Version 1.1 Release Date February 2010

**Volume II of II**

**Units of Competency**  
**and**  
**Imported Units of Competency**  
(Titles only)

This volume of the Pulp & Paper Manufacturing Industry Training Package contains only the endorsed units of competency for the Training Package. This volume of the Training Package must not be used in isolation and must be used in the context of the other volumes of the Training Package.

The other volumes of the Training Package are:

Volume I FPP01 Introduction, Assessment Guidelines and Qualifications



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Published by:	ForestWorks
First published:	2001 December
ISBN:	
Printed by:	ForestWorks
AEShareNet Code:	
Print Version No:	1.1
Release Date:	2010 February

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## Units of Competency

### What is competency?

The broad concept of industry competency concerns the ability to perform particular tasks and duties to the standard of performance expected in the workplace. Competency requires the application of specified skills, knowledge and attitudes relevant to effective participation in an industry, industry sector or enterprise.

Competency covers all aspects of workplace performance and involves performing individual tasks; managing a range of different tasks; responding to contingencies or breakdowns; and, dealing with the responsibilities of the workplace, including working with others. Workplace competency requires the ability to apply relevant skills, knowledge and attitudes consistently over time and in the required workplace situations and environments. In line with this concept of competency Training Packages focus on what is expected of a competent individual in the workplace as an outcome of learning, rather than focussing on the learning process itself.

Units of Competency in Training Packages are determined by industry to meet identified industry skill needs. Units of Competency are made up of a number of units of competency each of which describes a key function or role in a particular job function or occupation. Each unit of competency within a Training Package is linked to one or more AQF qualifications.

### Contextualisation of Units of Competency by RTOs

Registered Training Organisations (RTOs) may contextualise units of competency in this endorsed Training Package to reflect required local outcomes. Contextualisation could involve additions or amendments to the unit of competency to suit particular delivery methods, learner profiles, specific enterprise equipment requirements, or to otherwise meet local needs. However, the integrity of the overall intended outcome of the unit of competency must be maintained.

Any contextualisation of units of competency in this Training Package must be within the bounds of the following advice:

- RTOs must not remove or add to the number and content of elements and performance criteria.
- RTOs can include specific industry terminology in the range statement.
- Any amendments and additions to the range statement made by RTOs must not diminish the breadth of application of the competency, or reduce its portability.
- RTOs may add detail to the evidence guide in areas such as the critical aspects of evidence or required resources and infrastructure—but only where these expand the breadth of the competency and do not limit its use.

## **Components of Units of Competency**

The components of units of competency are summarised below, in the order in which they appear in each unit of competency.

*\*Note: some of these components do not appear in this version of the training package, but will appear in the next version.*

### **Unit Title**

The unit title is a succinct statement of the outcome of the unit of competency. Each unit of competency title is unique, both within and across Training Packages.

### **\*Unit Descriptor**

The unit descriptor broadly communicates the content of the unit of competency and the skill area it addresses. Where units of competency have been contextualised from units of competency from other endorsed Training Packages, summary information is provided. There may also be a brief second paragraph that describes its relationship with other units of competency, and any licensing requirements.

### **\*Employability Skills**

This sub-section contains a statement that the unit contains Employability skills.

### **\*Pre-requisite Units (optional)**

If there are any units of competency that must be completed before the unit, these will be listed.

### **\*Application of the Unit**

This sub-section fleshes out the unit of competency's scope, purpose and operation in different contexts, for example, by showing how it applies in the workplace.

### **Competency Field (Optional)**

The competency field either reflects the way the units of competency are categorised in the Training Package or denotes the industry sector, specialisation or function. It is an optional component of the unit of competency.

### **Sector (optional)**

The industry sector is a further categorisation of the competency field and identifies the next classification, for example an elective or supervision field.

### **Elements of Competency**

The elements of competency are the basic building blocks of the unit of competency. They describe in terms of outcomes the significant functions and tasks that make up the competency.

### **Performance Criteria**

The performance criteria specify the required performance in relevant tasks, roles, skills and in the applied knowledge that enables competent performance. They are usually written in passive voice. Critical terms or phrases may be written in bold italics and then defined in range statement, in the order of their appearance in the performance criteria.

### **\*Required Skills and Knowledge**

The essential skills and knowledge are either identified separately or combined. *Knowledge* identifies what a person needs to know to perform the work in an informed and effective manner. *Skills* describe the application of knowledge to situations where understanding is converted into a workplace outcome.

### **Range Statement**

The range statement provides a context for the unit of competency, describing 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. As applicable, the meanings of key terms used in the performance criteria will also be explained in the range statement.

## **Evidence Guide**

The evidence guide is critical in assessment as it provides information to the Registered Training Organisation (RTO) and assessor about how the described competency may be demonstrated. The evidence guide does this by providing a range of evidence for the assessor to make determinations, and by providing the assessment context. The evidence guide describes:

- conditions under which competency must be assessed including variables such as the assessment environment or necessary equipment;
- relationships with the assessment of any other units of competency;
- suitable methodologies for conducting assessment including the potential for workplace simulation;
- resource implications, for example access to particular equipment, infrastructure or situations;
- how consistency in performance can be assessed over time, various contexts and with a range of evidence; and
- the required underpinning knowledge and skills

## **Employability Skills in Units of Competency**

The detail and application of Employability Skills facets will vary according to the job-role requirements of each industry. In developing Training Packages, industry stakeholders are consulted to identify appropriate facets of Employability Skills which are incorporated into the relevant units of competency and qualifications.

Employability Skills are not a discrete requirement contained in units of competency (as was the case with Key Competencies). Employability Skills are specifically expressed in the context of the work outcomes described in units of competency and will appear in elements, performance criteria, range statements and evidence guides. As a result, users of Training Packages are required to review the entire unit of competency in order to accurately determine Employability Skills requirements.

## How Employability Skills relate to the Key Competencies

The eight nationally agreed Employability Skills now replace the seven Key Competencies in Training Packages. Trainers and assessors who have used Training Packages prior to the introduction of Employability Skills may find the following comparison useful.

<b>Employability Skills</b>	<b>Mayer Key Competencies</b>
Communication	Communicating ideas and information
Teamwork	Working with others and in teams
Problem solving	Solving problems
	Using mathematical ideas and techniques
Initiative and enterprise	
Planning and organising	Collecting, analysing and organising information
	Planning and organising activities
Self-management	
Learning	
Technology	Using technology

When analysing the above table it is important to consider the relationship and natural overlap of Employability Skills. For example, using technology may involve communication skills and combine the understanding of mathematical concepts.

### Explicitly embedding Employability Skills in units of competency

This Training Package seeks to ensure that industry-endorsed Employability Skills are explicitly embedded in units of competency. The application of each skill and the level of detail included in each part of the unit will vary according to industry requirements and the nature of the unit of competency.

Employability Skills must be both explicit and embedded within units of competency. This means that Employability Skills will be:

- embedded in units of competency as part of the other performance requirements that make up the competency as a whole
- explicitly described within units of competency to enable Training Packages users to identify accurately the performance requirements of each unit with regards to Employability Skills.

This Training Package also seeks to ensure that Employability Skills are well-defined and written into units of competency so that they are apparent, clear and can be delivered and assessed as an essential component of unit work outcomes.

### Sample unit of competency components showing Employability Skills

The following table shows the sequence of a unit of competency, and each cell contains text taken from a range of units. It provides examples of where and how various Employability Skills could be embedded in each component.

Please note that in the example, the bracketed Employability Skills are provided for clarification only and would not be present in units of competency within this Training Package.

<b>Unit Title</b>	Give formal presentations and take part in meetings ( <b>Communication</b> )
<b>Unit Descriptor</b>	This unit covers the skills and knowledge required to promote the use and implementation of innovative work practices to effect change. ( <b>Initiative and enterprise</b> )
<b>Element</b>	Proactively resolve issues. (problem solving)
<b>Performance Criteria</b>	Information is organised in a format suitable for analysis and dissemination in accordance with organisational requirements. ( <b>Planning and organising</b> )
<b>Range Statement</b>	Software applications may include email, internet, word processing, spreadsheet, database or accounting packages. (technology)  Modify activities depending on differing workplace contexts, risk situations and environments. ( <b>Learning</b> )
<b>Required Skills and Knowledge</b>	Work collaboratively with others during a fire emergency. (teamwork)  Instructions, procedures and other information relevant the maintenance of vessel and port security. ( <b>Communication</b> )
<b>Evidence Guide</b>	Evidence of having worked constructively with a wide range of community groups and stakeholders to solve problems and adapt or design new solutions to meet identified needs in crime prevention. In particular, evidence must be obtained on the ability to: <ul style="list-style-type: none"> <li>• assess response options to identified crime-prevention needs and</li> </ul>

determine the optimal action to be implemented

- in consultation with relevant others, design an initiative to address identified issues. (**Initiative and enterprise**).

### **Employability Skills Summaries and units of competency**

An Employability Skills Summary exists for each qualification. Summaries include broad advice on industry expectations with regard to Employability Skills at the qualification level. Summaries should be used by trainers and assessors to assist in identifying the Employability Skills requirements contained within units of competency.

## **Handling and Preparing Primary Resources**

FPPRES1A: Receive material

FPPRES2A: Unload materials

FPPRES3A: Prepare woodchip line for production

FPPRES4A: Prepare logs for chip production

FPPRES5A: Operate woodchip production system

FPPRES6A: Conduct woodchip quality assessments

FPPRES7A: Co-ordinate system shut down

FPPRES8A: Distribute woodchips

FPPRES9A: Troubleshoot and rectify resource handling systems

### ***Please note:***

*A single Range Statement has been prepared to cover all Units in Handling and Preparing Primary Resources. The actual context/conditions for each Unit would be drawn from the mill's customised version of this Range Statement.*



## **RANGE STATEMENT**

The coverage of resource handling and preparation includes the following systems:

- Units FPPRES1A & FPPRES2A

### **Resource receipt and unloading system**

- finished goods handling system
- Units FPPRES3A - FPPRES9A
  - woodchip system
  - screening and rechipping system
  - bark recovery system
  - debarking system
  - woodchip and hopper storage system
  - chipping system
  - waste recovery system

### **Materials/supplies:**

- Materials may be hardwood or softwood logs, lapped pulp, waste paper, woodchips, finished supplies, parts, complete orders.

### **Weighbridge: [excludes Units FPPRES2A - FPPRES9A]**

### **Equipment: [excludes Units FPPRES1A & FPPRES2A]**

- Chipper, hogger, conveyor feed systems, chipscreens, hydraulic cutting equipment, blades, chainsaws, magnetic detectors, silos, hopper and storage systems.
- Docking saw, debarking machinery.
- Chip spreaders/slingers, silos, hopper and storage systems.
- Trailer/tipper, articulated loader, tracked dozer/front end loader, forklift, side loader, mobile crane, rigid loader, log loader, straddle truck, mobile crane.
- Accessories may include protective and high visibility safety clothing and equipment, break down tools and equipment, electronic communication equipment.
- Testing equipment may include drying ovens, sizing screens, computer processing equipment.

### **Attachments: [excludes FPPRES1A]**

- Fork lift attachments, crane hooks, chains, slings and straps, grabs, winches.

**Legislation, policy and procedures:**

- Enterprise policy, procedures and guidelines.
- OH&S and environmental regulatory requirements (state and commonwealth).
- Quality assurance requirements.
- Standard Operating Procedures (SOP).

**Documentation/procedures/reports:**

- Standard Operating Procedures (SOP).
- Weighbridge dockets, work orders, tally sheets, truck delivery dockets, invoices, SOP, non-conformance reports, test results/reports.
- Log sheets (production/equipment), equipment performance data, tonnage/input/conversion.
- Sampling and test reports. [excludes Units FPPRES1A & FPPRES2A]
- Material Safety Data Sheets (MSDS).
- Pile survey documents. [excludes Units FPPRES1A-FPPRES5A, FPPRES7A]
- Process and instrument diagrams. [*excludes Units FPPRES1A & FPPRES2A*]

**Maintenance:**

- Operator level maintenance as per site agreement.
- Operator maintenance schedules.
- Maintenance systems.

**Sampling/testing:**

- Visual assessments of materials, for example size, bark.
- Testing and verification of video, monitoring, and alarm systems operation.
- Chip size.
- Contamination detection.
- In process testing, for example moisture content, chip furnish, density.

**Technology:**

- Enter/extract/file data into computer system.
- Electronic alarms and video monitoring.
- Electronic weighing and measuring equipment.

**Communication channels:**

- Internal/external customers, work area personnel.
- Maintenance services
- Team members
- Production/service co-ordinator.

## **FPPRES1A: Receive Materials**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Check, weigh and record load data.**

- 1.1 Trucks delivering loads are identified, inspected, documents checked, and load accepted.
- 1.2 Load data, estimated weights or volumes are calculated and recorded.
- 1.3 Non-conforming loads are handled in accordance with Standard Operating Procedures.
- 1.4 Confirmation of delivery record is obtained from truck driver.

#### **2 Direct trucks for unloading.**

- 2.1 Trucks are directed to appropriate unloading area, and workforce is notified of deliveries requiring unloading.
- 2.2 Truck traffic in the area is monitored and unacceptable movement is rectified.
- 2.3 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **EVIDENCE GUIDE**

- Explains load types, specifications and characteristics.
- Enters data and uses recording systems.
- Calculates weights.
- Operates materials handling equipment and procedures.
- Explains area layout.
- Interprets data.
- Demonstrates ability to control traffic within specified work area.
- Establishes and maintains a safe work environment and complies with all SOP and OH&S requirements.
- Directs trucks to appropriate locations for unloading.
- Calculates and documents accurately in accordance with enterprise requirements.
- Communicates effectively with truck and personnel.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPRES2A: Unload Materials**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Conduct unloading processes.**

- 1.1 Load is inspected for movements and safest unloading sequence is determined.
- 1.2 Load shifting equipment is checked, set up and prepared for operation.
- 1.3 Materials are lifted and unloaded maintaining load and equipment stability.
- 1.4 Damage to raw materials, equipment, or vehicle is reported according to company procedures.
- 1.5 Load/vehicle lifting equipment performance is monitored for unsatisfactory or hazardous operation.
- 1.6 Work is completed within OH&S, Standard Operating Procedures, environmental and safe working requirements and practices.

#### **2 Sort and stack materials.**

- 2.1 Materials are identified and assessed for immediate use or storage.
- 2.2 Materials are moved to appropriate stacking locations consistent with type, quality and stock rotation requirements.
- 2.3 Stacks are constructed to provide stability and minimise problems.
- 2.4 Provision for decks, storage bays and access for lifting equipment is made when storing.
- 2.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Record/tally unloading operations data.**

- 3.1 Materials are confirmed and recorded
- 3.2 Storage areas are marked as required.
- 3.3 Tally sheets and reject stock documentation is maintained as required.

## **EVIDENCE GUIDE**

- Explains load types, specifications and characteristics.
- Enters data and uses recording systems.
- Explains stocking procedures/implications/requirements.
- Uses identification, classification and tagging systems.
- Operates materials handling equipment and procedures.
- Explains deck/storage bay requirements.
- Explains enterprise emergency and evacuation procedures.
- Describes dangerous goods handling and storing requirements.
- Explains area layout.
- Interprets data.
- Stacks and stores materials as required.
- Communicates with area personnel.
- Uses enterprise work practices and procedures.
- Selects appropriate actions for handling non-conformance loads.
- Demonstrates a knowledge of area and unloading areas.
- Plans, moves and stacks materials efficiently.
- Minimises handling to meet loading, processing, and stock rotation requirements.
- Delivers materials as required, to meet production requirements.
- Maintains machinery and load receipt documentation effectively.
- Demonstrates approved manual handling techniques and complies with all SOP.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPRES3A: Prepare Woodchip Line for Production**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Interpret production requirements.**

- 1.1 Production requirements/specifications are identified from mill documentation.
- 1.2 Log supply requirements are established with log yard personnel, if appropriate.

#### **2 Conduct start up system checks.**

- 2.1 External inspection and pre-operational checks of the woodchip system are carried out.
- 2.2 Operator level maintenance schedules are carried out as independent requirements.
- 2.3 Isolations are removed in accord standard operating procedures.
- 2.4 Woodchip system is prepared for start up.
- 2.5 Monitoring devices and alarm systems are confirmed as operational.
- 2.6 Relevant personnel are notified of impending start up.
- 2.7 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Implement area housekeeping requirements.**

- 3.1 Potential hazards and obstructions are identified and cleared to designated area.
- 3.2 Infeed area is regularly cleared of debris.
- 3.3 Cleaning routines and schedules are met and comply with worksafe practices and OH&S requirements.
- 3.4 Chemical/Hazardous materials as removed and disposed in accord with SOPs.

## **EVIDENCE GUIDE**

- Interprets mill documentation.
- Explains system set up procedures.
- Operates equipment.
- Implements confined space requirements.
- Explains risks and hazards requirements.
- Explains equipment fault rectification procedures.
- Describes causes and effects of operational equipment faults and takes appropriate rectification action.
- Demonstrates ability to maintain a safe and clean work area.
- Works harmoniously with other personnel.
- Identifies and rectifies problems associated with chipping operations
- Demonstrates ability to prepare woodchip line in production.
- Demonstrates isolation and lockout procedures.
- Works within OH&S, SOP, environmental and safe working requirements and practices.



## **FPPRES4A: Prepare Logs for Chip Production**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Set up for docking and/or debarking and associated transfer equipment.**

- 1.1 Pre-start up checks on debarking and transfer equipment completed.
- 1.2 Logs to be processed are identified and loaded.
- 1.3 Equipment is started, checked and adjusted to suit loaded logs.
- 1.4 Work is completed within OH&S, Standard Operating Procedures, environmental and safe working requirements and practices.

#### **2 Operate and monitor the docking and/or debarking processes.**

- 2.1 Logs are loaded and docked where appropriate.
- 2.2 Logs are sorted on infeed conveyor and manoeuvred to ensure correct presentation.
- 2.3 Logs are visually assessed to determine suitability for debarking.
- 2.4 Non-compliance logs are removed for re-preparation in accordance with SOP.
- 2.5 Debarking processes are operated to remove bark from logs.
- 2.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Monitor and maintain production flow.**

- 3.1 Supply of logs is co-ordinated and maintained to ensure production requirements are met.
- 3.2 Conveyors and logs are monitored to provide optimum flow.
- 3.3 Debarked logs are removed and/or directed for further processing.
- 3.4 Bark is removed and transferred to storage for distribution.
- 3.5 Production and quality records are maintained.

## **EVIDENCE GUIDE**

- Demonstrates safe equipment/systems operation.
- Explains quality standards requirements.
- Implements equipment maintenance procedures and fault rectification.
- Explains log preparation procedures and purpose.
- Implements non-conformance action requirements.
- Identifies and rectifies problems associated with the broad range of docking and debarking conditions.
- Maintain production quality and schedules.
- Demonstrates ability to accurately assess logs.
- Sets up equipment/plant to specification.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPRES5A: Operate the Woodchip Production System**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Start up system for production run.**

- 1.1 Equipment, conveyors/transfer system and operational monitoring equipment pre-start-up checks are carried out.
- 1.2 Transfer equipment, bins and hoppers are checked to ensure prevention of chip contamination.
- 1.3 System is started in accordance with Standard Operating Procedures.
- 1.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Monitor and maintain chipping system operation.**

- 2.1 Log and chip conveyors are monitored for material flow.
- 2.2 Equipment operation is monitored electronically and visually to ensure operating conditions are continually maintained.
- 2.3 Potential throat jamming situations are identified and appropriate action is taken to rectify.
- 2.4 Woodchip quality is continually monitored for confirmation with production specifications.
- 2.5 Woodchip transfer to storage system is monitored and maintained.
- 2.6 Storage levels are monitored and maintained.
- 2.7 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Record/document machine performance and production data.**

- 3.1 Equipment and system performance log book is maintained as required.
- 3.2 Data is entered into computer system.
- 3.3 Problems or variations are communicated to relevant personnel.

## **EVIDENCE GUIDE**

- Demonstrates safe equipment/systems operation.
- Explains quality standards requirements.
- Implements equipment maintenance procedures and fault rectification.
- Explains log preparation procedures and purpose.
- Implements non-conformance action requirements.
- Explains causes and effects of system power stand rectification requirements.
- Accurate log assessments and equipment/plant settings.
- Demonstrated ability to preparation, start-up, and monitor operations.
- Maintain chip quality and machine production rate/schedules.
- Responds to video and other monitoring and alarm devices.
- Maintain waste systems.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPRES6A: Conduct Woodchip Quality Assessments**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Conduct routine visual assessments of woodchips.**

- 1.1 Chips are visually assessed against specification requirements.
- 1.2 Potential problems with chip characteristics and contamination are identified and reported.
- 1.3 Chip samples are identified and isolated from mixing and contamination.
- 1.4 Sampling records are completed/entered as required.
- 1.5 Work is completed within OH&S, Standard Operating Procedures, environmental and safe working requirements and practices.

#### **2 Conduct in process tests.**

- 2.1 Chip specification requirements are identified from production schedules and orders.
- 2.2 Chips are tested for compliance with specifications.
- 2.3 Chip samples are stored as required by the enterprise.
- 2.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Report and follow up test results.**

- 3.1 Test results are interpreted, recorded/entered, and communicated to relevant personnel.
- 3.2 Out-of-specification test results are reported and procedures for rectification are initiated.
- 3.3 Test sampling is modified to accommodate production changes.
- 3.4 Recommendations are made to relevant personnel for rectification of system processes and operation.

### **EVIDENCE GUIDE**

- Explains quality standards.
- Implements test procedures and sampling requirements.
- Operates test equipment.

- Describes effects of contaminants on the pulping processes and customer finished product.
- Prepares, records, reports and makes recommendations.
- Works harmoniously with other personnel.
- Records test samples.
- Collects samples safely.
- Assesses chip production, storage and handling processes and procedures.
- Interprets test results against specifications and initiates corrective action.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPRES7A: Co-ordinate System Shutdown**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Conduct a planned shutdown.**

- 1.1 Shutdown is planned in accordance with Standard Operating Procedures.
- 1.2 Work plan is communicated with relevant personnel.
- 1.3 Shutdown procedures are co-ordinated in accordance with SOP.
- 1.4 Plant is left in a safe condition for access.
- 1.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Conduct an uncontrolled shutdown.**

- 2.1 Cause of shutdown is identified, isolated and rectified according to SOP.
- 2.2 Safety of personnel is secured and confirmed in accordance with SOP.
- 2.3 Shutdown of system or appropriate sections/plant is completed in accordance with SOP and relevant personnel are notified.
- 2.4 Plant is left in a safe condition for access.

### **EVIDENCE GUIDE**

- Explains emergency procedures and responses.
- Implements shutdown procedures according to specific situations.
- Explains plant and machinery functions and operation.
- Co-ordinates and plans shutdown activity.
- Communicates clearly with relevant personnel.
- Works harmoniously with other personnel.
- Explains causes and effects of system faults and rectifies requirements.
- Responds problems associated with the broad range chipping operations.
- Responds to video and other monitoring and alarm devices.
- Monitors waste systems.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPRES8A: Distribute Woodchips**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Plan woodchip distribution.**

- 1.1 Future storage size is estimated from production and distribution schedules.
- 1.2 Filling or distribution patterns are planned to enable maximum woodchip storage density.
- 1.3 Requirements for specific sequences in filling deposit areas are identified.
- 1.4 Direction and extent for distribution and contraction is planned and confirmed with relevant personnel.
- 1.5 Chip distribution requirements are estimated considering the reach and limitations of the chip slinging/chip moving equipment.

#### **2 Start up transfer equipment and chip distributor.**

- 2.1 Pre start up checks are completed for conveyors, chip distributor, and wheeled or tracked vehicles.
- 2.2 Isolations are removed in accordance with standard operating procedures.
- 2.3 Deposit areas are checked to ensure clearance for start up.
- 2.4 Other operators are informed of impending start up.
- 2.5 Conveyors and chip spreading processes are started and correct transfer of woodchips is confirmed.
- 2.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Distribute woodchips to storage facility.**

- 3.1 Equipment is prepared for distribution of woodchips.
- 3.2 Storage is inspected to identify hazards within the vehicle operational area.
- 3.3 Notice of impending operation is communicated to relevant personnel.
- 3.4 Chip distribution is manoeuvred to enable filling or distribution over required area.



- 3.5 Woodchips are distributed to storage facilities.
- 3.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **EVIDENCE GUIDE**

- Operates plant and equipment.
- Implements Standard Procedures.
- Explains safety requirements and hazards prevention.
- Explains machine/plant maintenance requirements and procedures.
- Describes chip pile segregation purpose and techniques.
- Identifies wood types and grades.
- Works harmoniously with other personnel.
- Implements isolation and lockout procedures.
- Chips are selected and directed to appropriate position consistently.

# **FPPRES9A: Troubleshoot and Rectify Resource Handling Systems**

## **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

### **1 Identify and diagnose causes of systems and quality faults.**

- 1.1 Operational warning devices are interpreted to determine and fault type and location.
- 1.2 Sampling and testing results are interpreted to identify variations from specifications/schedule.
- 1.3 Causes and sources of problems are identified and located and relevant personnel notified.
- 1.4 Relevant sources of historical data are accessed/referred to, to confirm diagnosis.
- 1.5 Work is completed within OH&S, Standard Operating Procedures, environmental and safe working requirements and practices.

### **2 Rectify systems/machinery and ancillary equipment faults.**

- 2.1 Emergency stop/shutdown, isolation and lockout procedures are initiated prior to fault rectification.
- 2.2 Faulty equipment/instrumentation is isolated, repaired or replaced.
- 2.3 Corrective adjustments and maintenance requirements to machinery/systems operation are made.
- 2.4 Restoration of machine/system to normal operation is verified and communicated to relevant personnel.
- 2.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **3 Rectify quality faults.**

- 3.1 Quality faults/variations are identified by observation, systematic sampling and testing.
- 3.2 Samples for a range of tests are taken according to established enterprise procedures.
- 3.3 Test results are interpreted and operations are adjusted to correct deviations from specification.
- 3.4 Out of specification production is dealt with according to SOPs.

- 3.5 Recommendations for adjustments to system/process are communicated to relevant personnel.
- 3.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **4 Record and report system performance and product quality data.**

- 4.1 Variations from specifications are recorded as required.
- 4.2 Stock production and machine operation faults are recorded.
- 4.3 Causes of variations and corrective actions undertaken are recorded as required.
- 4.4 Relevant information is communicated to appropriate personnel.

#### **EVIDENCE GUIDE**

- Explains types, causes and effects of plant shutdowns.
- Implements start-up/shutdown procedures.
- Describes purpose and effects of process variables on production/quality.
- Uses routine checking procedures during plant/systems operation.
- Uses troubleshooting guides and diagnostic procedures.
- Gathers data for analysis and interpretation.
- Conducts routine checks during plant/systems operation.
- Explains types and purposes of tests.
- Sets up and operates test equipment.
- Implements sampling and testing procedures.
- Interprets test results.
- Describes plant operation and control mechanisms.
- Logs and records requirements/procedures.
- Uses keyboarding and computer access skills.
- Communicates effectively with others.
- Demonstrates ability to comply with environmental requirements.
- Responds effectively to problems.
- Identifies and rectifies operational and quality variables.

- Demonstrates ability to maintain plant operation
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## Pulping Operations

FPPPUL1B: Prepare and start-up pulping system operations.

FPPPUL3A: Monitor and control pulping operations.

FPPPUL4A: Troubleshoot and rectify pulping systems.

FPPPUL5A: Co-ordinate and implement pulping plant shutdowns.

FPPPUL6A: Store and distribute pulped product.

***Please note:***

*A single Range Statement has been prepared to cover all Units in Pulping Operations. The actual context/conditions for each Unit would be drawn from the mill's customised version of this Range Statement.*

## **RANGE STATEMENT**

The competencies described for Pulping Operations are consistent with those required when working within the following pulping processes - chemical, mechanical and semi-chemical pulping:

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

The products of these processes include:

- bleached/unbleached pulp
- crumbed pulp
- baled/rolled/sheet pulp
- slushed pulp

### **Materials/supplies: [excludes FPPPUL6A]**

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

### **Equipment:**

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

- process plant
- materials handling equipment
- hand and power tools

**Legislation, policy and procedures:**

- OH&S policies and procedures
- hazardous chemical handling
- air and gas discharges
- relevant endorsed licences
- environmental legislation/requirements
- Standard Operating Procedures (SOP)
- quality assurance requirements
- safety instructions

**Documentation/procedures/reports:**

- work instructions/purchase orders
- log sheets and shift reports
- work orders
- exception documents
- delivery/distribution documentation
- tally/production records
- Standard Operating Procedures (SOP)
- incident reports
- Materials Safety Data Sheets (MSDS)
- process and instrumentation diagrams

**Maintenance:**

- as per site agreement
- operator maintenance schedules
- test equipment is calibrated as per site agreement
- maintenance systems

**Sampling and testing: [excludes FPPPUL1A]**

Testing as required by production processes and quality guidelines may include the following range:

- consistency
- oven-dried chips
- freeness
- moisture control
- chemical strengths
- loading/storage configurations
- steam pressures
- shives
- steam recovery
- pH tests
- fibre fractions
- physical properties

Testing may be conducted at:

- pre process
- in process
- end of process

**Technology:**

- computer data entry, retrieval & interpretation
- analogue control systems

**Communication channels:**

- internal/external
- customers/suppliers
- team members
- Production/services or coordinator
- maintenance services



## **FPPPUL1B: Prepare & Start-up Pulping System Operations**

This competency standard replaces FPPPUL1A and FPPPUL2A from the previously endorsed Pulp and Paper Manufacturing Industry Training Package.

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Determine production requirements.**

- 1.1 Grade type and flow rate for production is established and communicated to relevant personnel.
- 1.2 Availability of supplies to meet production requirements are determined.
- 1.3 Readiness and availability of facilities to receive process product and/or by-products is confirmed.
- 1.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Inspect and prepare systems for start-up**

- 1.1 Isolations (if any) are removed according to SOP.
- 1.2 Pre start-up checks are completed.
- 1.3 Power and resource supplies are confirmed as available and ready for production.
- 1.4 Delivery systems are set for operation.
- 1.5 Operational settings are made and confirmed with specification requirements.
- 1.6 Production ready status is confirmed with relevant personnel.
- 1.7 Monitoring devices/systems are checked and confirmed operational.
- 1.8 Faults are identified and rectified as required, according to SOP.
- 1.9 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Synchronise start-up operations.**

- 3.1 Process flow-through systems are activated and confirmed operational.
- 3.2 Equipment start-ups are co-ordinated for production.

- 3.3 Co-ordinated system functions are confirmed by monitoring plant, equipment and instrumentation.
- 3.4 Process operation is communicated to relevant personnel.
- 3.5 Production start-up details are logged, recorded or filed according to SOP.
- 3.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **4 Establish and stabilise the production and quality processes**

- 4.1 Systems are monitored and adjusted to rectify variations from specifications.
- 4.2 Adjustments/modifications are made to stabilise pulp quality to be within specification.
- 4.3 Samples are taken as required to ensure product quality requirements will be met.
- 4.4 Product tests are verified as within specification, where applicable.
- 4.5 System operation, production and quality data is logged, recorded or filed as required.
- 4.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **5 Implement housekeeping requirements.**

- 5.1 Routine checks and maintenance of work area are undertaken.
- 5.2 Chemicals/hazardous materials are handled and disposed in accordance with SOPs.
- 5.3 Potential waste hazards are removed to designated areas according to SOP.
- 5.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **EVIDENCE GUIDE**

- Explains the information provided on production sheets.
- Determines pulping production requirements.
- Conducts checks to ensure availability of material for processing.
- Conducts checks to ensure pulp, about to be produced, can be used or stored.

- Describes the purpose and location of each supply system.
- Explains the organisation's isolation procedure.
- Ensures isolations are removed according to SOP.
- Explains the purpose of each of the steps in the preparation of the pulping operation for production
- Explains the purpose of each component of the pulping operation.
- Describes cause and affects of operational equipment faults.
- Explains the critical control points of the preparation for start-up procedure.
- Conducts pre-start-up checks of plant and equipment including instrumentation.
- Communicates operational requirements clearly to the stock preparation area.
- Explains the purpose of the process controls and how the changes affect the production variables.
- Describes how to navigate the computer control system displays.
- Inputs operational settings (eg. set points) in preparation for start-up in accordance with SOP.
- Explains the relationships within the pulping area members and with the area's suppliers and customers.
- Confirms production ready status with team members, suppliers and customers.
- Explains the critical control points of the start-up procedure.
- Activates and confirms operation of process flow-through systems.
- Responds to faults of process flow-through systems, if required.
- Activates and confirms operation of plant according to SOP.
- Responds to faults of plant, if required.
- Explains the critical control points of the monitoring process during start-up.
- Interprets control systems/display monitors in accordance with SOP.
- Makes process control adjustments to stabilise production and obtain product quality.
- Responds to control systems/display alarms in accordance with SOP.
- Explains the sampling and testing procedure, if required.
- Takes samples, conducts tests and interprets results, if required.
- Conducts routine maintenance checks.
- Explains organisation's OH&S, SOP, environmental and safe working requirements and practices for handling and disposal of hazardous substances (eg. oil rags, waste, chemicals).

- Conducts housekeeping activities to ensure a safe and clean work area (eg. disposal of hazardous substances such as oil rags, waste, chemicals).
- Explains the organisation's documentation requirements.
- Logs production preparation and start-up details according to SOP.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPPUL3A: Monitor and Control Pulping Operations**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Monitor processes.**

- 1.1 Supplies and supply systems are monitored to ensure availability and suitability.
- 1.2 Sampling and testing is conducted in accordance with Standard Operating Procedures (SOP).
- 1.3 Chest levels are monitored and maintained.
- 1.4 Production and/or by-product storage is monitored.
- 1.5 Internal and external process variables are monitored and maintained to ensure effective operation.
- 1.6 Discharges are monitored to meet environmental requirements.
- 1.7 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Monitor and maintain plant and equipment.**

- 2.1 Plant and equipment problems are rectified and/or reported.
- 2.2 Plant inspections are undertaken to maintain plant performance.
- 2.3 Chest levels are monitored and maintained.
- 2.4 Test equipment is calibrated and maintained in accordance with SOP and/or ISO.
- 2.5 Plant and equipment adjustments are made to maintain production and quality schedules.
- 2.6 Production meets customer requirements.
- 2.7 Operator level preventative maintenance schedules are carried out according to enterprise procedures.
- 2.8 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Record and document plant performance data.**

- 3.1 Process and plant data is interpreted and recorded in operations log or entered into computer system.
- 3.2 Problems or variations with systems or product are communicated to relevant personnel.

- 3.3 Hazardous conditions are documented and communicated to relevant personnel.
- 3.4 Non-conformance is acted on and reported according to SOP.

## **EVIDENCE GUIDE**

- Identifies sources of operational data.
- Interprets relevant verbal and written information.
- Explains relevant systems, processes and functions.
- Identifies and implements in-process test requirements.
- Describes cause and effects of test results and actions.
- Explains impact of inappropriate responses.
- Explains product grade and process adjustment procedures.
- Describes causes and effects of system faults and rectification requirements.
- Identifies and implements operational procedures.
- Explains use and handling requirements of chemicals used; their purpose, effects, hazards and SOP.
- Demonstrates relevant OH&S, environmental, safe work practices and emergency evacuation procedures.
- Uses technology to assist work performance.
- Communicates effectively with others.
- Demonstrates that relevant tests are conducted in accordance with SOP.
- Demonstrates that available data and test results are consistently interpreted and appropriate actions are selected and initiated.
- Demonstrates that grade specification/quality is consistently maintained.
- Demonstrates that problems in monitoring process are identified and rectified.
- Demonstrates ability to inspect and maintain equipment systems to specifications.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPPUL4A: Troubleshoot and Rectify Pulping Systems**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Identify and diagnose causes of faults.**

- 1.1 Alarms are interpreted to determine fault type and location.
- 1.2 Sampling and testing results are interpreted to identify variations from specifications/schedule.
- 1.3 Cause and source of problem is identified and located using appropriate diagnostic procedures.
- 1.4 Relevant sources of data are accessed/referred to, to assist diagnosis.
- 1.5 Work is completed within OH&S, Standard Operating Procedures, environmental and safe working requirements and practices.

#### **2 Rectify plant and equipment faults.**

- 2.1 Emergency stop/shut down, isolation and lockout procedures are in place prior to fault rectification.
- 2.2 Faulty equipment/instrumentation is isolated, repaired or replaced.
- 2.3 Running adjustments and routine maintenance requirements are carried out.
- 2.4 Plant and equipment are returned to normal operation.
- 2.5 Verification is communicated to relevant personnel in compliance with relevant site agreements and work practices.
- 2.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Rectify product quality faults.**

- 3.1 Quality faults/variations are identified by observation, systematic sampling and testing.
- 3.2 Samples for a range of tests are taken according to SOP.
- 3.3 Test results are interpreted and operations adjusted to correct faults.
- 3.4 Faults/causes are rectified if appropriate, or recommendations made for further action.

- 3.5 Out-of-specification product is managed in accordance with SOP.
- 3.6 Tests and test procedures comply with OH&S and environmental requirements, and safe work practices.

#### **4 Report and record system performance and product quality data.**

- 4.1 Variations from specification of product production and plant and equipment faults are documented/logged.
- 4.2 Signs and symptoms of performance variation are entered into log.
- 4.3 Assessment and evaluation of causes of deviation, and corrective action undertaken is recorded as required.
- 4.4 Relevant information is communicated to appropriate personnel.

#### **EVIDENCE GUIDE**

- Identifies sources of historical and operational data.
- Interprets relevant verbal and written information.
- Explains relevant systems, processes and functions.
- Identifies and implements in-process test requirements.
- Describes cause and effects of test results and actions.
- Explains impact of inappropriate responses.
- Explains product grade and process adjustment procedures.
- Describes causes and effects of system faults and rectification requirements.
- Identifies and implements operational procedures.
- Explains use and handling requirements of chemicals used; their purpose, effects, hazards and SOP.
- Uses technology to assist work performance.
- Communicates effectively with relevant personnel.
- Demonstrates that emergencies/crash shutdowns are dealt with in accordance with SOP.
- Demonstrates that Isolations and lockouts are conducted according to SOP.
- Demonstrates that relevant tests are conducted in accordance with SOP.
- Demonstrates that available data and test results are consistently interpreted and appropriate actions are selected and initiated.



- Demonstrates that grade specification/quality is consistently maintained or appropriate action taken.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

# **FPPPUL5A: Co-ordinate and Implement Pulping Plant Shutdowns**

## **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

### **1 Conduct a planned shutdown.**

- 1.1 Shutdown is planned according to requirements and other relevant departments/personnel are notified.
- 1.2 Shutdown instructions and requirements are interpreted.
- 1.3 Work plan is communicated with relevant personnel.
- 1.4 Shutdown procedures are co-ordinated in accordance with Standard Operating Procedures.
- 1.5 Plant is left in a safe condition for further access.
- 1.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **2 Manage an uncontrolled shutdown**

- 2.1 The cause of the shut is identified.
- 2.2 Safety of personnel is secured and confirmed according to SOP.
- 2.3 Shutdown of appropriate sections/equipment is completed in accordance with SOP requirements.
- 2.4 Plant is left in a safe condition for access.
- 2.5 Shutdown status is communicated to relevant personnel.
- 2.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

## **EVIDENCE GUIDE**

- Identifies faults and causes of shutdowns.
- Interprets relevant verbal and written information.
- Explains relevant systems, processes and functions.
- Explains impact of inappropriate responses.
- Describes causes and effects of system faults and rectification requirements.
- Identifies and implements operational procedures.
- Demonstrates relevant OH&S, environmental, safe work practices and emergency evacuation procedures.
- Uses technology to assist work performance.

- Communicates effectively with others.
- Describes planned shutdown procedures and ensures safety of personnel.

# **FPPPUL6A: Store and Distribute Pulped Product**

## **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

### **1 Prepare for handling operation.**

- 1.1 Handling requirements are interpreted and confirmed from instructions and Standard Operating Procedures.
- 1.2 Work areas are cleaned and prepared for operation.
- 1.3 Pre-operation checks are conducted on relevant equipment in accordance with SOP.
- 1.4 Availability of required materials for the task is confirmed.
- 1.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **2 Load/unload product.**

- 2.1 Product is directly loaded from production line in compliance with materials handling requirements and SOP.
- 2.2 Non-conformance product is identified and/or separated according to SOP.
- 2.3 Loads are within safety limits and comply with relevant requirements.
- 2.4 Product is distributed to appropriate storage.
- 2.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **3 Transport and store product.**

- 3.1 Product is conveyed in compliance with established procedures and regulations.
- 3.2 Product is stored in approved configurations and in relevant stock locations.
- 3.3 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **4 Record and document product data.**

- 4.1 Inventory records are compiled and verified.
- 4.2 Product is appropriately identified as required in accordance with SOP.

## EVIDENCE GUIDE

- Explains storage and inventory systems.
- Operates manual/materials handling equipment.
- Conducts routine maintenance of equipment.
- Interprets documentation.
- Identifies internal/external suppliers.
- Explains traffic flows and work area conditions.
- Demonstrates that product is successfully stored in appropriate locations
- Demonstrates that non-conformance loads are identified and acted upon.
- Demonstrates that product is handled to minimise damage.
- Demonstrates that inventory records are maintained as required.
- Work is carried out in compliance with relevant OH&S, SOP and safe work practices.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## Chemical Recovery Operations

FPPREC1B: Prepare and start-up chemical recovery operations.

FPPREC3A: Monitor and optimise chemical recovery operations.

FPPREC4A: Troubleshoot and rectify chemical recovery systems.

FPPREC5A: Manage chemical recovery plant shutdowns.

FPPREC6A: Store and distribute processed chemicals.

***Please note:***

*A single Range Statement has been prepared to cover all Units in Chemical Recovery Operations. The actual context/conditions for each Unit would be drawn from the mill's customised version of this Range Statement.*

## RANGE STATEMENT

The competencies described in this group of units are consistent with those required when working within the following chemical recovery processes:

- evaporator operations
- condensate stripper
- black liquor oxidation
- lime mud treatment
- WAO (wet air oxidation)
- causticising plant operations
- recovery boiler operations
- DARS operations
- foul gas and condensate incineration

The chemicals involved within these processes include:

- white liquor
- green liquor
- black liquor
- condensates
- non condensable gases

The type of plant and systems shutdowns likely to occur within the chemical recovery processes may include the following: *[excludes Units FPPREC1A, FPPREC6A]*

- planned/operational shut
- emergency shut
- crash shut
- maintenance shut

### **Materials/supplies: [excludes FPPREC6A]**

- steam
- chemicals
- water
- power

**Equipment: [excludes Units FPPREC1A, FPPREC2A]**

- power/steam generation
- pneumatic systems
- water supply systems and equipment
- process plant
- hydraulic/electrical systems
- pumps and transfer equipment
- mechanical/hydraulic/electrical systems

**Legislation, policy and procedures:**

- OH&S policies and procedures
- environmental legislation and requirements
- quality management policies
- enterprise SOP
- hazardous chemical handling

**Documentation/procedures/reports:**

- work instructions/orders
- incident reports
- Standard Operating Procedures (SOP)
- log sheets and shift reports
- emergency operational procedures (EMOs)
- process and instrument diagrams
- non conformance reports

**Maintenance:**

- as per site agreement
- maintenance systems
- operator maintenance schedules

**Sampling/testing/monitoring: [excludes Units FPPREC5A, FPPREC6A]**

Testing/monitoring as required by chemical recovery processes and quality guidelines may include:

- process flows



- process temperatures
- process pressures
- steam pressures
- pH tests
- chemical strengths
- chemical density

Testing/monitoring of chemicals may be undertaken within the following stages of the recovery process:

- pre process
- end of process
- in process

**Storage and distribution of processed chemicals will involve continuous monitoring of:**

- storage capacities
- distribution serviceability
- product quality

**Technology:**

- computer data entry and retrieval
- process monitoring and management equipment

**Communication channels:**

- team members
- internal/external customers/suppliers
- maintenance services
- production/services co-ordinator

## **FPPREC1B: Prepare and start-up Chemical Recovery Operations**

This competency standard replaces FPPREC1A and FPPREC2A from the previously endorsed Pulp and Paper Manufacturing Industry Training Package.

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Determine production requirements.**

- 1.1 Processing rates for production are determined and communicated to relevant personnel.
- 1.2 Availability of incoming supplies to meet production requirements are determined
- 1.3 Readiness and availability of facilities to receive process product and/or by-products is confirmed.
- 1.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Inspect and prepare systems for start-up**

- 2.1 Isolations (if any) are removed according to SOP.
- 2.2 Pre start-up checks are completed.
- 2.3 Power and chemical supplies are confirmed as available and ready for production.
- 2.4 Delivery systems are set for operation.
- 2.5 Operational settings are made and confirmed with specification requirements
- 2.6 Production ready status is confirmed with relevant personnel
- 2.7 Monitoring devices/systems are checked and confirmed operational.
- 2.8 Faults are identified and rectified as required, according to SOP.
- 2.9 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Synchronise start-up operations.**

- 3.1 Process flow-through systems are started and confirmed operational.
- 3.2 Equipment start-ups are co-ordinated for production.

- 3.3 Co-ordinated system functions are confirmed by monitoring plant, equipment and control system/display monitors.
- 3.4 Process operation is communicated to relevant personnel.
- 3.5 Production start-up details are logged, recorded or filed according to SOP.
- 3.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **4 Establish and stabilise the production and quality processes**

- 4.1 Systems are monitored and adjusted to rectify variations from specifications.
- 4.2 Adjustments/modifications are made to stabilise chemical recovery conditions.
- 4.3 System operation, production and quality data is logged, recorded or filed as required.
- 4.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **5 Implement housekeeping requirements**

- 5.1 Routine checks and maintenance of work area are undertaken according to SOP.
- 5.2 Housekeeping activities are conducted to ensure a safe and clean work area.
- 5.3 Chemical/hazardous materials are handled and disposed of as required by SOP.
- 5.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **EVIDENCE GUIDE**

- Explains the information provided on the production specification sheet.
- Determines chemical recovery requirements (eg, temperatures, oxidation, combustion & evaporation rates) for operation.
- Conducts checks to ensure availability of incoming supplies.
- Conducts checks to ensure readiness and availability of facilities to receive process product and/or by-products.
- Describes the purpose and location of the chemical recovery supply system.

- Explains the organisation's isolation procedure.
- Ensures isolations are removed according to SOP.
- Explains the purpose of each of the steps in the preparation of the chemical recovery system for production.
- Explains the purpose of each component of the chemical recovery system.
- Describes cause and affects of operational equipment faults.
- Explains the critical control points of the preparation for start-up procedure.
- Conducts pre-start-up checks of plant and equipment including instrumentation.
- Communicates operational requirements clearly to relevant personnel.
- Explains the purpose of the process controls and how the changes affect the operation's variables.
- Describes how to navigate the computer control system displays.
- Inputs operational settings (eg. set points) in preparation for start-up in accordance with SOP.
- Explains the relationships within the chemical recovery area members and with the area's suppliers and customers.
- Confirms production ready status with team members, suppliers and customers.
- Explains the critical control points of the start-up procedure.
- Activates and confirms operation of chemical recovery system according to SOP.
- Responds to faults of process flow-through systems, if required.
- Responds to faults of plant, if required.
- Explains the critical control points of the monitoring process during start-up.
- Interprets control systems/display monitors in accordance with SOP.
- Makes process control adjustments to stabilise production and quality.
- Responds to control systems/display alarms in accordance with SOP.
- Conducts routine maintenance checks.
- Explains organisation's OH&S, SOP, environmental and safe working requirements and practices for handling and disposal of hazardous substances (eg. oil rags, waste, chemicals).
- Conducts housekeeping activities to ensure a safe and clean work area (eg. disposal of hazardous substances such as oil rags, waste, chemicals).
- Explains the organisation's documentation requirements.
- Logs production preparation and start-up details according to SOP.

- Works within OH&S, SOP, environmental and safe working requirements and practices.

# **FPPREC3A: Monitor and Optimise Chemical Recovery Operations**

## **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

### **1 Monitor processes and equipment operation.**

- 1.1 Supplies and supply systems are monitored to ensure availability and suitability.
- 1.2 Sampling and testing is conducted in accordance with Standard Operating Procedures.
- 1.3 Production and by-product storage is monitored.
- 1.4 Internal and external process variables are monitored and compared to ensure effective operation and optimised production.
- 1.5 Operator level preventative maintenance schedules are carried out to enterprise requirements.
- 1.6 Discharges are monitored and compared against environmental requirements.
- 1.7 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **2 Optimise processes and equipment operations.**

- 2.1 Process and equipment problems are rectified and/or reported.
- 2.2 Plant inspections are undertaken to optimise plant performance.
- 2.3 Test equipment is calibrated and maintained in accordance with SOP.
- 2.4 Processes and equipment adjustments are made to optimise production and quality schedules.
- 2.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **3 Record and document performance data.**

- 3.1 Process and plant data is interpreted and recorded in operations log or entered into computer system.
- 3.2 Problems or variations with systems or product are communicated to relevant personnel.
- 3.3 Hazardous conditions are documented and communicated to relevant personnel.

### 3.4 Non-conformance is acted on and reported according to SOP.

#### **EVIDENCE GUIDE**

- Identifies sources of operational data.
- Interprets relevant verbal and written information.
- Explains systems, processes and functions.
- Implements in-process test requirements.
- Describes cause and effects of test results and actions.
- Explains impact of inappropriate responses to plant variables.
- Explains chemical recovery and process adjustment procedures.
- Describes causes and effects of system faults and rectification requirements.
- Explains use and handling requirements of chemicals used; their purpose, effects, hazards and SOP.
- Uses technology to assist work performance.
- Communicates effectively with relevant personnel.
- Demonstrates that relevant tests are conducted in accordance with SOP.
- Demonstrates that available data and test results are consistently interpreted and appropriate actions are selected and initiated.
- Demonstrates that process quality is consistently maintained.
- Demonstrates that problems in process are identified and rectified as soon as practicable.
- Demonstrates that plant operation/production is optimised within existing range of variables.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

# **FPPREC4A: Troubleshoot and Rectify Chemical Recovery Systems**

## **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

### **1 Identify and diagnose causes of faults.**

- 1.1 Warning devices are interpreted to determine fault type and location.
- 1.2 Sampling and testing results are interpreted to identify variations from specifications/schedule.
- 1.3 Cause and source of problem is identified and located using appropriate diagnostic procedures.
- 1.4 Relevant sources of data are accessed/referred to, to assist diagnosis.
- 1.5 Work is completed within OH&S, Standard Operating Procedures, environmental and safe working requirements and practices.

### **2 Rectify plant and equipment faults.**

- 2.1 Emergency stop/shut down, isolation and lockout procedures are in place prior to fault rectification.
- 2.2 Hazardous conditions are identified and communicated to relevant personnel
- 2.3 Faulty equipment/instrumentation is isolated, repaired or replaced.
- 2.4 Running adjustments and routine maintenance requirements are carried out.
- 2.5 Plant and equipment are returned to normal operation.
- 2.6 Verification is communicated to relevant personnel in compliance with relevant site agreements and work practices.
- 2.7 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **3 Rectify product quality faults.**

- 3.1 Quality faults/variations are identified by observation, systematic sampling and testing.
- 3.2 Samples for a range of tests are taken according to SOP.
- 3.3 Test results are interpreted and operations adjusted to correct faults.



- 3.4 Faults/causes are rectified if appropriate, or recommendations made for further action.
- 3.5 Out-of-specification product is managed in accordance with SOP.
- 3.6 Tests and test procedures comply with OH&S and environmental requirements, and safe work practices.

#### **4 Report and record system performance and product quality data.**

- 4.1 Variations from specification of product production and plant and equipment faults are documented/logged.
- 4.2 Indications of performance variance are entered into log.
- 4.3 Assessment and evaluation of causes of deviation, and corrective action undertaken is recorded as required.
- 4.4 Details of hazardous conditions or situations are documented in accordance with statutory requirements and SOP.
- 4.5 Relevant information is communicated to appropriate personnel.

#### **EVIDENCE GUIDE**

- Identifies sources of operational data.
- Interprets relevant verbal and written information.
- Explains systems, processes and functions.
- Implements in-process test requirements.
- Describes cause and effects of actions.
- Explains impact of inappropriate responses.
- Explains process adjustment procedures.
- Describes causes and effects of system faults and rectification requirements.
- Explains use and handling requirements of chemicals used; their purpose, effects, hazards and SOP.
- Uses technology to assist work performance.
- Communicates effectively with relevant personnel.
- Demonstrates that emergencies/crash shutdowns are dealt with in accordance with SOP.
- Demonstrates that isolations and lockouts are conducted according to SOP.
- Demonstrates that relevant tests are conducted in accordance with SOP.

- Demonstrates that available data and test results are consistently interpreted and appropriate actions are selected and initiated.
- Demonstrates that quality is consistently maintained.
- Demonstrates that faults are rectified within site agreements.
- Demonstrates that plant operation/production has minimal interruptions.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPREC5A: Manage Chemical Recovery Plant Shutdowns**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Conduct a planned shutdown.**

- 1.1 Shutdown is planned according to requirements.
- 1.2 Shutdown instructions and requirements are interpreted.
- 1.3 Work plan is communicated with relevant personnel.
- 1.4 Shutdown procedures are co-ordinated in accordance with Standard Operating Procedures.
- 1.5 Plant is left in a safe condition for further access.
- 1.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Handle an uncontrolled shutdown.**

- 2.1 The cause of the shut is identified.
- 2.2 Safety of personnel is secured and confirmed according to SOP.
- 2.3 Shutdown of appropriate sections/equipment is completed in accordance with SOP requirements.
- 2.4 Plant is left in a safe condition for access.
- 2.5 Shutdown status is communicated to relevant personnel.
- 2.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **EVIDENCE GUIDE**

- Identifies sources of operational data.
- Interprets relevant verbal and written information.
- Explains systems, processes and functions.
- Implements in-process test requirements.
- Describes cause and effects of test results and actions.
- Explains impact of inappropriate responses.
- Explains product grade and process adjustment procedures.
- Describes causes and effects of system faults and rectification requirements.
- Explains use and handling requirements of chemicals used; their purpose, effects, emergency procedures, hazards and SOP.

- Uses technology to assist work performance.
- Communicates effectively with relevant personnel.
- Demonstrates that shutdowns are in accordance with SOP.
- Demonstrates that isolations and lockouts are conducted according to SOP.
- Demonstrates that relevant tests are conducted in accordance with SOP.
- Demonstrates that available data and test results are consistently interpreted and appropriate actions are selected and initiated.
- Demonstrates that grade specification/quality is consistently maintained.
- Demonstrates that faults are rectified within site agreements.
- Demonstrates that plant operation/production has minimal interruptions.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPREC6A: Store and Distribute Processed Chemicals**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Prepare for handling operation.**

- 1.1 Handling requirements are interpreted and confirmed from instructions and Standard Operating Procedures.
- 1.2 Work areas are cleaned and prepared for operation.
- 1.3 Pre-operation checks are conducted on mechanical equipment in accordance with SOP.
- 1.4 Availability of required materials for the task is confirmed.
- 1.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Receive and distribute product.**

- 2.1 Product is received from processing plant in compliance with materials handling requirements and SOP.
- 2.2 Non-conformance product is identified and/or separated according to SOP.
- 2.3 Flows are within safety limits and comply with relevant requirements.
- 2.4 Product is distributed to appropriate storage.
- 2.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Transport and store product.**

- 3.1 Product is conveyed in compliance with established procedures and regulations.
- 3.2 Product is stored to appropriate levels in relevant storage vessels.
- 3.3 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **4 Record and document product data.**

- 4.1 Inventory records are compiled and verified.
- 4.2 Product is appropriately identified as required in accordance with SOP.

4.3 Product information is communicated to relevant sections/personnel.

**EVIDENCE GUIDE**

- Explains transfer, storage and distribution systems.
- Operates chemical distribution plant and equipment.
- Operates manual/materials handling equipment.
- Conducts routine maintenance of distribution plant and equipment.
- Interprets documentation.
- Identifies internal/external suppliers.
- Explains work area conditions and requirements.
- Demonstrates that product is successfully supplied to appropriate storage's.
- Demonstrates that non-conformance materials are identified and acted upon.
- Demonstrates that product is handled to minimise damage.
- Demonstrates that inventory records are maintained as required.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## Handling and Preparing Waste Paper for Pulp Production

FPPHWP1A: Receive waste paper.

FPPHWP2A: Unload waste paper.

FPPHWP3A: Set up and operate sorting/pressing line.

FPPHWP4A: Manage system shutdowns.

FPPHWP5A: Conduct paper grade quality assessments.

FPPHWP6A: Store and despatch blocks.

***Please note:***

*A single Range Statement has been prepared to cover all Units in Handling and Preparing Waste Paper for Pulp Production. The actual context/conditions for each Unit would be drawn from the mill's customised version of this Range Statement.*

## **RANGE STATEMENT**

The competencies for this group of units relate to those systems and functions involved in handling and preparing waste paper for pulp production.

It may involve the following shutdown situations: *[excludes Units FPPHWP1A-FPPHWP3A, FPPHWP5A, FPPHWP6A]*

- controlled/planned shutdown for equipment change, regular maintenance or end of shift
- emergency or uncontrolled shutdown.

### **Materials/supplies: [excludes Units FPPHWP4A-FPPHWP6A]**

- Raw materials delivered may be waste paper, chemicals, fuels and gas.
- Blocks, pallets, shippers, signs, labels and strapping.

### **Equipment: [excludes FPPHWP5A]**

- Conveyor systems, cranes, sorting tables.
- Fork lift, straddle truck, trailer/tipper, articulated loader, side loader, mobile crane.
- Hydraulic presses/blocking machinery, manual handling equipment.
- Mechanical handling equipment (manual and motorised).
- Accessories may include protective and high visibility safety clothing and equipment, break down tools and equipment, electronic communication equipment.
- Hand and power tools

### **Attachments: [excludes FPPHWP5A]**

- Fork lift tines, crane hooks, chains, slings and straps, grabs.

### **Legislation, policy and procedures:**

- OH&S policies and procedures, and other statutory requirements (state and commonwealth); requirements include vehicle loading/unloading safety requirements, mechanical handling and safe working practices.
- Internal and external environmental requirements.
- Dangerous goods and services.
- Standard Operating Procedures (SOP).
- New plant legislation.
- Relevant operator licences and endorsements.



**Documentation/procedures/reports:**

- Sampling and test reports.
- Weighbridge dockets, work orders, tally sheets, truck delivery dockets, invoices, SOP, non-conformance reports, test results/reports.
- Log sheets (production/equipment), equipment performance data, tonnage/input/conversion.
- Stock inventory, work orders, despatch documentation, quality assurance documentation, customer orders.
- Process and instrument diagrams.

**Maintenance:**

- As per site agreement
- Operator maintenance schedules
- Maintenance systems

**Sampling/testing: [excludes FPPHWP1A]**

- Visual assessments and sampling at process by operator, to site specifications.
- Visual assessment of loads and finished products, storage profiles, load configuration.
- Visual assessment of product for contamination including:
  - unacceptable inks or dyes
  - infestation or rot in paper
  - steel
  - rocks
  - paint
  - plastic
  - any other non-recyclables

**Technology:**

- Computer data entry and retrieval.
- Electronic weighbridge.
- Sampling and testing equipment.

**Communication channels:**

- Internal/external suppliers and customers.
- maintenance services.

- team members
- production/services co-ordinators.

## FPPHWP1A: Receive Waste Paper

### ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA

#### 1 Check, weigh and record load data.

- 1.1 Trucks delivering loads are identified, documents checked, and load accepted.
- 1.2 Load data, estimated weights or volumes are calculated and recorded.
- 1.3 Non-conforming loads are handled in accordance with Standard Operating Procedures.
- 1.4 Confirmation of delivery record is obtained from truck driver.

#### .2 Direct trucks for unloading.

- 2.1 Trucks are directed to appropriate unloading area according to load grade.
- 2.2 Yard personnel as required, are notified of deliveries requiring unloading.
- 2.3 Truck movements in the yard are monitored.
- 2.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### EVIDENCE GUIDE

- Explains paper types, specifications, characteristics and grade specifications.
- Enters data and uses recording systems.
- Calculates weights and tables.
- Operates materials handling equipment and procedures.
- Explains plant and yard layout.
- Interprets data.
- Demonstrates the ability to sort/grade waste paper to specification.
- Demonstrates the ability to establish and maintain a safe work environment and complies with all SOP and OH&S requirements.
- Demonstrates the ability to direct trucks to appropriate locations for unloading.
- Demonstrates the ability to calculate and document accurately in accordance with enterprise requirements.
- Demonstrates the ability to communicate effectively with relevant personnel.

- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPHWP2A: Unload Waste Paper**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Receive and unload waste paper.**

- 1.1 Load/product documentation is received, interpreted and verified.
- 1.2 Load and handling characteristics are identified in accordance with Standard Operating Procedures.
- 1.3 Mechanical handling equipment is selected in accordance with load and handling characteristics and in compliance with SOP.
- 1.4 Mechanical handling equipment is operated in accordance with enterprise SOP.
- 1.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Grade/class, sort and stack waste paper.**

- 2.1 Waste paper is graded and assessed for immediate processing, or for storage.
- 2.2 Waste paper is moved to appropriate stacking locations consistent with type, quality and stock rotation requirements.
- 2.3 Stacks are constructed to provide stability and minimise problems.
- 2.4 Provision for decks, storage bays and access for lifting equipment is made when storing.
- 2.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Store product.**

- 3.1 Load is lifted, carried and set down safely in accordance with SOP.
- 3.2 Load is stored in compliance with enterprise stock location requirements.
- 3.3 Inventory records documentation is completed in accordance with enterprise requirements.
- 3.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

## **EVIDENCE GUIDE**

- Explains load types, specifications and characteristics.
- Enters data and uses recording systems.
- Explains stocking procedures/implications/requirements.
- Operates materials handling equipment and procedures.
- Explains deck/storage bay requirements.
- Explains enterprise emergency and evacuation procedures.
- Describes dangerous goods handling and storing requirements.
- Interprets data.
- Stacks and stores raw materials as required.
- Communicates with area personnel.
- Selects appropriate actions for handling non-conformance loads.
- Demonstrates a knowledge of yard layout and unloading areas.
- Plans, moves and stacks paper efficiently.
- Minimises handling to meet loading, processing, and stock rotation requirements.
- Delivers paper as required, to meet production requirements.
- Maintains machinery and load receipt documentation effectively.
- Uses approved manual handling techniques and complies with all SOP.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPHWP3A: Set Up and Operate Sorting/Pressing Line**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Interpret production requirements.**

- 1.1 Production requirements/specifications are identified from mill documentation.
- 1.2 Paper supply requirements are established with depot personnel, if appropriate.

#### **2 Start up system.**

- 2.1 External inspection and pre-operational checks of the conveyor system are carried out.
- 2.2 Isolations are removed in accordance with Standard Operating Procedures.
- 2.3 Monitoring devices and alarm systems are confirmed as operational.
- 2.4 Operator level preventative maintenance schedules are carried out according to enterprise procedures.
- 2.5 Relevant personnel are notified of impending start up.
- 2.6 System is started in accordance with Standard Operating Procedures.
- 2.7 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Implement area housekeeping requirements.**

- 3.1 Potential hazards and obstructions are identified and cleared from production area.
- 3.2 Infeed area is regularly cleared of debris.
- 3.3 Cleaning routines and schedules are met and comply with worksafe practices and OH&S requirements.

#### **4 Monitor and maintain grade separation.**

- 4.1 Supply of waste paper is co-ordinated and maintained to ensure production requirements are met.
- 4.2 Conveyors are monitored to provide optimum flow.
- 4.3 Grades are removed and/or directed for further processing.

- 4.4 Contaminants are identified and removed.
- 4.5 Production and quality records are maintained.

**5 Troubleshoot and resolve problems with line operations.**

- 5.1 Equipment problems are identified and rectified.
- 5.2 Equipment faults and/or maintenance requirements are reported to appropriate personnel.
- 5.3 Isolation or lock-out procedures are followed before correcting machinery or flow problems.

**6 Record/document machine performance and production data.**

- 6.1 Machine and system performance log book is maintained as required.
- 6.2 Data is entered into computer system.
- 6.3 Problems or variations are communicated to relevant personnel.

**EVIDENCE GUIDE**

- Interprets documentation and recording requirements.
- Explains system set up procedures.
- Operates equipment.
- Explains confined space requirements.
- Implements isolation and lockout procedures.
- Explains risks and hazards requirements.
- Explains equipment fault rectification procedures.
- Describes effects of operational equipment faults.
- Identifies range of contaminants/outthrows.
- Explains quality standards and grading classifications.
- Describes causes and effects of operational equipment faults and takes appropriate rectification action.
- Identifies and rectifies problems associated with the broad range sorting and pressing operations are effectively identified and rectified.
- Identifies and removes contaminants.
- Demonstrates ability to maintain schedule.



- Demonstrates ability to grade paper within specification.
- Starts up and operates sorting/pressing line.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPHWP4A: Manage System Shutdowns**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Manage a planned shutdown.**

- 1.1 Shutdown procedures are co-ordinated in accordance with Standard Operating Procedures.
- 1.2 Plant is left in a safe condition for access.
- 1.3 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Handle an uncontrolled shutdown.**

- 2.1 Cause of shutdown is identified and isolated according to SOP.
- 2.2 Safety of personnel is secured and confirmed in accordance with SOP.
- 2.3 Shutdown of system or appropriate sections/plant is completed in accordance with SOP and relevant personnel are notified.
- 2.4 Plant is left in a safe condition for access.

### **EVIDENCE GUIDE**

- Explains emergency procedures and responses.
- Explains plant and machinery functions and operation.
- Co-ordinates and plans shutdown activity.
- Communicates clearly with relevant personnel.
- Demonstrates ability to shut down operations.
- Identifies and rectifies problems associated with the operations.
- Complies with OH&S requirements.
- Demonstrates ability to maintain waste system.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPHWP5A: Conduct Paper Grade Quality Assessments**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Conduct routine visual assessments of blocks.**

- 1.1 Blocks are visually assessed against specification requirements.
- 1.2 Potential problems with grade characteristics and contamination are identified and reported.
- 1.3 Work is completed within OH&S, Standard Operating Procedures, environmental and safe working requirements and practices.

#### **2 Conduct grade/paper quality tests.**

- 2.1 Grade specification requirements are identified from production schedules and orders.
- 2.2 Paper is tested for compliance with specifications.
- 2.3 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Report and follow up test results.**

- 3.1 Test results are interpreted, recorded/entered, and communicated to relevant personnel.
- 3.2 Out-of-specification test results are reported and procedures for rectification are initiated.
- 3.3 Test sampling is modified to accommodate production changes.
- 3.4 Recommendations are made to relevant personnel for rectification of system processes and operation.

### **EVIDENCE GUIDE**

- Identifies contaminants and paper grade types.
- Explains quality standards.
- Describes visual assessment practices.
- Describes effects of contaminants on the pulping processes and customer finished product.
- Prepares reports and makes recommendations.
- Identifies and removes contaminants.

- Safely collects samples.
- Assesses waste quality and employs appropriate handling processes and procedures.
- Interprets observations against specifications and initiates corrective action.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPHWP6A: Store and Despatch Blocks**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Pack/store product.**

- 1.1 Packaging requirements are interpreted from customer orders.
- 1.2 Package identification/verification procedures are undertaken in accordance with Standard Operating Procedures.
- 1.3 Goods are matched to and with correct labels, tags and stickers in accordance with enterprise requirements.
- 1.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Despatch product.**

- 2.1 Customer order and specifications are interpreted.
- 2.2 Goods are retrieved from storage area in compliance with SOP.
- 2.3 Goods are loaded, despatched and documented according to SOP.
- 2.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **EVIDENCE GUIDE**

- Explains warehouse organisation and workflow.
- Operates materials handling equipment.
- Maintains materials handling equipment.
- Interprets customer order requirements.
- Selects product.
- Packs/wraps product to customer requirements.
- Operates packaging/wrapping/labelling equipment.
- Communicates effectively with individuals/teams.
- Explains freight carrying and load restraints.
- Maintains inventory systems with accurate information.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **Waste Paper Operations**

FPPWPO1B: Prepare and start-up waste paper plant operations.

FPPWPO3A: Monitor and control waste paper plant operations.

FPPWPO4A: Troubleshoot and rectify waste paper plant systems.

FPPWPO5A: Co-ordinate and implement waste paper plant shutdown.

## RANGE STATEMENT

The competencies described in this group of units relate to the use of recycled paper/broke as the primary resource within the following stock production processes:

- conveyor feed system
- hydropulper
- refining system
- water treatment
- de-inking system
- cleaning systems
- fractionating systems
- dewatering system
- screening processes
- broke system
- dispersion
- holding tanks/silos
- flotation system
- reject systems

System shutdowns may be caused by: *[excludes FPPWPO1A]*

- product change
- mechanical failures
- crash shut
- full storage/low supply storage
- maintenance shut
- process failures

### Materials/supplies:

- waste paper
- air
- chemicals
- broke
- steam

- water
- electricity

**Equipment:**

- broke handling systems
- fork trucks and front end loaders
- cranes

**Legislation, policy and procedures:**

- OH&S policies/procedures
- statutory requirements (state and commonwealth)
- appropriate licences
- environmental policies
- Standard Operating Procedures (SOP)

**Documentation/procedures/reports:**

- logs
- Standard Operating Procedures (SOP)
- Material Safety Data Sheets (MSDS)
- furnish sheets
- tally sheets
- process and instrument diagrams

**Maintenance:**

- as per site agreement
- operator maintenance schedules
- maintenance systems

**Sampling/testing: [excludes FPPWPO1A, FPPWPO5A]**

- stock consistency
- stock colour
- stock brightness
- water quality
- waste paper quality



- visual assessments
- stickies

**Technology:**

- computer data entry/retrieval
- communication equipment/2-way radios

**Communication channels:**

- internal/external customers and suppliers
- team members
- maintenance services
- production/services co-ordinators

## **FPPWPO1B: Prepare and Start-up Waste Paper Operations**

This competency standard replaces FPPWPO1A and FPPWPO2A from the previously endorsed Pulp and Paper Manufacturing Industry Training Package.

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Determine production requirements.**

- 1.1 Furnish type, chemical requirements and supply rate (conveyer loading procedure) are determined and communicated to relevant personnel.
- 1.2 Availability of supplies to meet production requirements are determined.
- 1.3 Readiness and availability of facilities to receive process product and/or by-products is confirmed.
- 1.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Inspect and prepare systems for start-up.**

- 2.1 Isolations (if any) are removed according to SOP
- 2.2 Pre-start checks are completed.
- 2.3 Power and resource supplies are confirmed as available and ready for production.
- 2.4 Furnish is positioned in the holding area to ensure safe and efficient stock preparation.
- 2.5 Conveyers and chemical delivery systems are set for operation.
- 2.6 Operational settings are made and confirmed with specification requirements.
- 2.7 Production ready status is confirmed with relevant personnel.
- 2.8 Monitoring devices/systems are checked and confirmed operational.
- 2.9 Faults are identified and rectified as required, according to SOP.
- 2.10 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Synchronise start-up operations**

- 3.1 Process flow-through systems are activated and confirmed operational.

- 3.2 Equipment start-ups are co-ordinated for production according to SOP.
- 3.3 Co-ordinated system functions are confirmed by monitoring plant, equipment and control system/display monitors.
- 3.4 Systems are monitored and adjusted to rectify variations from specifications.
- 3.5 Process operation is communicated to relevant personnel.
- 3.6 Production start-ups are logged, recorded or filed according to SOP.
- 3.7 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **4 Establish and stabilise the production and quality processes.**

- 4.1 Systems are monitored and adjusted to rectify variations from specifications.
- 4.2 Adjustments/modifications are made to stabilise stock quality to be within specification.
- 4.3 Samples are taken as required to ensure product quality requirements will be met.
- 4.4 Product tests are verified as within specification, where applicable.
- 4.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.
- 4.6 System operation, production and quality data is logged, recorded or filed as required.
- 4.7 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **5 Implement housekeeping requirements.**

- 5.1 Routine checks and maintenance of work area are undertaken according to SOP.
- 5.2 Housekeeping activities are conducted to ensure a safe and clean work area.
- 5.3 Chemical/hazardous materials are handled and disposed of as required by SOP.
- 5.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

## EVIDENCE GUIDE

- Explains the information provided on production sheets.
- Determines production requirements (eg, conveyer loading procedure, chemical additives and water rates).
- Conducts checks to ensure availability of waste, chemical additives and water.
- Conducts checks to ensure stock and by-products, about to be produced, can be used or stored.
- Describes the purpose and location of each supply system.
- Explains the organisation's isolation procedure.
- Ensures isolations are removed according to SOP.
- Explains the purpose of each of the steps in the preparation of the waste paper operations system for production
- Explains the purpose of each component of the waste paper operations system.
- Describes cause and affects of operational equipment faults.
- Explains the critical control points of the preparation for start-up procedure.
- Conducts pre-start-up checks of plant and equipment including instrumentation.
- Communicates operational requirements clearly to the wet end area.
- Explains the purpose of the process controls and how the changes affect the production variables.
- Describes how to navigate the computer control system displays.
- Inputs operational settings (eg. set points) in preparation for start-up in accordance with SOP.
- Explains the relationships within the waste paper operations area members and with the area's suppliers and customers
- Confirms production ready status with team members, suppliers and customers.
- Explains the critical control points of the start-up procedure.
- Activates and confirms operation of process flow-through systems.
- Responds to faults of process flow-through systems, if required.
- Activates and confirms operation of plant (eg. conveyers, hydrapulper, chests, agitators, chemical & water systems, rejects removal systems) according to SOP.
- Responds to faults of plant, if required.
- Explains the critical control points of the monitoring process during start-up.
- Interprets control systems/display monitors in accordance with SOP.

- Makes process control adjustments to stabilise production and obtain product quality.
- Responds to control systems/display alarms in accordance with SOP.
- Explains the sampling and testing procedure, if required.
- Takes samples, conducts tests and interprets results, if required.
- Conducts routine maintenance checks.
- Explains organisation's OH&S, SOP, environmental and safe working requirements and practices for handling and disposal of hazardous substances (eg. oil rags, waste, chemicals).
- Conducts housekeeping activities to ensure a safe and clean work area (eg. disposal of hazardous substances such as oil rags, waste, chemicals).
- Explains the organisation's documentation requirements.
- Logs production preparation and start-up details according to SOP.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

# FPPWPO3A: Monitor and Control Waste Paper Plant Operations

## ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA

### **1 Monitor and maintain plant and ancillary operations. Process variables are monitored and maintained to production requirements.**

- 1.1 Process supplies are maintained to production specifications.
- 1.2 Chest levels are monitored and maintained as required.
- 1.3 Visual/walk around inspections of plant/systems are conducted.
- 1.4 Electronic monitoring of screens and gauges is carried out.
- 1.5 Reject systems are monitored and maintained within operating parameters.
- 1.6 Operator level preventative maintenance is carried out according to enterprise procedures.
- 1.7 Work is completed within OH&S, Standard Operating Procedures (SOP), environmental and safe working requirements and practices.

### **2 Control stock quality/specifications.**

- 2.1 Conveyor feeds are monitored and maintained for consistent delivery.
- 2.2 Stock quality is monitored by sampling and testing to ensure production requirements are maintained.
- 2.3 Modifications to pulp quality or systems operations are made to rectify out-of-specification stock.
- 2.4 Water distribution systems are monitored and maintained.
- 2.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **3 Implement area housekeeping and cleaning.**

- 3.1 Routine checks and maintenance of work area are undertaken.
- 3.2 Housekeeping/cleaning activities are conducted to ensure a safe and clean work area.
- 3.3 Potential waste hazards are removed to designated areas, in compliance with SOP.

- 3.4 Chemical/hazardous materials are disposed of as required by SOP.
- 3.5 Solid waste is disposed according to SOP.
- 3.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **4 Record and document plant performance data.**

- 4.1 Systems and production data is interpreted and recorded in operations log book or entered into computer system.
- 4.2 Problems or variations with systems or product are communicated to relevant personnel.

#### **EVIDENCE GUIDE**

- Explains purpose and operation of reject systems.
- Explains purpose and operation of water systems.
- Describes purpose and effects of process variables on production/quality.
- Conducts routine checks during plant/systems operation.
- Explains types and purposes of tests.
- Sets up and operates test equipment.
- Implements sampling and testing procedures.
- Interprets test results.
- Describes plant operation and control mechanisms.
- Logs and records requirements/procedures.
- Communicates effectively with relevant personnel.
- Demonstrates ability to inspect and maintain equipment/systems to specification.
- Demonstrates that plant operation is consistently maintained within specification.
- Demonstrates that stock quality is consistently within specification.
- Demonstrates that operational and quality variables are identified and rectified.
- Works within OH&S, SOP, environment and safe working requirements and practices.

# FPPWPO4A: Troubleshoot and Rectify Waste Paper Plant Systems

## ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA

### 1 Identify and diagnose causes of systems and quality faults.

- 1.1 Alarms are interpreted to determine and fault type and location.
- 1.2 Sampling and testing results are interpreted to identify variations from specifications/schedule.
- 1.3 Causes and sources of problems are identified and located and relevant personnel notified.
- 1.4 Relevant sources of historical data are accessed/referred to, to confirm diagnosis.
- 1.5 Work is completed within OH&S, Standard Operating Procedures (SOP), environmental and safe working requirements and practices.

### 2 Rectify systems/machinery and ancillary equipment faults.

- 2.1 Emergency stop/shutdown, isolation and lockout procedures are initiated prior to fault rectification.
- 2.2 Faulty equipment/instrumentation is isolated, repaired or replaced.
- 2.3 Corrective adjustments and maintenance requirements to machinery/systems operation are made.
- 2.4 Operator level preventative maintenance is carried out according to enterprise procedures.
- 2.5 Restoration of machine/system to normal operation is verified and communicated to relevant personnel.
- 2.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### 3 Rectify quality faults.

- 3.1 Quality faults/variations are identified by observation, systematic sampling and testing.
- 3.2 Samples for a range of tests are taken according to established enterprise procedures.
- 3.3 Test results are interpreted and operations are adjusted to correct deviations from specification.



- 3.4 Recommendations for adjustments to system/process are communicated to relevant personnel.
- 3.5 Out of specification product is dealt with according to SOP.
- 3.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **4 Record system performance and product quality data.**

- 4.1 Variations from specifications are recorded as required.
- 4.2 Stock production and machine operation faults are recorded.
- 4.3 Causes of variations and corrective actions undertaken are recorded as required.
- 4.4 Relevant information is communicated to appropriate personnel.

#### **EVIDENCE GUIDE**

- Explains purpose and operation of reject systems.
- Explains purpose and operation of water systems.
- Describes purpose and effects of process variables on production/quality.
- Uses routine checking procedures during plant/systems operation.
- Uses troubleshooting guides and diagnostic procedures.
- Gathers data for analysis and interpretation.
- Conducts routine checks during plant/systems operation.
- Explains types and purposes of tests.
- Sets up and operates test equipment.
- Implements sampling and testing procedures.
- Interprets test results.
- Describes plant operation and control mechanisms.
- Logs and records requirements/procedures.
- Uses keyboarding and computer access skills.
- Communicates effectively with relevant personnel.
- Demonstrates that operational and quality variables are identified and rectified.
- Demonstrates that faults/causes are consistently identified and located.

- Demonstrates that faults are rectified or caused to be rectified with minimal delay to production, in accordance with site agreements.
- Demonstrates that plant operation is consistently maintained within specification.
- Demonstrates that stock quality is consistently within specification.
- Works within OH&S, SOP, environment and safe working requirements and practices.

## **FPPWPO5A: Co-ordinate and Implement Waste Paper Plant Shutdown**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Assess reason and effects of shutdown malfunction.**

- 1.1 Reasons for shutdown are identified, and appropriate personnel notified.
- 1.2 Extent and effect of the shutdown on the waste paper plant is assessed.
- 1.3 Work is completed within OH&S, Standard Operating Procedures (SOP), environmental and safe working requirements and practices.

#### **2 Implement shutdown procedures.**

- 2.1 Shutdown is managed, planned, organised and responded to according to reason for shutdown.
- 2.2 Process supply sections of the waste paper plant are shutdown as required.
- 2.3 Equipment and areas are isolated as required to ensure personnel safety.
- 2.4 Shutdown information is communicated to the other personnel.
- 2.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Record and report shutdown data.**

- 3.1 Shutdown information is recorded and reported to relevant personnel.

### **EVIDENCE GUIDE**

- Identifies type, causes and effects of plant shutdown.
- Interprets SOP for shutdown.
- Plans and organises shutdown.
- Identifies and responds to shutdown problems.
- Solves problems associated with shutdown.
- Communicates problems accurately.
- Explains action required to protect people and equipment.

- Explains emergency procedures associated with shutdown.
- Accesses and enters data in recording system.
- Demonstrates that shutdown is responded to effectively within SOP.
- Demonstrates that shutdown procedures are implemented effectively and efficiently.
- Demonstrates that precautions are taken to protect people and equipment.
- Demonstrates that information regarding shutdown is communicated accurately.
- Works within OH&S, SOP, environment and safe working requirements and practices.

## Stock Preparation Operations

FPPSPR1B: Prepare and start-up stock and chemical system for production.

FPPSPR3A: Monitor and control stock and chemical preparation systems.

FPPSPR4A: Troubleshoot and rectify stock and chemical preparation systems.

FPPSPR5A: Co-ordinate and implement stock and chemical preparation system shutdown.

### **Please note:**

A single Range Statement has been prepared to cover all Units in Stock Preparation Operations. The actual context/conditions for each Unit would be drawn from the mill's customised version of this Range Statement.

## **RANGE STATEMENT**

- The competencies for this group of units relate to those systems and functions involved in stock preparation from unrefined pulp and broke to the machine chest and include:
  - refining systems
  - blending system
  - proportioning system
  - broke system
  - dump chests
  - chemical/additive plants

### **Materials/supplies:**

- water
- stock
- chemicals
- additives
- steam

### **Equipment:**

- refiners, pumps, valves, chests, agitators
- pulpers, screens, cleaners, disc deckers
- monitoring and alarm systems

### **Legislation, policy and procedures:**

- enterprise policy, procedures and guidelines
- OH&S and environmental regulatory requirements (state and commonwealth)
- quality assurance requirements
- Standard Operating Procedures (SOP)

### **Documentation/procedures/reports:**

- Furnish specifications
- Material Safety Data Sheets (MSDS)
- Standard Operating Procedures (SOP)
- Process and instrument diagrams

**Maintenance:**

- as per site agreement
- operator maintenance schedules
- maintenance systems

**Sampling/testing/quality checks: [excludes Units FPPSPR1A, FPPSPR5A]**

- freeness/wetness
- pH
- consistency
- residuals
- flow rates
- concentrations

**Technology:**

- process control and monitoring equipment, input and extract data
- Communication channels:
  - wet end operators
  - dry end operators
  - pulping operators
  - supervisors
  - service suppliers
  - machine operators
  - maintenance
  - management

## **FPPSPR1B: Prepare and start-up stock & chemical system for production**

This competency standard replaces FPPSPR1A and FPPSPR2A from the previously endorsed Pulp and Paper Manufacturing Industry Training Package.

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Determine production requirements**

- 1.1 Stock and flow rate for grade requirements are determined and communicated to relevant personnel.
- 1.2 Availability of stock and water to meet production requirements is determined.
- 1.3 Chemical addition requirements are determined.
- 1.4 Readiness and availability of facilities to receive process product and/or by-products is confirmed.
- 1.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Inspect and prepare systems for start-up.**

- 2.1 Isolations (if any) are removed according to SOP.
- 2.2 Pre start-up checks are completed.
- 2.3 Power and process supplies are confirmed as available and ready for production.
- 2.4 Delivery systems (stock, water, chemical additives) are set for operation.
- 2.5 Water requirements are established.
- 2.6 Operational settings are made and confirmed to be within specification.
- 2.7 Production ready status is confirmed with relevant personnel.
- 2.8 Monitoring devices/systems are checked and confirmed operational.
- 2.9 Faults are identified and rectified as required, according to SOP.
- 2.10 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.



### **3 Synchronise start-up operations**

- 3.1 Process flow-through systems are activated and confirmed operational.
- 3.2 Equipment start-ups such as refiners and chests, agitators and chemical systems are co-ordinated according to SOP.
- 3.3 Co-ordinated system functions confirmed by monitoring plant, equipment and control system/display monitors.
- 3.4 Process operation is communicated to relevant personnel.
- 3.5 Production start-up details are logged, recorded or filed according to SOP.
- 3.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **4 Establish and stabilise the production and quality processes**

- 4.1 Systems are monitored and adjusted to rectify variations from specifications.
- 4.2 Adjustments/modifications are made to stabilise stock quality to be within specification.
- 4.3 Samples are taken as required to ensure product quality requirements will be met.
- 4.4 Product tests are verified as within specification, where applicable.
- 4.5 System operation, production and quality data is logged, recorded or filed as required.
- 4.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **5 Implement housekeeping requirements.**

- 5.1 Routine checks and maintenance of work area are undertaken according to SOP.
- 5.2 Housekeeping activities are conducted to ensure a safe and clean work area.
- 5.3 Chemical/hazardous materials are handled and disposed of as required by SOP.
- 5.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

## EVIDENCE GUIDE

- Explains the information provided on furnish/production sheets.
- Determines furnish requirements (eg, stock, chemical additives, water) for production.
- Conducts checks to ensure availability of stock, supply additives and power.
- Conducts checks to ensure stock, about to be produced, can be used or stored.
- Describes the purpose and location of each supply system.
- Explains the organisation's isolation procedure.
- Ensures isolations are removed according to SOP.
- Explains the purpose of each of the steps in the preparation of the stock preparation system for production
- Explains the purpose of each component of the stock preparation system.
- Describes cause and affects of operational equipment faults.
- Explains the critical control points of the preparation for start-up procedure.
- Conducts pre-start-up checks of plant and equipment including instrumentation.
- Communicates operational requirements clearly to the wet end area.
- Explains the purpose of the process controls and how the changes affect the production variables.
- Describes how to navigate the computer control system displays.
- Inputs operational settings (eg. set points) in preparation for start-up in accordance with SOP.
- Explains the relationships within the stock preparation area members and with the area's suppliers and customers
- Confirms production ready status with team members, suppliers and customers.
- Explains the critical control points of the start-up procedure.
- Activates and confirms operation of process flow-through systems.
- Responds to faults of process flow-through systems, if required.
- Activates and confirms operation of plant (eg. refiners and chests, agitators and chemical systems) according to SOP.
- Responds to faults of plant, if required.
- Explains the critical control points of the monitoring process during start-up.
- Interprets control systems/display monitors in accordance with SOP.
- Makes process control adjustments to stabilise production and obtain product quality.
- Responds to control systems/display alarms in accordance with SOP.

- Explains the sampling and testing procedure, if required.
- Takes samples, conducts tests and interprets results, if required.
- Conducts routine maintenance checks.
- Explains organisation's OH&S, SOP, environmental and safe working requirements and practices for handling and disposal of hazardous substances (eg. oil rags, waste, chemicals).
- Conducts housekeeping activities to ensure a safe and clean work area (eg. disposal of hazardous substances such as oil rags, waste, chemicals).
- Explains the organisation's documentation requirements.
- Logs production preparation and start-up details according to SOP.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

# **FPPSPR3A: Monitor and Control Stock and Chemical Preparation Systems**

## **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

### **1 Monitor stock and chemical quality/specifications.**

- 1.1 Stock and chemical quality is monitored and maintained within grade specifications.
- 1.2 Sample test sheets and results are interpreted and data recorded as required.
- 1.3 Process adjustments are made to ensure product quality meets furnish specifications meets the required product quality.
- 1.4 Work is completed within OH&S, Standard Operating Procedures, environmental and safe working requirements and practices.

### **2 Monitor and maintain machine and auxiliary operations.**

- 2.1 Equipment is monitored and adjustments made to ensure operating standards are met.
- 2.2 Potential faults are identified and appropriate preventative action is taken.
- 2.3 Changes to equipment operations are communicated to relevant personnel.
- 2.4 Operator level preventative maintenance schedules are carried out according to enterprise procedures.
- 2.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **3 Record performance data.**

- 3.1 Documentation is maintained according to SOP.
- 3.2 Problems or variations in performance are identified, recorded and communicated to relevant personnel.

## **EVIDENCE GUIDE**

- Specifies the furnish specification requirements.
- Explains the purpose of each type of chemical/additive.
- Explains the effect of under and over addition of chemicals.

- Describes what is happening to equipment during the stock preparation process.
- Locates problems in stock and equipment.
- Identifies and rectifies routine problems.
- Communicates routine problems.
- Adjusts process to meet grade specifications.
- Accesses and enters information in computer system.
- Inspects and maintains machinery/systems as specifications.
- Demonstrates that problems are identified and promptly rectified and/or reported.
- Records performance in reporting system.
- Explains causes and effects of system faults and rectification requirements.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

# **FPPSPR4A: Troubleshoot and Rectify Stock and Chemical Preparation Systems**

## **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

### **1 Identify and diagnose causes of systems and quality faults.**

- 1.1 Alarm systems are interpreted to determine fault type and location.
- 1.2 Routine physical inspections of plant and processes are made to identify faults.
- 1.3 Sampling and testing results are interpreted to identify variations from specifications/schedule.
- 1.4 Cause and source of problem is identified and located using appropriate diagnostic procedures and relevant historical data.
- 1.5 Diagnoses are communicated to relevant personnel.
- 1.6 Work is completed within OH&S, Standard Operating Procedures, environmental and safe working requirements and practices.

### **2 Rectify product quality faults.**

- 2.1 Product quality faults/variations are identified.
- 2.2 Samples for a range of tests are taken according to SOP.
- 2.3 Test results are interpreted and processes are adjusted to correct variations from specification.
- 2.4 Out of specification product is dealt with according to SOP's.
- 2.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **3 Rectify systems/machinery and auxiliary equipment faults.**

- 3.1 Emergency stop/shutdown, isolation procedures are initiated prior to fault rectification.
- 3.2 Faulty equipment/instrumentation is isolated and repaired/replaced according to level of responsibility.
- 3.3 Machine/system is returned to normal operation, verified and communicated to relevant personnel.
- 3.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **4 Record and report process performance and product quality data.**

- 4.1 Variations from specification of sheet production and machine operation faults are documented/logged.
- 4.2 Corrective action undertaken is recorded as required.
- 4.3 Variations from standards are identified and recorded.
- 4.4 Information is communicated to appropriate personnel.

#### **EVIDENCE GUIDE**

- Identifies sources of historical and operational data.
- Interprets relevant verbal and written information.
- Explains systems, processes and functions.
- Identifies and implements in-process test requirements.
- Describes cause and effects of test results and actions.
- Explains impact of inappropriate responses.
- Explains product grade and process adjustment procedures.
- Describes causes and effects of system faults and rectification requirements.
- Identifies and implements operational procedures.
- Explains use and handling requirements of chemicals used; their purpose, effects, hazards and SOP.
- Uses technology to assist work performance.
- Responds to emergencies/crash shutdowns in accordance with SOP.
- Isolations and lockouts according to SOP.
- Demonstrates that faults are rectified within site agreements.
- Accesses and enters information in recording system.
- Communicates with other personnel/sections/departments to assist with diagnosis and resolution of operational problems.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

# FPPSPR5A: Co-ordinate and Implement Stock and Chemical Preparation System Shutdown

## ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA

### 1 Assess causes and effects of malfunction/shutdown.

- 1.1 Cause of stock preparation problem is identified, located and appropriate personnel notified.
- 1.2 Extent and effect of the shutdown on the stock preparation and wet end is assessed.
- 1.3 Work is completed within OH&S, Standard Operating Procedures, environmental and safe working requirements and practices.

### 2 Implement shutdown procedures.

- 2.1 Shutdown is managed, planned, organised and responded to according to type of shutdown.
- 2.2 Equipment and areas are isolated as required to ensure personnel safety.
- 2.3 Process supply system is shutdown and flushed as required.
- 2.4 Isolations/lock-outs are initiated according to SOP to enable maintenance and/or fault rectification to be undertaken.
- 2.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### 3 Record and report shutdown data.

- 3.1 Shutdown information is recorded and reported to relevant personnel.

## EVIDENCE GUIDE

- Identifies type of shutdown.
- Interprets SOP for shutdown.
- Plans and organises shutdown.
- Identifies and responds to shutdown problems.
- Solves problems associated with shutdown.
- Communicates problems accurately.



- Explains action required to protect people and property.
- Explains emergency procedures.
- Accesses and enters data in recording system.
- Demonstrates that shutdown procedures are implemented effectively and efficiently.
- Demonstrates that precautions are taken to protect people and property.
- Demonstrates that information regarding shutdown is communicated accurately.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **Wet End Operations**

FPPWEO1B: Prepare and start-up wet end operations.

FPPWEO3A: Monitor and control wet end operations.

FPPWEO4A: Troubleshoot and rectify wet end systems.

FPPWEO5A: Co-ordinate and implement wet end shutdown.

### **Please note:**

A single Range Statement has been prepared to cover all Units in Wet End Operations. The actual context/conditions for each Unit would be drawn from the mill's customised version of this Range Statement.

## **RANGE STATEMENT**

The competencies for Wet End Operations are consistent with those required when working within the following wet end processes:

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

### **Materials/supplies:**

- water
- air
- stock
- chemicals
- additives
- steam
- machine clothing (felts/fabrics)

### **Equipment:**

- screens
- forming section
- water/chemical/vacuum/stock systems
- former
- presses/felts
- yankee drier and associated equipment
- monitoring, control and alarm systems
- cleaners

### **Legislation, policy and procedures:**

- enterprise policy, procedures and guidelines
- OH&S and environmental regulatory requirements (state and commonwealth)
- quality assurance requirements
- Standard Operating Procedures (SOP)

**Documentation/procedures/reports:**

- Standard Operating Procedures (SOP)
- Machine Safety Data Sheets (MSDS)
- grade specifications
- computer system
- operating logs
- site requirements
- process and instrument diagrams

**Maintenance:**

- as per site agreement
- operator maintenance schedules
- maintenance systems

**Technology:**

- process control and monitoring equipment

**Communication channels:**

- internal/external suppliers/customers
- maintenance services
- team members
- production/services co-ordinator

## **FPPWEO1B: Prepare and Start-up Wet End Operations**

This competency standard replaces FPPWEO1A and FPPWEO2A from the previously endorsed Pulp and Paper Manufacturing Industry Training Package.

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Determine production requirements.**

- 1.1 Stock and flow rate for grade requirements is determined and communicated to relevant personnel.
- 1.2 Chemical addition requirements are determined.
- 1.3 Readiness and availability of facilities to receive process product is confirmed.
- 1.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Inspect and prepare delivery systems for start-up.**

- 2.1 Isolations (if any) are removed according to SOP.
- 2.2 Delivery system power supplies (eg. electrical, steam, air and water) are inspected and prepared ready to commence production.
- 2.3 Delivery system resource supplies (eg. stock, chemical additives, water, vacuum) are inspected and prepared ready to commence production.
- 2.4 Delivery system power supplies (eg. electrical, steam, air and water) are set for operation.
- 2.5 Delivery system resource supplies (eg. stock, chemical additives, water, vacuum) are set for operation.
- 2.6 Water requirements and recirculation are inspected and set for operation.
- 2.7 Operational settings (eg. power and operational set points, closing/activation of systems, stock approach flow control) are made and confirmed operational and to be within specification.
- 2.8 Production ready status of the supply systems is confirmed with relevant personnel.
- 2.9 Supply systems monitoring devices/systems are checked and confirmed operational.
- 2.10 Supply systems faults are identified and rectified as required, according to SOP.

- 2.11 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **3 Inspect and prepare forming section for start-up.**

- 3.1 Forming section power supplies (electrical, steam, air and water) are determined to be operationally ready to commence production.
- 3.2 Auxiliary forming section equipment and systems are inspected and set ready for start-up.
- 3.3 Fabrics/wires are cleaned, tensioned and guiding systems are set ready for start-up.
- 3.4 Former showers and associated systems are inspected and set ready for start-up.
- 3.5 Doctor blades or roll cleaning systems are inspected and set ready for start-up.
- 3.6 Broke and/or forming vacuum systems are inspected and set ready for start-up.
- 3.7 Production ready status of the forming section is confirmed with relevant personnel.
- 3.8 Forming section monitoring devices/systems are checked and confirmed operational.
- 3.9 Forming section faults are identified and rectified as required, according to SOP.
- 3.10 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **4 Inspect and prepare press/felts section for start-up.**

- 4.1 Press section power supplies (electrical, steam and water) are determined to be operationally ready to commence production.
- 4.2 Auxiliary press section equipment and systems are inspected and set ready for start-up.
- 4.3 Press/felts are cleaned and tensioned and guiding systems are set ready for start-up.
- 4.4 Felt conditioning, press shower systems and doctor blades are inspected and set ready for start-up.
- 4.5 Press vacuum systems are inspected and set ready for start-up.
- 4.6 Production ready status of the press section is confirmed with relevant personnel.

- 4.7 Press section monitoring devices/systems are checked and confirmed operational.
- 4.8 Press section faults are identified and rectified as required, according to SOP.
- 4.9 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

## **5 Synchronise start-up operations**

- 5.1 Delivery & auxiliary systems, forming section and press section start-ups are co-ordinated for production according to SOP.
- 5.2 Forming operation procedures are implemented for the establishment of the wet web.
- 5.3 Press operating procedures are implemented for the transfer of the sheet to the press section.
- 5.4 Co-ordinated system functions are confirmed by monitoring plant, equipment and control system/display monitors.
- 5.5 Process operation is communicated to relevant personnel.
- 5.6 Production start-up details are logged, recorded or filed according to SOP.
- 5.7 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

## **6 Establish and stabilise sheet on the wire/fabric.**

- 6.1 Stock system is activated to bring stock onto wire.
- 6.2 Sheet is established on wire.
- 6.3 Conditions for establishment and establishment of the sheet monitored by plant, equipment and control system/display monitors.
- 6.4 Adjustments/modifications are made to stabilise incoming stock conditions.
- 6.5 Adjustments/modifications are made to stabilise quality of sheet on the wire.
- 6.6 Samples are taken as required to ensure product quality requirements will be met.
- 6.7 Product tests are verified as within specification, where applicable.
- 6.8 System operation, production and quality data is logged, recorded or filed as required.

- 6.9 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

## **7 Transfer to and stabilise sheet in the press section.**

- 7.1 Sheet/tail is transferred to felt/press section.
- 7.2 Sheet is established and stabilised through press section to dry end.
- 7.3 Press section is monitored and adjusted to rectify variations from specifications.
- 7.4 Adjustments/modifications are made to stabilise sheet quality to be within specification.
- 7.5 System operation, production and quality data is logged, recorded or filed as required.
- 7.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

## **8 Implement housekeeping requirements.**

- 8.1 Routine checks and maintenance of work area are undertaken according to SOP.
- 8.2 Housekeeping activities are conducted to ensure a safe and clean work area.
- 8.3 Chemical/hazardous materials are handled and disposed of as required by SOP.
- 8.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

## **EVIDENCE GUIDE**

- Explains the information provided on product specification sheet.
- Determines wet end production requirements (eg, stock ratio, machine speed, consistency).
- Conducts checks to ensure availability of sheet, electrical power, steam, vacuum, air supply, chemical additives, if required.
- Conducts checks to ensure the dry end is ready to receive product.
- Describes the purpose and location of each supply system.
- Explains the organisation's isolation procedure.
- Ensures isolations are removed according to SOP.



- Explains the purpose of each of the steps in the preparation of wet end for production
- Explains the purpose of each component of the dry end.
- Describes cause and affects of operational equipment faults.
- Explains the critical control points of the preparation for start-up procedure.
- Conducts pre-start-up checks of plant and equipment including instrumentation.
- Activates and confirms operation of supply systems.
- Activates and confirms operation of electrical drives.
- Activates and confirms operation of approach system.
- Activates and confirms operation of forming section.
- Establishes sheet on the wire according to SOP.
- Activates and confirms operation of vacuum system according to SOP.
- Activates and confirms operation of water & recycling system according to SOP.
- Transfers sheet to the press section according to SOP.
- Feeds sheet through the press section according to SOP.
- Activates and confirms operation of press section according to SOP.
- Communicates operational requirements clearly to the stock preparation and dry end areas.
- Explains the purpose of the process controls and how the changes affect the production variables.
- Describes how to navigate the computer control system displays.
- Inputs operational settings (eg. set points) in preparation for start-up in accordance with SOP.
- Explains the relationships within the wet end area members and with the area's suppliers and customers
- Confirms production ready status with team members, suppliers and customers.
- Explains the critical control points of the start-up procedure.
- Responds to faults of plant, if required.
- Explains the critical control points of the monitoring process during start-up.
- Interprets control systems/display monitors in accordance with SOP.
- Makes process control adjustments to stabilise production and obtain product quality.
- Responds to control systems/display alarms in accordance with SOP.
- Explains the sampling and testing procedure, if required.

- Takes samples, conducts tests and interprets results, if required.
- Conducts routine maintenance checks.
- Explains organisation's OH&S, SOP, environmental and safe working requirements and practices for handling and disposal of hazardous substances (eg. oil rags, waste, chemicals).
- Conducts housekeeping activities to ensure a safe and clean work area (eg. disposal of hazardous substances such as oil rags, waste, chemicals).
- Explains the organisation's documentation requirements.
- Logs production preparation and start-up details according to SOP.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPWEO3A: Monitor and Control Wet End Operations**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Monitor product quality/specifications.**

- 1.1 Product quality is monitored and maintained within grade specifications.
- 1.2 Check levels are monitored and maintained.
- 1.3 Sample test sheets and results are interpreted and data recorded as required.
- 1.4 Process adjustments are made to ensure product quality meets grade specifications.
- 1.5 Changes to product requirements are communicated to relevant personnel.
- 1.6 Work is completed within OH&S, Standard Operating Procedures, environmental and safe working requirements and practices.

#### **2 Monitor and control machine and auxiliary operations.**

- 2.1 Machine and auxiliary operations are monitored and adjustments made to ensure operating standards are met.
- 2.2 Process supplies are maintained to production requirements.
- 2.3 Potential machine faults are identified and appropriate preventative action is taken.
- 2.4 Changes to machine operations are communicated to relevant personnel.
- 2.5 Operator level preventative maintenance is carried out according to enterprise procedures.
- 2.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Respond to wet end paper breaks.**

- 3.1 Action is taken to co-ordinate machine to restore production.
- 3.2 Wet end is returned to normal operating condition.
- 3.3 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **4 Record performance data.**

- 4.1 Documentation is maintained according to enterprise requirements.
- 4.2 Problems or variations in performance are identified, recorded and communicated to relevant personnel.

#### **EVIDENCE GUIDE**

- Interprets the grade specification requirements.
- Explains the purpose of each type of chemical/additive.
- Explains the effect of under and over addition of chemicals.
- Describes what is happening to equipment during the wet end process.
- Identifies problems in product and equipment.
- Identifies and rectifies routine problems.
- Accesses, interprets and adjusts computer information.
- Communicates routine problems within SOP.
- Adjusts process to meet grade specifications.
- Accesses and enters information in computer system.
- Demonstrates ability to rectify machine paper breaks.
- Explains effect of plant malfunction on the environmental performance of the mill.
- Demonstrates basic understanding of the environmental licence conditions.
- Explain the wet end safety procedures.
- Inspects and maintains equipment/auxiliary, equipment/services written operating standards.
- Demonstrates that product grade specifications are achieved within SOP.
- Demonstrates that problems are identified and promptly rectified and/or reported.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPWEO4A: Troubleshoot and Rectify Wet End Systems**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Identify and diagnose causes of systems and quality faults.**

- 1.1 Alarm systems are interpreted to determine fault type and location.
- 1.2 Routine physical inspections of plant and processes are made to identify faults.
- 1.3 Sampling and testing results are interpreted to identify variations from specifications/schedule.
- 1.4 Cause and source of problem is identified and located using appropriate diagnostic procedures and relevant historical data.
- 1.5 Preventative action is taken to minimise faults.
- 1.6 Diagnoses are communicated to relevant personnel.
- 1.7 Work is completed within OH&S, Standard Operating Procedures, environmental and safe working requirements and practices.

#### **2 Rectify product quality faults.**

- 2.1 Product quality faults/variations are identified by observation inspection and testing.
- 2.2 Samples for a range of tests are taken according to established enterprise procedures and SOP.
- 2.3 Test results are interpreted and processes are adjusted to correct variations from specification.
- 2.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Rectify systems/machinery and auxiliary equipment faults.**

- 3.1 Emergency stop/shutdown are initiated if required.
- 3.2 Faulty equipment is bypassed to maintain production wherever possible.
- 3.3 Faulty equipment/instrumentation is isolated/locked out and repaired/replaced according to level of responsibility.
- 3.4 Out of specification product is dealt with in accordance with SOP.

- 3.5 Machine/system is returned to normal operation, verified and communicated to relevant personnel.
- 3.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **4 Change machine clothing.**

- 4.1 Machine clothing is monitored to determine whether it is performing to specification.
- 4.2 Machine clothing is changed and adjusted.
- 4.3 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **5 Record and report process performance and product quality data.**

- 5.1 Variations from specification of sheet production and machine operation faults are documented/logged.
- 5.2 Indications of performance variations are entered into log.
- 5.3 Assessment and evaluation of causes of deviation, and corrective action undertaken is recorded.
- 5.4 Information is communicated to appropriate personnel.

#### **EVIDENCE GUIDE**

- Explains troubleshooting process.
- Explains emergency procedures.
- Diagnoses problems.
- Interprets historical data.
- Repairs routine problems with equipment.
- Interprets test results.
- Adjusts process to maintain production and quality.
- Accesses and enters information in recording system.
- Isolates equipment in accordance with SOP.
- Changes and adjusts machine clothing to enterprise and manufacturers requirements.
- Explains effect of plant malfunction on the environmental performance of the mill.
- Demonstrates basic understanding of the environmental licence conditions.
- Demonstrates knowledge of the mill maintenance systems.

- Implements confined space procedures.
- Demonstrates that problems are accurately diagnosed using observation, test results and historical data.
- Demonstrates that product problems are rectified.
- Demonstrates that routine system, machine and auxiliary equipment problems are rectified.
- Responds non-routine problems within SOP.
- Communicates with relevant personnel.
- Explains causes and effects of system faults and rectification requirements.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

# **FPPWEO5A: Co-ordinate and Implement Wet End Shutdown**

## **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

### **1 Assess reason and effects of shutdown malfunction.**

- 1.1 Reasons for shutdown are identified and appropriate personnel notified.
- 1.2 Extent and effect of the shutdown on the wet end is assessed.
- 1.3 Work is completed within OH&S, Standard Operating Procedures, environmental and safe working requirements and practices.

### **2 Implement shutdown procedures.**

- 2.1 Shutdown is managed, planned, organised and responded to according to reason for shutdown.
- 2.2 Process supply sections of the wet end are shutdown as required.
- 2.3 Equipment and areas are isolated as required to ensure personnel safety.
- 2.4 Stock chests and water tanks are dumped to clear system.
- 2.5 Machine clothing is washed, stopped and protected or changed according to SOP.
- 2.6 Shutdown information is communicated to the other personnel.
- 2.7 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **3 Record and report shutdown data.**

- 3.1 Shutdown information is recorded and reported to relevant personnel.

## **EVIDENCE GUIDE**

- Identifies type of shutdown.
- Interprets SOP for shutdown.
- Plans and organises shutdown.
- Identifies and responds to shutdown problems.
- Solves problems associated with shutdown.



- Communicates problems accurately.
- Explains action required to protect people and equipment.
- Explains emergency procedures associated with shutdown.
- Accesses and enters data in recording system.
- Demonstrates that shutdown is responded to effectively within SOP.
- Demonstrates that shutdown procedures are implemented effectively and efficiently.
- Demonstrates that precautions are taken to protect people and equipment.
- Communicates information regarding shutdown is accurately.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **Dry End Operations**

### **FPPDEO1B: Prepare and start-up dry end operations**

FPPDEO3A: Monitor and control dry end operations.

FPPDEO4A: Troubleshoot and rectify dry end systems.

FPPDEO5A: Co-ordinate and implement dry end shutdown.

#### **Please note:**

A single Range Statement has been prepared to cover all Units in Dry End Operations. The actual context/conditions for each Unit would be drawn from the mill's customised version of this Range Statement.

## **RANGE STATEMENT**

The competencies described in this group of units relate to those systems and functions inclusive from dryer to parent reel/roll and include the following:

- drying processes
- reeling operations
- chemical additive system
- monitoring systems
- sheet treatment processes
- tail feed systems
- broke system
- on-line coating systems
- calendering systems

### **Materials/supplies:**

- chemicals
- compressed air
- water
- electricity/gas
- steam
- additives
- felts/fabrics
- machine clothing
- dry screens
- ropes

### **Equipment:**

- equipment appropriate to the dry end processes
- hand and power tools

### **Legislation, policy and procedures:**

- OH&S
- environmental
- statutory legislation

- enterprise policies and procedures
- Standard Operating Procedures (SOP)
- quality assurance

**Documentation/procedures/reports:**

- SOP
- grade specifications
- maintenance logs
- job sheets
- operating log
- production instructions
- Materials Safety Data Sheets (MSDS)
- process and instrument diagrams

**Maintenance:**

- as per site agreement
- operator maintenance schedules
- maintenance systems

**Sampling/testing/quality checks: [excludes Units FPPDEO1A, FPPDEO5A]**

As per site agreement and may include the following:

- weight
- moisture
- colour
- thickness/bulk
- burst
- calliper
- tensile

**Technology:**

- computer systems
- electronic screens and alarms
- process control systems (analogue/digital)

**Communication channels:**

- team members
- production/services co-ordinators
- internal/external suppliers and customers
- maintenance services

## **FPPDEO1B: Prepare and Start-up Dry End Operations**

This competency standard replaces FPPDEO1A and FPPDEO2A from the previously endorsed Pulp and Paper Manufacturing Industry Training Package.

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Determine production requirements.**

- 1.1 Paper grade specifications and limits are confirmed and communicated to relevant personnel.
- 1.2 Process requirements are determined.
- 1.3 Readiness and availability of facilities to receive process product is confirmed.
- 1.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Inspect and prepare systems for start-up.**

- 2.1 Isolations (if any) are removed according to SOP.
- 2.2 Pre start-up checks are completed.
- 2.3 Power and process supplies are confirmed as available and ready for production.
- 2.4 Operational settings are made and confirmed to be within specification.
- 2.5 Production ready status is confirmed with relevant personnel.
- 2.6 Monitoring devices/systems are checked and confirmed operational.
- 2.7 Faults are identified and rectified, as required according to SOP.
- 2.8 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Synchronise start-up operations.**

- 3.1 Equipment start-ups are co-ordinated for production according to SOP.
- 3.2 Co-ordinated system functions are confirmed by monitoring plant, equipment and control system/display monitors.
- 3.3 Process operation is communicated to relevant personnel.

- 3.4 Production start-up details are logged, recorded or filed according to SOP.
- 3.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **4 Establish and stabilize the production and quality processes**

- 4.1 Sheet is established and stabilised through dry end sections to parent reel.
- 4.2 Systems are monitored and adjusted to rectify variations from specifications.
- 4.3 Adjustments/modifications are made to stabilise sheet quality to be within specification.
- 4.4 System operation, production and quality data is logged, recorded or filed as required.
- 4.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **5 Implement housekeeping requirements.**

- 5.1 Routine checks and maintenance of work area are undertaken according to SOP.
- 5.2 Housekeeping activities are conducted to ensure a safe and clean work area.
- 5.3 Chemical/hazardous materials are handled and disposed of as required by SOP.
- 5.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **EVIDENCE GUIDE**

- Explains the information provided on product specification sheet.
- Determines dry end production requirements (eg, steam pressures, temperatures, size press conditions, if required).
- Conducts checks to ensure availability of sheet, electrical power, steam, vacuum, air supply, size press chemicals, if required.
- Conducts checks to ensure the winder is ready to receive product.
- Describes the purpose and location of each supply system.
- Explains the organisation's isolation procedure.

- Ensures isolations are removed according to SOP.
- Explains the purpose of each of the steps in the preparation of dry end for production
- Explains the purpose of each component of the dry end.
- Describes cause and affects of operational equipment faults.
- Explains the critical control points of the preparation for start-up procedure.
- Conducts pre-start-up checks of plant and equipment including instrumentation.
- Communicates operational requirements clearly to the winder.
- Explains the purpose of the process controls and how the changes affect the production variables.
- Describes how to navigate the computer control system displays.
- Inputs operational settings (eg. set points) in preparation for start-up in accordance with SOP.
- Explains the relationships within the dry end area members and with the area's suppliers and customers
- Confirms production ready status with team members, suppliers and customers.
- Explains the critical control points of the start-up procedure.
- Activates and confirms operation of process flow-through systems, (i.e. feeding of tail, chemical supply to size press, if required).
- Responds to faults of process flow-through systems, if required.
- Activates and confirms operation of plant (eg. electrical drives, steam and condensate system, size press) according to SOP.
- Responds to faults of plant, if required.
- Explains the critical control points of the monitoring process during start-up.
- Interprets control systems/display monitors in accordance with SOP.
- Makes process control adjustments to stabilise production and obtain product quality.
- Responds to control systems/display alarms in accordance with SOP.
- Explains the sampling and testing procedure, if required.
- Takes samples, conducts tests and interprets results, if required.
- Conducts routine maintenance checks.
- Explains organisation's OH&S, SOP, environmental and safe working requirements and practices for handling and disposal of hazardous substances (eg. oil rags, waste, chemicals).
- Conducts housekeeping activities to ensure a safe and clean work area (eg. disposal of hazardous substances such as oil rags, waste, chemicals).



- Explains the organisation's documentation requirements.
- Logs production preparation and start-up details according to SOP.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPDEO3A: Monitor and Control Dry End Operations**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Monitor and maintain process/systems.**

- 1.1 Process supplies are maintained to production requirements.
- 1.2 Systems are monitored to ensure dry end operations are within specification.
- 1.3 All process and system variations from specification are identified, rectified and/or reported according to Standard Operating Procedures.
- 1.4 Operator level preventative maintenance is carried out according to enterprise procedures.
- 1.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Control product quality.**

- 1.1 Sheet is monitored and maintained to quality requirements.
- 1.2 Routine observations and assessments are conducted on product and systems operations.
- 1.3 Systems operations adjustments are made to rectify out-of-specification product quality.
- 1.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Change machine clothing.**

- 3.1 Machine clothing is monitored to determine whether it is performing to specification.
- 3.2 Machine clothing is changed and maintained to SOP.
- 3.3 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **4 Record and report product and process performance data.**

- 4.1 Systems and production data is interpreted and entered into recording system.
- 4.2 Problems or variations with systems or product are communicated to relevant personnel.

## EVIDENCE GUIDE

- Interprets work instructions, test results and Standard Operating Procedures (SOP).
- Explains plant and systems operation and purpose.
- Describes in-process tests and procedures.
- Explains the effect of process adjustments.
- Describes fault causes and effects of systems and rectification requirements.
- Observes and identifies routine problems and faults.
- Uses technology to assist work performance.
- Inspects and maintains dry end systems to specifications.
- Stabilises sheet consistently within required time.
- Maintains quality specifications.
- Maintains process operations are maintained.
- Identifies and handles plant and system faults according to SOP.
- Maintains plant work area clear and hazard free.
- Records operational data as per SOP.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

# **FPPDEO4A: Troubleshoot and Rectify Dry End Systems**

## **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

### **1 Identify and diagnose causes of systems and quality faults.**

- 1.1 Alarm systems and observations are interpreted to determine fault type and location.
- 1.2 Routine inspections of plant and processes are made to identify faults.
- 1.3 Sampling and testing results are interpreted to identify variations from specifications/schedule.
- 1.4 Cause and source of problem is identified and located using appropriate diagnostic procedures.
- 1.5 Relevant historical data accessed/referred to, to confirm diagnosis.
- 1.6 Diagnoses are communicated to relevant personnel.
- 1.7 Work is completed within OH&S, Standard Operating Procedures (SOP), environmental and safe working requirements and practices.

### **2 Rectify systems/machinery and ancillary equipment faults.**

- 2.1 Emergency stop/shutdown, isolation and lockout procedures are initiated prior to fault rectification.
- 2.2 Faulty equipment/instrumentation is isolated and repaired/replaced.
- 2.3 Faulty equipment is by-passed where the process allows.
- 2.4 Corrective adjustments and maintenance requirements to machinery/systems operation are made.
- 2.5 Restoration to normal operation is verified and communicated to relevant personnel.
- 2.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **3 Rectify product quality faults.**

- 3.1 Samples for a range of tests are taken according to established enterprise procedures and SOP.
- 3.2 Test results are interpreted and operations are adjusted to correct variations from specification.

- 3.3 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **4 Record and report process performance and product quality data.**

- 4.1 Variations from specification of sheet production and machine operation faults are documented/logged.
- 4.2 Indications of performance variation are entered into log.
- 4.3 Causes of deviation from standards are assessed and evaluated.
- 4.4 Corrective action is undertaken and is recorded.
- 4.5 Out of specification product is required within SOP.
- 4.6 Relevant information is communicated to appropriate personnel to prepare for modification to the production run.

#### **EVIDENCE GUIDE**

- Describes systems, plant and equipment operation.
- Explains faults and effects on operations.
- Explains causes and effects of crash shut and describes procedures to be undertaken.
- Demonstrates the understanding of environmental licence conditions.
- Interprets troubleshooting guides, operational data, trend analysis and test results.
- Uses effective data gathering and analysis techniques.
- Operates test equipment.
- Logs and records information.
- Operates communication systems.
- Uses technology to assist performance.
- Uses effective communication.
- Demonstrates ability to resolve product/process problems.
- Demonstrates ability to identify causes of locate and respond appropriately to crash shuts.
- Rectify or caused to be rectified faults within site agreements.
- Implements isolations/lockouts procedures.
- Communicates with other personnel to assist with diagnosis and resolution of operational problems.
- Adjusts process to maintain production and quality.

- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPDEO5A: Co-ordinate and Implement Dry End Shutdown**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Establish and/or assess cause and effect of malfunction/shutdown**

- 1.1 Planned shutdown is established from work area instructions or maintenance schedules.
- 1.2 Abnormal operating conditions are identified by analysis of technical and operational information.
- 1.3 Effects of abnormal conditions are determined to enable appropriate action to be taken in accordance with Standard Operating Procedures (SOP).
- 1.4 Source of shutdown cause is located to ensure rectification in accordance with SOP.
- 1.5 Appropriate personnel are notified when abnormal operating conditions are identified.
- 1.6 Safety issues are identified to ensure compliance with SOP.

#### **2 Implement shutdown procedures.**

- 2.1 Isolation/lock out requirements are implemented according to SOP.
- 2.2 Process supplies shutdown procedures are followed as required.
- 2.3 Plant/system shutdown is managed in accordance with relevant procedures.
- 2.4 Plant integrity and personnel safety is ensured in compliance with SOP.
- 2.5 Shutdown information is communicated to relevant personnel as required.
- 2.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Record and report shutdown data.**

- 3.1 Planned/crash shutdown data is entered/logged as required by SOP.
- 3.2 Assessments and evaluations of causes, and corrective actions undertaken are recorded as required.

3.3 Relevant information is communicated to appropriate personnel in accordance with operational requirements.

#### **EVIDENCE GUIDE**

- Describes types and causes of shutdowns.
- Explains routines, procedures, and safety related to shutdowns.
- Explains effects of shutdowns to the rest of the systems.
- Explains isolations and lockouts and the procedures for implementing them.
- Describes problem-solving techniques.
- Describes the procedures involved with emergency and planned shutdown conditions.
- Uses effective communication and observation skills.
- Explains logging and recording of information requirements.
- Demonstrates ability to handle dry end shutdown.
- Responds to shut situations promptly and according to enterprise procedures.
- Implements personnel protection and plant security priorities according to Standard Operating Procedures (SOP).
- Works within OH&S, SOP, environmental and safe working requirements and practices.



## Coating Systems

FPPOLC1B: Prepare and start-up coated paper system operations.

FPPOLC3A: Monitor and control coated paper systems operation.

FPPOLC4A: Co-ordinate coated paper systems shutdown.

FPPOLC5A: Troubleshoot and rectify coated paper systems.

### **Please note:**

A single Range Statement has been prepared to cover all Units in Off-Line Coating Operations. The actual context/conditions for each Unit would be drawn from the mill's customised version of this Range Statement.

## **RANGE STATEMENT**

The competencies described in this group of units relate to those systems and functions involved in the off-line coating process and include the following:

- coating process
- tail feed systems
- coating makedown
- splicing
- clay plant operation
- calender
- pre reeler operations
- super calendering
- monitoring systems
- rewinding
- drying systems
- carbamate makedown
- material makedown
- internal unloading
- starch cooking
- combine rollers
- testing

### **Materials/supplies:**

- chemicals
- power
- water
- additives
- steam
- labels
- felts
- equipment
- gas

- accessories (parts)
- air
- base paper

**Equipment:**

- equipment appropriate to the off-line coating processes, for example, coater, splicer, pre reelers, calender, super calender, parent rolls/reels, cranes, pigment and coating makedown, starch cooking.

**Legislation, policy and procedures:**

- OH&S
- environmental requirements
- legislation (state and commonwealth)
- enterprise policies and procedures
- Standard Operating Procedures (SOP)
- quality assurance

**Documentation/procedures/reports:**

- SOP
- product specifications/schedules
- maintenance logs
- job sheets
- site agreements
- safety instructions
- process and instrument diagrams

**Maintenance:**

- as per site agreement
- operator maintenance schedules
- maintenance suppliers

**Technology:**

- computer systems
- electronic screens and alarms
- process control systems

**Communication channels:**

- internal/external customers and suppliers
- team members
- production/service co-ordinator
- maintenance service

## **FPPOLC1B: Prepare and Start-up Coated Paper System Operations**

This competency standard replaces FPPOLC1A and FPPOLC2A from the previously endorsed Pulp and Paper Manufacturing Industry Training Package.

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Determine production requirements.**

- 1.1 Grade specifications and limits are confirmed and communicated to relevant personnel.
- 1.2 Process requirements are determined
- 1.3 Process supplies are confirmed available for production
- 1.4 Chemical requirements are determined.
- 1.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Inspect and prepare systems for start-up**

- 1.1 Isolations (if any) are removed according to SOP.
- 1.2 Pre start checks on equipment (eg. coater and supply systems) are completed.
- 1.3 Electrical power and process supplies are confirmed as available for production.
- 1.4 Chemical delivery system is set for operation.
- 1.5 Operational settings are made and confirmed to be within specification.
- 1.6 Production ready status is confirmed with relevant personnel.
- 1.7 Monitoring devices/systems are checked and confirmed operational.
- 1.8 Faults are identified and rectified as required, according to SOP.
- 1.9 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Synchronise start-up operations**

- 3.1 Equipment start-ups are co-ordinated for production in accordance with SOP.
- 3.2 Co-ordinated system functions are confirmed by monitoring plant, equipment and control system/display monitors.

- 3.3 Process operation is communicated to relevant personnel.
- 3.4 Production start-up details are logged, recorded or filed according to SOP.
- 3.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **4 Establish and stabilise the production and quality processes.**

- 4.1 Systems are monitored and adjusted to rectify variations from specifications.
- 4.2 Adjustments/modifications are made to stabilise coating quality to be within specification.
- 4.3 Samples are taken as required to ensure product quality requirements will be met.
- 4.4 Product tests are verified as within specification, where applicable.
- 4.5 System operation, production and quality data is logged, recorded or filed as required.
- 4.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **5 Implement housekeeping requirements.**

- 5.1 Routine checks and maintenance of work area are undertaken according to SOP.
- 5.2 Housekeeping activities are conducted to ensure a safe and clean work area.
- 5.3 Chemical/hazardous materials are handled and disposed of as required by SOP.
- 5.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **EVIDENCE GUIDE**

- Explains the information provided on the production specification sheet.
- Determines coating production requirements (eg, sheet, coating chemicals).
- Conducts checks to ensure availability of sheet, coating chemicals and electrical power.
- Conducts checks to ensure coated sheet can be stored.
- Describes the purpose and location of the coating chemical supply system.

- Explains the organisation's isolation procedure.
- Ensures isolations are removed according to SOP.
- Explains the purpose of each of the steps in the preparation of the coating system for production.
- Explains the purpose of each component of the coating system.
- Describes cause and affects of operational equipment faults.
- Explains the critical control points of the preparation for start-up procedure.
- Conducts pre-start-up checks of plant and equipment including instrumentation.
- Communicates operational requirements clearly to warehouse/despatch area.
- Explains the purpose of the process controls and how the changes affect the production variables.
- Describes how to navigate the computer control system displays.
- Inputs operational settings (eg. set points) in preparation for start-up in accordance with SOP.
- Explains the relationships within the coating area members and with the area's suppliers and customers.
- Confirms production ready status with team members, suppliers and customers.
- Explains the critical control points of the start-up procedure.
- Activates and confirms operation of coating system according to SOP.
- Responds to faults of process flow-through systems, if required.
- Responds to faults of plant, if required.
- Explains the critical control points of the monitoring process during start-up.
- Interprets control systems/display monitors in accordance with SOP.
- Makes process control adjustments to stabilise production and obtain product quality.
- Responds to control systems/display alarms in accordance with SOP.
- Explains the sampling and testing procedure, if required.
- Takes samples, conducts tests and interprets results, if required.
- Conducts routine maintenance checks.
- Explains organisation's OH&S, SOP, environmental and safe working requirements and practices for handling and disposal of hazardous substances (eg. oil rags, waste, chemicals).
- Conducts housekeeping activities to ensure a safe and clean work area (eg. disposal of hazardous substances such as oil rags, waste, chemicals).

- Explains the organisation's documentation requirements.
- Logs production preparation and start-up details according to SOP.
- Works within OH&S, SOP, environmental and safe working requirements and practices.



## **FPPOLC3A: Monitor and Control Coated Paper Systems Operation**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Monitor and maintain process/systems.**

- 1.1 Process supplies are maintained to production requirements.
- 1.2 Systems are monitored to ensure coating system operations are within specification.
- 1.3 Chest levels are monitored and maintained
- 1.4 Operator level preventative maintenance schedules are carried out to enterprise procedures.
- 1.5 Routine process and system variations from specification are identified, rectified and/or reported according to Standard Operating Procedures (SOP).
- 1.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Monitor and maintain product quality.**

- 2.1 Product/process is monitored and maintained to quality requirements.
- 2.2 Routine visual observations and assessments are conducted on product and systems operations.
- 2.3 Sampling and testing is carried out to SOP.
- 2.4 Systems operations adjustments are made to rectify out-of-specification quality.
- 2.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Record and report product and process performance data.**

- 3.1 Systems and production data is interpreted and entered into recording system.
- 3.2 Problems or variations with systems or product are communicated to relevant personnel.

### **EVIDENCE GUIDE**

- Interprets work instructions, test results and SOP.

- Explains plant and systems operation and purpose.
- Conducts start-up checks and procedures.
- Describes in-process tests and procedures.
- Sets up and uses test equipment.
- Explains the effect of process adjustments during monitoring and operation.
- Describes system fault causes and effects and rectification requirements.
- Explains safe handling, use and disposal of chemicals and additives.
- Visually observes and identifies routine problems and faults.
- Uses technology to assist work performance.
- Inspects and maintains equipment/systems to specifications.
- Maintains quality specifications.
- Maintains process operations.
- Identifies and handles plant and system faults according to SOP.
- Maintains plant work area clear and hazard free.
- Records operational data as per SOP.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPOLC4A: Co-ordinate Coated Paper Systems Shutdown**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Establish and/or assess cause and effect of malfunction/shutdown**

- 1.1 Planned shutdown is established from work area instructions or maintenance schedules.
- 1.2 Abnormal operating conditions are identified by analysis of technical and operational information.
- 1.3 Effects of abnormal conditions are determined to enable appropriate action to be taken in accordance with Standard Operating Procedures (SOP).
- 1.4 Source of shutdown cause is located to ensure rectification in accordance with SOP.
- 1.5 Appropriate personnel are notified when abnormal operating conditions prevail.
- 1.6 Safety issues are identified to ensure compliance with SOP.

#### **2 Implement shutdown procedures.**

- 2.1 Isolation and lock out requirements are implemented according to SOP.
- 2.2 Process supplies shutdown procedures are followed as required.
- 2.3 Plant/system shutdown is managed in accordance with relevant procedures.
- 2.4 Plant integrity and personnel safety is ensured in compliance with SOP.
- 2.5 Shutdown information is communicated to relevant personnel as required.
- 2.6 Plant and equipment is washed and cleaned for restart.
- 2.7 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Record and report shutdown data.**

- 3.1 Planned/crash shutdown data is entered/logged as required by SOP.

- 3.2 Assessments and evaluations of causes, and corrective actions undertaken are recorded as required.
- 3.3 Relevant information is communicated to appropriate personnel in accordance with operational requirements.

### **EVIDENCE GUIDE**

- Describes types and causes of shutdowns.
- Explains routines, procedures, and safety related to shutdowns.
- Explains effects of shutdowns to the rest of the systems.
- Explains isolations and lockouts and the procedures for implementing them.
- Describes problem-solving techniques.
- Implements emergency shutdown procedures.
- Uses effective communication and observation skills.
- Reacts to shut situations promptly and according to enterprise procedures.
- Implements personnel protection and plant security priorities according to SOP.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPOLC5A: Troubleshoot and Rectify Coated Paper Systems**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Identify and diagnose causes of systems and quality faults.**

- 1.1 Visual assessments and machine alarm systems are interpreted to determine fault type and location.
- 1.2 Routine physical inspections of plant and processes are made to identify faults.
- 1.3 Sampling and testing results are interpreted to identify variations from specifications/schedule.
- 1.4 Cause and source of problem is identified and located using appropriate diagnostic procedures.
- 1.5 Relevant historical data accessed/referred to, to confirm diagnosis.
- 1.6 Diagnoses are communicated to relevant personnel.
- 1.7 Work is completed within OH&S, Standard Operating Procedures (SOP), environmental and safe working requirements and practices.

#### **2 Rectify systems/machinery and ancillary equipment faults.**

- 2.1 Emergency stop/shutdown, isolation and lockout procedures are initiated prior to fault rectification.
- 2.2 Faulty equipment/instrumentation is isolated and repaired/replaced.
- 2.3 Corrective adjustments and maintenance requirements to machinery/systems operation are made.
- 2.4 Restoration to normal operation is verified and communicated to relevant personnel.
- 2.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Rectify product quality faults.**

- 3.1 Product faults/variations are identified by observation, systematic sampling and testing.
- 3.2 Out of specification product is dealt with according to SOP's.
- 3.3 Samples for a range of tests are taken according to established enterprise procedures and SOP.

- 3.4 Tests and test procedures comply with SOP.
- 3.5 Test results are interpreted and operations are adjusted to correct variations from specification.
- 3.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **4 Record and report process performance and product quality data.**

- 4.1 Produced variations from specification and machine operation faults are documented/logged
- 4.2 Indications of performance variation are entered into log..
- 4.3 Assessment and evaluation of causes of deviation, and corrective action undertaken is recorded as required.
- 4.4 Relevant information is communicated to appropriate personnel to prepare for modification to the production run.

#### **EVIDENCE GUIDE**

- Identifies sources of historical and operational data.
- Interprets relevant verbal and written information.
- Explains systems, processes and functions.
- Identifies and implements in-process test requirements.
- Describes cause and effects of test results and actions.
- Explains impact of inappropriate responses.
- Explains product grade and process adjustment procedures.
- Describes causes and effects of system faults and rectification requirements.
- Identifies and implements operational procedures.
- Explains use and handling requirements of chemicals used; their purpose, effects, hazards and SOP.
- Uses technology to assist work performance.
- Responds to emergencies/crash shutdowns in accordance with SOP.
- Implements isolations and lockouts according to SOP.
- Maintains grade specification/quality or initiates appropriate action to rectify.
- Rectifies faults within site agreements.
- Recommendations for further action are made.

- Maintains plant operation/production with minimal interruptions.
- Complies with relevant OH&S and SOP requirements.
- Interprets trouble shooting guides, operational data, treat analysis and test results.
- Uses effective data gathering and analysis techniques.
- Operates test equipment.
- Logs and records information.
- Communicates with other personnel/sections/departments to assist with diagnosis and resolution of operational problems.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **Finishing and Converting**

FPPFCO1A: Prepare finishing/converting systems for production.

FPPFCO2A: Monitor and control finishing/converting systems operation.

FPPFCO3B: Package product.

FPPFCO4A: Troubleshoot and rectify finishing and converting systems.

FPPFCO5B: Store product.

FPPFCO6B: Prepare and despatch product.

### **Please note:**

A single Range Statement has been prepared to cover all Units in Finishing and Converting. The actual context/conditions for each Unit would be drawn from the mill's customised version of this Range Statement.



## **RANGE STATEMENT**

The competencies referred to in this group of units are consistent with those required to set up, operate, and maintain the operation of the following plant, systems and equipment used in the finishing and converting processes:

- winding/re-winding
- water marking
- perforating
- slitting and cutting
- embossing
- laminating
- folding
- printing
- bonding
- core making
- wrapping and packing
- storing and dispatching
- storage area or warehouse

The competencies relate to the processes involved from the parent reel to reels/sheets as per the next internal/external customer requirement.

### **Materials/supplies:**

- parent roll/reel
- shrink and stretch wraps
- pallets
- sheet paper
- labelling and stencilling
- wrap paper
- customer rolls
- boxes
- polythene wrap
- glues
- cartons

- strapping
- printing inks
- shippers
- reams
- signs and labels
- core board
- scent
- unitised pallets
- rolls
- strapping
- compressed air

**Equipment:**

- reels and winding equipment
- wrapping/packing equipment
- guillotine, knives, cutting equipment
- conveying systems
- variety of finishing and converting
- mechanical handling equipment
- processes equipment (manual, motorised)
- flexographic printing equipment
- overhead cranes
- scales
- roll grab attachments
- warehousing equipment

**Legislation, policy and procedures:**

- relevant endorsed licences
- enterprise policies, procedures and guidelines
- OH&S and environmental requirements (state and commonwealth)
- quality assurance requirements
- oil/chemical spills and disposal guidelines

**Documentation/procedures/reports:**

- production schedules [excludes FPPFCO6A]
- stock inventory [excludes FPPFCO1A, FCO2]
- warehousing schedules
- work orders
- dispatch documentation [excludes FPPFCO1A, process and instrument diagrams FPPFCO5A]
- Standard Operating Procedures (SOP)
- customer orders
- quality assurance documentation (eg. ISO 9002)
- Material Safety Data Sheets (MSDS)

**Maintenance:**

- as per site agreement
- operator maintenance schedules
- maintenance supplies

**Quality assessments: [excludes FPPFCO1A]**

Quality checks and assessment of process functions as per site requirements, may include:

- roll density
- core slippage
- damaged packaging
- reel hardness
- core size
- colour matching
- bulk
- core strength
- sheet size
- roll appearance
- print quality
- cut quality
- MD & CD tensiles
- core scenting

- packaged product
- stretch
- roll size
- perforations
- product identification
- warehousing records

**Technology:**

- warehousing control systems
- computer monitoring
- computer data entry and retrieval
- electronic, pneumatic and hydraulic process controls
- PLC controls

**Communication channels:**

- warehousing manager/coordinator
- internal/external customers and suppliers
- maintenance services
- team members
- production/services co-ordinator

## **FPPFCO1A: Prepare Finishing/Converting Systems for Production**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Establish production requirements.**

- 1.1 Product identification and customer specification is identified and confirmed.
- 1.2 Product requirements are interpreted from documentation and supplies are confirmed available for production.
- 1.3 Components and accessories are loaded/installed and set up for production.
- 1.4 Work is completed within OH&S, Standard Operating Procedures (SOP), environmental and safe working requirements and practices.

#### **FPPFCO1A.2 Inspect systems and process functions.**

- 2.1 All isolations are confirmed as signed off and lifted where applicable.
- 2.2 Pre start checks are conducted on process systems and equipment as required.
- 2.3 Operational maintenance requirements are undertaken in accordance with site agreements.
- 2.4 Process adjustments are made to ensure production are met.
- 2.5 Faults are identified and rectified as required according to SOP.
- 2.6 Confirmation for start-up is communicated to relevant personnel.
- 2.7 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Implement area housekeeping.**

- 3.1 Potential hazards are removed to designated areas, in compliance with SOP.
- 3.2 Chemical/hazardous materials are disposed of as required by enterprise SOP.
- 3.3 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.
- 3.4 Housekeeping/cleaning activities are conducted to ensure safe and clean work area.

## **EVIDENCE GUIDE**

- Explains the purpose of finishing and converting processes and systems.
- Interprets documents.
- Operate plant and equipment.
- Describes equipment/systems set-up procedures, adjustments and maintenance requirements.
- Interprets customer requirements and work instructions.
- Explains product types and quality requirements.
- Uses inspection techniques.
- Employs effective written and verbal communication.
- Implements isolation/lockout procedures.
- Demonstrates consistent plant/equipment set up for product and/or process changes to operational specifications.
- Identifies and handles set-up problems.
- Maintains work area is maintained in a clean and hazard free condition.
- Inspects and maintains equipment/systems to specifications.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPFCO2A: Monitor and Control Finishing/Converting Systems Operation**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Operate and monitor processes.**

- 1.1 Equipment is started up and shut down in accordance with Standard Operating Procedures (SOP).
- 1.2 Operations and systems are monitored and maintained within process specifications.
- 1.3 Assessments and running inspections undertaken to confirm processes are within quality specification.
- 1.4 Monitoring displays and devices are interpreted and responded to according to SOP.
- 1.5 Operator level maintenance is carried out according to enterprise procedures.
- 1.6 Process adjustments are made to ensure production specifications are met.
- 1.7 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Transfer product to customer.**

- 2.1 Product is transferred to next stage or customer, and is processed in accordance with SOP.
- 2.2 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Record and report production data.**

- 3.1 Production log/tally is maintained as required.
- 3.2 Machine/systems downtime is logged and resultant actions recorded.
- 3.3 Appropriate customer identification is attached to product, when necessary.

### **EVIDENCE GUIDE**

- Explains finishing/converting systems and processes.
- Explains start-up and shutdown procedures.
- Interprets customer requirements and work instructions.

- Explains product types and quality requirements.
- Explains plant and systems capabilities and limits.
- Operates and adjusts plant and equipment operation.
- Describes cause and effect of adjustments.
- Explains types, function and purpose of alarms and monitoring devices.
- Explains causes and effects of system faults and rectification requirements.
- Uses visual inspection techniques.
- Uses computer/keyboard for data entry and retrieval.
- Communicates effectively with individuals/teams.
- Operates equipment consistently to specifications and within enterprise time expectations.
- Maintains product quality.
- Minimises waste throughout production runs.
- Identifies and handles operating problems in accordance with SOP.
- Enters and extracts data from computers, where applicable.
- Works harmoniously with other personnel.
- Maintains work area in a clean and hazard free condition.
- Inspects and maintains equipment/systems to specification.
- Works within OH&S, SOP, environmental and safe working requirements and practices.



## **FPPFCO3B: Package Product**

This competency standard replaces FPPFCO3A from the previously endorsed Pulp and Paper Manufacturing Industry Training Package.

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Pack and wrap product.**

- 1.1 Packaging and wrapping requirements are obtained and interpreted for customer order.
- 1.2 Packing systems are prepared and operated in accordance with Standard Operating Procedures (SOP).
- 1.3 Wrapping systems are prepared and operated in accordance with SOP.
- 1.4 Operator level maintenance requirements are undertaken in accordance with SOP.
- 1.5 Appropriate labelling/stencilling including customer specification and product identification is attached to product.
- 1.6 Packaged products dispatched to warehouse for shipment and/or storage.
- 1.7 Work is completed within OH&S, SOP, environmental and safe working requirements and practices

#### **EVIDENCE GUIDE**

- Describes manual transfer techniques/requirements
- Uses materials handling equipment.
- Maintains materials handling equipment.
- Identifies product and customer specifications.
- Describes dispatch procedures and responsibilities.
- Operates packaging and wrapping systems.
- Enters and retrieves data in reporting system.
- Implements isolation and lockout procedures.
- Explains causes and effects of system faults and rectification requirements.
- Locates out-of-specification product to designated areas.
- Maintains dispatch documentation according to requirements.
- Inspects/maintains equipment/systems to specification.
- Dispatches product to warehouse.

- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPFCO4A: Troubleshoot and Rectify Finishing and Converting Systems**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Identify and diagnose causes of systems and quality faults.**

- 1.1 Warning devices are interpreted to determine fault type and location.
- 1.2 Quality assessments are interpreted to identify variations from specifications/schedule.
- 1.3 Cause and source of problem is identified and located.
- 1.4 Relevant sources of historical data accessed/referred to, to confirm diagnosis of problems.
- 1.5 Work is completed within OH&S, Standard Operating Procedures (SOP), environmental and safe working requirements and practices.

#### **2 Rectify systems faults.**

- 2.1 Emergency stop/shutdown, isolation and lockout SOP are initiated prior to fault rectification.
- 2.2 Faulty equipment/instrumentation is identified and caused to be repaired or replaced in accordance with site agreements.
- 2.3 Faulty equipment is by-passed in accordance with SOP, where the process allows it to occur.
- 2.4 Corrective adjustments are made, and operational maintenance requirements are undertaken according to site agreements.
- 2.5 Restoration of machine/system to normal operation is verified and communicated to relevant personnel.
- 2.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Rectify/reprocess product with quality faults.**

- 3.1 Product quality faults/variations are identified by observation, systematic sampling, testing or quality assessment procedures.
- 3.2 Samples for a range of tests are taken, results are interpreted, and operations are adjusted to correct deviations from specification.
- 3.3 Out of specification product is redirected for further testing and/or reprocessing.

- 3.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **4 Record and report system performance and product quality data.**

- 4.1 Variations from specification of production and machine operation faults are documented/logged.
- 4.2 Indications of performance variation are entered into log.
- 4.3 Assessment and evaluation of causes of deviation, and corrective action undertaken is recorded as required.
- 4.4 Relevant information is communicated to appropriate personnel to prepare for modification to the production run.

#### **EVIDENCE GUIDE**

- Explains systems, plant, and equipment operation.
- Explains finishing/converting systems and processes.
- Implements diagnostic and problem solving techniques.
- Interprets troubleshooting guides, operational data, trend analysis and test results.
- Uses data gathering and analysis skills.
- Uses logging and recording procedures.
- Operates communication equipment.
- Uses key boarding and computer access skills.
- Identifies causes of faults are identified and responds appropriately.
- Locates faults efficiently.
- Rectifies or causes to be rectified faults within site agreements.
- Implements isolation and lockout procedures in accordance with site agreements.
- Communicates with other personnel to assist with diagnosis and resolution of operational problems.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPFCO5B: Store Product**

This competency standard replaces FPPFCO5A from the previously endorsed Pulp and Paper Manufacturing Industry Training Package.

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Receive and load/unload product.**

- 1.1 Load/product documentation is received, interpreted and verified.
- 1.2 Load and handling characteristics are identified in accordance with Standard Operating Procedures (SOP).
- 1.3 Appropriate mechanical handling equipment is selected in compliance with SOP.
- 1.4 Mechanical handling equipment is operated in accordance with enterprise SOP.
- 1.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Store product.**

- 2.1 Load is lifted, carried and set down safely in accordance with SOP.
- 2.2 Load is stored in compliance with enterprise stock location requirements.
- 2.3 Product quality faults/variations are identified by observation, sampling, testing and quality assessment processes.
- 2.4 Out of specification product is redirected for further testing and/or reprocessing.
- 2.5 Housekeeping is completed in accordance with SOP.
- 2.6 Inventory records documentation is completed in accordance with enterprise requirements.
- 2.7 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **EVIDENCE GUIDE**

- Explains warehouse organisation and workflow.
- Explains warehousing procedures.
- Operates materials handling equipment.

- Identifies and rectifies storage problems/faults.
- Interprets documents.
- Communicates effectively with individuals/teams.
- Maintains materials handling equipment.
- Explains purposes for stock rotation of stored products.
- Uses technology to enter, access and retrieve information.
- Implements isolation and lockout procedures.
- Maintains logs and records.
- Describes causes and effects of equipment/system faults and takes rectification action.
- Stores product in designated location.
- Maintains inventory system with up-to-date and accurate information.
- Explains inventory systems.
- Explains storage systems and procedures.
- Stacks product correctly and in appropriate bays.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPFCO6B: Prepare and Dispatch Product**

This competency standard replaces FPPFCO6A from the previously endorsed Pulp and Paper Manufacturing Industry Training Package.

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Pack product.**

- 1.1 Packaging requirements are interpreted from customer orders.
- 1.2 Package identification/verification procedures are undertaken in accordance with Standard Operating Procedures (SOP).
- 1.3 Goods are matched to and with correct labels, tags and stickers in accordance with enterprise requirements.
- 1.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Dispatch product.**

- 2.1 Customer order and specifications are interpreted.
- 2.2 Goods are retrieved from storage area in compliance with SOP.
- 2.3 Goods are loaded, dispatched and documented according to SOP.
- 2.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **EVIDENCE GUIDE**

- Explains warehouse organisation and workflow.
- Explains warehousing procedures.
- Operates materials handling equipment.
- Maintains materials handling equipment.
- Interprets customer order requirements.
- Selects product.
- Packs/wraps product to customer requirements.
- Operates packaging/wrapping/labelling equipment.
- Describes dispatch procedures and responsibilities.
- Communicates effectively with individuals/teams.
- Explains freight carrying and load restraints.

- Demonstrates keyboard skills.
- Maintains dispatch documentation according to requirements.
- Uses technology to access enter and retrieve information.
- Explains warehouse organisation and traffic flow systems.
- Explains freight carrying and load restraints.
- Secures loads safely.
- Distributes loads to correct customers.
- Selects and packages product to customer requirements.
- Identifies and rectifies faults in dispatch processes.
- Maintains inventory systems with up-to-date accurate information.
- Works within OH&S, SOP, environmental and safe working requirements and practices.



## Water Services

FPPWAS1A: Manage water system start-up.

FPPWAS8A: Manage water system shutdown.

FPPWAS9A: Troubleshoot and rectify water systems.

### **Please note:**

A single Range Statement has been prepared to cover all Units in Water Services. The actual context/conditions for each Unit would be drawn from the mill's customised version of this Range Statement.

## **RANGE STATEMENT**

The application of the competencies described in this unit may refer to:

- surface water systems
- domestic water system
- ground water systems
- raw water systems
- irrigation water systems
- water treatment systems
- filtration systems
- water evaporation systems
- water storage systems

and may involve the following:

- major and minor catchment areas in both urban and rural locations
- extreme inflow rates, eg. flood conditions.

### **Materials/supplies:**

- pipes, i.e. vitrified clay, UPVC, polyethylene, reinforced concrete, vinyl iron
- fittings, i.e. jointing systems for pipes and prefabricated sections
- chemicals

### **Equipment:**

- flow control and metering devices
- pumping systems, eg. submersible
- electronic and digital monitoring and metering
- centrifugal, multiple stage deep well systems
- valving systems, eg. sluice, blade,
- manual chart recording systems
- gate, non-return, pressure reducing
- chemical testing and analysis equipment
- small marine craft [excl. FPPWAS1A, FPPWAS5A]
- chemical spraying apparatus

- wastewater treatment equipment and
- on and off road vehicle
- tanks [excludes FPPWAS2A, FPPWAS4A]
- basic hand and power tools
- irrigation and domestic water
- communication equipment, eg. two way
- equipment [excl.FPPWAS2A, FPPWAS4A,FPPWAS5A]  
radios, phones and fax
- raw water tanks and equipment
- manual/hydraulic, pneumatic flow control
- surface and ground water tanks and  
and adjustment equipment
- equipment [excludes FPPWAS3A-FPPWAS5A]
- clarifiers and solids removal system
- aeration ponds
- chemical handling equipment
- hand and power tools
- de-bugging equipment

**Legislation, policy and procedures:**

- by laws, organisational policies
- environmental protection legislation and procedures
- OH&S policies and procedures
- Australian Committee on Large Dams Guidelines (ANCOLD) [excludes FPPWAS1A,  
FPPWAS5A]
- Standard Operating Procedures (SOP)
- equipment operating licences
- water and chemical legislation and regulations
- safety instructions

**Documentation/procedures/reports:**

- as required by enterprise policies and statutory requirements

**Maintenance:**

- as per site agreement
- operator maintenance schedules
- maintenance systems

**Sampling/testing:**

- for example, sludge consistency, pH, conductivity, flocculation, colour, suspended solids
- sampling for legislative/regulatory requirements

**Technology:**

- electronic monitoring and metering
- analysis and recording equipment

**Communication channels:**

- internal/external customers and suppliers
- team member
- statutory authorities
- production/services co-ordinator
- maintenance services

## FPPWAS1A: Manage Water System Start-Up

### ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA

#### 1 Conduct local inspections and pre-operational safety checks.

- 1.1 Plant status and work requirements are determined.
- 1.2 Operational pre-requisites are established in accordance with Standard Operating Procedures.
- 1.3 Availability of supplies for water system is confirmed.
- 1.4 Sequencing for plant start-up is determined in accordance with SOP.
- 1.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### 2 Initiate start-up procedures.

- 2.1 Isolations are removed in accordance with SOP
- 2.2 Water system is started up according to SOP.
- 2.3 System/plant is observed for correct operational response.
- 2.4 Variations from required operational conditions are detected and corrective action taken to rectify.
- 2.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### 3 Implement area housekeeping and cleaning.

- 3.1 Potential work area hazards are identified and reported.
- 3.2 Prevention/control measures are employed.
- 3.3 Chemical/hazardous materials are disposed in accordance with SOP
- 3.4 Solid waste is disposed in accordance with SOP
- 3.5 Routine documentation is maintained and logged in accordance with SOP.
- 3.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### EVIDENCE GUIDE

- Explains start-up procedures for specified water system.

- Interprets documentation.
- Explains system layout.
- Interprets plans, charts and instructions.
- Communicates with mill employees.
- Uses communication equipment effectively.
- Conducts and interprets test results.
- Uses technology effectively.
- Identifies system start-up faults.
- Implements isolation/lockout procedures.
- Operates water system plant and equipment.
- Maintains a clean and hazard free workplace.
- Implements confined space procedures.
- Implements solid waste disposal procedures.
- Prepares and initiates start-up according to operating requirements.
- Identifies, assesses and rectifies start up problems/faults and reports according to site requirements.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## **FPPWAS8A: Manage Water System Shutdown**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Conduct a planned shutdown.**

- 1.1 Shutdown is planned within Standard Operating Procedures.
- 1.2 Work plan is communicated with relevant personnel.
- 1.3 Shutdown procedures are co-ordinated in accordance with SOP.
- 1.4 Plant is left in a safe condition for access.
- 1.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Manage an uncontrolled shutdown.**

- 2.1 Cause of shutdown is identified and isolated according to SOP.
- 2.2 Safety of personnel is secured and confirmed in accordance with SOP.
- 2.3 Shutdown of system or appropriate sections/plant is completed in accordance with SOP, and relevant personnel are notified.
- 2.4 Plant is left in a safe condition for access.
- 2.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **EVIDENCE GUIDE**

- Explains emergency procedures and responses.
- Implements shutdown procedures according to specific situations.
- Explains plant and machinery functions and operation.
- Co-ordinates and plans shutdown activity.
- Communicates clearly with relevant personnel.
- Explains the possible environmental effects of an emergency shutdown.
- Explains isolation/lock-out procedures.
- Conducts shutdown operations effectively and safely.
- Identifies, assesses, rectifies and reports shutdown problems/faults according to site procedures.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

# FPPWAS9A: Troubleshoot and Rectify Water Systems

## ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA

### 1 Identify and diagnose causes of faults.

- 1.1 Alarms are interpreted to determine fault type and location.
- 1.2 Sampling and testing results are interpreted to identify variations from specifications/schedule.
- 1.3 Cause and source of problem is identified and located using appropriate diagnostic procedures.
- 1.4 Relevant sources of data are accessed/referred to, to assist diagnosis.
- 1.5 Work is completed within OH&S, Standard Operating Procedures, environmental and safe working requirements and practices.

### 2 Rectify plant and equipment faults.

- 2.1 Emergency stop/shut down, isolation and lockout procedures are in place prior to fault rectification.
- 2.2 Faulty equipment/instrumentation is isolated, repaired or replaced.
- 2.3 Running adjustments and routine maintenance requirements are carried out.
- 2.4 Plant and equipment are returned to normal operation.
- 2.5 Verification is communicated to relevant personnel in compliance with relevant site agreements and work practices.
- 2.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### 3 Rectify product quality faults.

- 3.1 Quality faults/variations are identified by observation, systematic sampling and testing.
- 3.2 Samples for a range of tests are taken according to SOP.
- 3.3 Test results are interpreted and operations adjusted to correct faults.
- 3.4 Faults/causes are rectified if appropriate, or recommendations made for further action.



- 3.5 Out-of-specification product is managed in accordance with SOP.
- 3.6 Tests and test procedures comply with OH&S and environmental requirements, and safe work practices.

#### **4 Report system performance and product quality data.**

- 4.1 Variations from specification of product production and plant and equipment faults are documented/logged.
- 4.2 Signs and symptoms of performance variation are entered into log.
- 4.3 Assessment and evaluation of causes of deviation, and corrective action undertaken is recorded as required.
- 4.4 Relevant information is communicated to appropriate personnel.

#### **EVIDENCE GUIDE**

- Identifies sources of instrument and operational data.
- Interprets relevant verbal and written information.
- Explains relevant systems, processes and functions.
- Identifies and implements in-process test requirements.
- Describes cause and effects of test results and actions.
- Explains impact of inappropriate responses.
- Explains product grade and process adjustment procedures.
- Describes causes and effects of system faults and rectification requirements.
- Identifies and implements operational procedures.
- Explains use and handling requirements of chemicals used; their purpose, effects, hazards and SOP.
- Uses technology to assist work performance.
- Communicates effectively with relevant personnel.
- Demonstrates that emergencies/crash shutdowns are dealt with in accordance with SOP.
- Demonstrates that isolations and lockouts are conducted according to SOP.
- Demonstrates that relevant tests are conducted in accordance with SOP.
- Demonstrates that available data and test results are consistently interpreted and appropriate actions are selected and initiated.

- Demonstrates that grade specification/quality is consistently maintained or appropriate action taken.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## Steam Generation

FPPSTM1A: Manage steam boiler start-up.

FPPSTM2A: Monitor and control boiler operation.

FPPSTM3A: Shutdown and store steam boiler.

FPPSTM4A: Troubleshoot and rectify boiler plant system faults.

### **Please note:**

A single Range Statement has been prepared to cover all Units in Steam Generation. The actual context/conditions for each Unit would be drawn from the mill's customised version of this Range Statement.

## **RANGE STATEMENT**

The competencies described in this group of units relate to those functions inclusive of the following boiler types:

- fire tube
- saturated boiler
- water tube
- super heated

and may be operated in conjunction with other steam driven plant and operations including:

- paper making machines
- turbines
- digesters
- heating plant

### **Materials/supplies:**

- chemicals
- coal
- oil
- gas
- additives
- air
- water
- wood waste
- steam
- recovery process products
- power

### **Equipment:**

Equipment appropriate to steam generation processes and may include the following:

- boiler and auxiliary plant
- boiler heating systems
- fuel and fuel delivery system plant
- dust removal and combustion waste

- fuel management system
- extraction systems
- water distribution systems
- compressed air systems
- steam temperature control plant
- chemical dosing system
- water treatment system
- flare detection equipment
- hand and power tools

**Legislation, policy and procedures:**

- OH&S
- environmental and statutory legislation
- enterprise policies and procedures
- Standard Operating Procedures (SOP)
- appropriate boiler/pressure vessel operator certification

**Documentation/procedures/reports:**

- SOP
- job sheets
- grade specifications
- manufacturer's specifications
- maintenance logs
- statutory requirements
- Materials Safety Data Sheets (MSDS)
- operator's log
- process and instrument diagrams

**Maintenance:**

- as per site agreement
- maintenance schedules
- maintenance systems

**Sampling/testing:** *[excludes FPPSTM3A]*

- feed water quality
- assessments of process operations

**Technology:**

- fully automated, semi automated, manually operated plant and equipment
- enter/extract computer data, electronic screens and alarms, analogue and digital instrumentation

**Communication channels:**

- internal/external customers and suppliers
- statutory authorities
- team members
- maintenance/services co-ordinators
- maintenance services

## **FPPSTM1A: Manage Steam Boiler Start-Up**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Conduct pre-operational safety checks.**

- 1.1 Work/output requirements are established.
- 1.2 Pre-operational and safety checks are conducted in accordance with Standard Operating Procedures.
- 1.3 Availability of process supplies are confirmed.
- 1.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Conduct start-up procedures.**

- 2.1 Isolations are removed in accordance with SOP.
- 2.2 Pre-light conditions are established in accordance with SOP.
- 2.3 Boiler is started and brought on-line according to SOP.
- 2.4 System and plant is observed for correct operational response.
- 2.5 Boiler condition during start-up is monitored to detect abnormal conditions.
- 2.6 Deviations from required operating conditions are detected and corrective action undertaken to rectify.
- 2.7 Responses to corrective actions are documented as required by SOP.
- 2.8 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Implement area housekeeping and cleaning.**

- 3.1 Potential work area hazards are identified and reported.
- 3.2 Prevention/control measures are employed.
- 3.3 Chemical/hazardous wastes are disposed in accordance with SOP.
- 3.4 Solid waste disposal is in accordance with SOP.
- 3.5 Routine documentation is maintained and logged in accordance with SOP.
- 3.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

## **EVIDENCE GUIDE**

- Implements isolation and access procedures.
- Interprets documentation.
- Describes plant layout and status identification.
- Explains purpose and operation of plant and systems.
- Reads and interprets instruments, gauges and data recording equipment.
- Explains pre-operational checks and requirements.
- Starts up and operates boiler system.
- Reads and interprets specifications and customer orders.
- Reports and documents information.
- Uses effective verbal and written communication.
- Explains boiler water treatment system and reasons for treatment.
- Explains statutory responsibilities.
- Maintains a clean and hazard free work area.
- Implements confined space procedures.
- Complies with all OH&S requirements.
- Completes all pre-start checks and procedures.
- Demonstrates ability to consistently set-up and start boiler within specified time.
- Ensuring that handling and/or rectification of start-up problems comply with SOP or site agreements.
- Maintains documentation requirements.
- Works within OH&S, SOP, environment and safe working requirements and practices.



## **FPPSTM2A: Monitor and Control Boiler Operation**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Confirm operational status.**

- 1.1 Continuing process supplies are maintained.
- 1.2 Combustion processes are confirmed to be within operational specifications.
- 1.3 Operational log confirms boiler performance parameters have been within specifications.
- 1.4 Operational status is communicated to relevant personnel.
- 1.5 Work is completed within OH&S, Standard Operating Procedures (SOP), environmental and safe working requirements and practices.

#### **2 Monitor and control boiler and ancillary plant operation.**

- 2.1 Operational status is confirmed by visual and audible observations, and process monitoring systems.
- 2.2 Water quality tests are conducted according to SOP.
- 2.3 Steam pressures are monitored and maintained as required.
- 2.4 Fuel efficiency calculations/recordings are made in compliance with SOP.
- 2.5 Boiler control adjustments are made in accordance with SOP to maintain operation within specification.
- 2.6 Boiler water chemicals levels tested and adjusted as required by SOP.
- 2.7 Make up pre-treatment systems for water to be monitored, tested and maintained as per SOP.
- 2.8 Steam distribution systems are monitored and maintained to client requirements.
- 2.9 Operator level maintenance is carried out according to SOP.
- 2.10 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Place boiler in stand-by/banked/stored mode.**

- 3.1 Fuel and air supplies are shutdown according to SOP.

- 3.2 Steam pressures and water condition and levels are maintained and monitored.
- 3.3 Relevant personnel/customers are notified of system status in compliance with SOP.
- 3.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **4 Record and document boiler and plant performance.**

- 4.1 Operating log is maintained in accordance with SOP requirements.
- 4.2 Maintenance requirements are identified and documented.

#### **EVIDENCE GUIDE**

- Explains and implements isolation and access procedures.
- Describes plant layout and status identification.
- Explains purpose and operation of plant and systems.
- Reads and interprets instruments, gauges and data recording equipment.
- Conducts pre-operational checks.
- Starts up and operates boiler system.
- Reads and interprets specifications and customer orders.
- Reports and documents information.
- Uses effective verbal and written communication.
- Explains boiler water treatment system and reasons for treatment.
- Explains statutory responsibilities.
- Complies with all OH&S requirements.
- Completes all pre-start checks and procedures.
- Sets-up and starts boiler within specified time.
- Handles and/or rectifies start-up problems in compliance with SOP or site agreements.
- Safely places boiler in standby mode, banked mode, stored mode, and status maintained in accordance with SOP.
- Maintains documentation requirements.
- Inspects and maintains boiler and auxiliary equipment and services to operating standards.
- Works within OH&S, SOP, environment and safe working requirements and practices.

## **FPPSTM3A: Shutdown and Store Steam Boiler**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Prepare boiler for controlled shutdown.**

- 1.1 Maintenance/rectification requirements are identified and reported in accordance with Standard Operating Procedures (SOP).
- 1.2 Appropriate isolations/lock-outs are initiated.
- 1.3 Boiler and ancillary plant are shutdown in compliance with SOP.
- 1.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Conduct boiler inspection/maintenance.**

- 2.1 Boiler is prepared for inspection in accordance with SOP.
- 2.2 Condition of boiler is established to ensure safe removal of equipment.
- 2.3 Hydrostatic test is conducted in accordance with SOP and monitoring requirements.
- 2.4 Inspections and maintenance is carried out according to SOP and statutory requirements.
- 2.5 Internal/external cleaning of boiler and fittings are undertaken.
- 2.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Store boiler in shutdown mode.**

- 3.1 Storage time and condition of storage are established.
- 3.2 Boiler is stored in a safe condition for access in accordance with manufacturer's specifications and SOP.
- 3.3 Stored boiler water and chemicals are analysed and handled in accordance with SOP when boiler is stored for extended periods.
- 3.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **4 Respond to crash/emergency shutdowns.**

- 4.1 Crash is responded to immediately in accordance with SOP.
- 4.2 Emergency conditions are complied with in accordance with legislative and enterprise procedures.
- 4.3 Cause of crash is identified and located where possible.
- 4.4 Immediate safety of personnel and plant is ensured in compliance with SOP.
- 4.5 Continuing plant operation is monitored and maintained in safe working conditions and customers are notified.
- 4.6 Relevant personnel are notified to rectify and make plant ready for restart.
- 4.7 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **EVIDENCE GUIDE**

- Explains and implements isolation and access procedures.
- Describes plant layout and status identification.
- Explains purpose and operation of plant and systems.
- Reads and interprets instruments, gauges and data recording equipment.
- Conducts pre-operational checks.
- Starts up and operates boiler system.
- Explains causes and effects of shutdowns.
- Describes shutdown responses and procedures.
- Implements boiler store/bank procedures.
- Reads and interprets specifications and customer orders.
- Reports and documents information.
- Uses effective verbal and written communication.
- Explains boiler water treatment system and reasons for treatment.
- Explains statutory responsibilities.
- Responds to shutdowns immediately and appropriately as per SOP.
- Maintains compliance with all OH&S requirements.
- Demonstrates ability to safely store/bank boiler, if applicable, and maintains status according to SOP.

- Boiler is consistently set-up and/or re-started within specified time.
- Conducts all pre-start checks and procedures.
- Handles and/or rectifies start up problems in accordance with SOP or site agreements.
- Maintains documentation requirements.
- Works within OH&S, SOP, environment and safe working requirements and practices.

# **FPPSTM4A: Troubleshoot and Rectify Boiler Plant Systems**

## **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

### **1 Identify and diagnose causes of faults.**

- 1.1 Plant assessments and system alarm systems are interpreted to determine fault type and location.
- 1.2 Routine physical inspections of plant and processes are made to identify faults.
- 1.3 Cause and source of problem is identified and located.
- 1.4 Faulty plant is isolated, if possible, and confirmed with production and maintenance.
- 1.5 Relevant historical data is accessed/referred to, to confirm diagnosis.
- 1.6 Diagnoses are communicated to relevant personnel.
- 1.7 Work is completed within OH&S, Standard Operating Procedures (SOP), environmental and safe working requirements and practices.

### **2 Rectify systems/plant equipment faults.**

- 2.1 Emergency stop/shutdown, isolation and lock-out procedures are initiated prior to fault rectification.
- 2.2 Faulty equipment/instrumentation is isolated and caused to be repaired/replaced.
- 2.3 Fine tuning adjustments to process and systems are made to return to specifications.
- 2.4 Restoration of machine/system to normal operation is verified and communicated to relevant personnel.
- 2.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **3 Rectify product quality and distribution faults.**

- 3.1 Product quality faults/variations are identified by observation, systematic sampling and testing.
- 3.2 Samples for a range of tests are taken according to established enterprise procedures and SOP.

- 3.3 Test results are interpreted and operations are adjusted to correct variations from specification.
- 3.4 Out of specification product is dealt with according to SOP.
- 3.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **4 Record and report operational data.**

- 4.1 Variations from standard specification and machine operation faults are documented/logged.
- 4.2 Indications of performance variance are entered into log.
- 4.3 Assessment and evaluation of causes of variations and corrective action undertaken is recorded as required.
- 4.4 Relevant information is communicated to appropriate personnel to prepare for modification to the plant output.

#### **EVIDENCE GUIDE**

- Explains types, causes and effects of plant shutdowns.
- Explains plant start-up and shutdown procedures.
- Describe plant operation and control mechanisms.
- Outlines impact and effect of inappropriate responses to shut.
- Explains causes and effects of system faults and rectification requirements.
- Implements troubleshooting guides and diagnostic procedures.
- Diagnoses production and quality faults, effects and causes.
- Gathers, analyses and interprets data.
- Conducts routine checking procedures during plant/systems operation.
- Explains types and purpose of tests.
- Sets up and operates test equipment.
- Explains sampling and testing procedures.
- Interprets test results.
- Logs and records data.
- Demonstrates keyboarding and computer access skills.
- Uses effective communication.
- Explains boiler water treatment system and reasons for treatment.

- Explains statutory responsibilities.
- Identifies causes of shutdown and responds appropriately.
- Initiates isolations and lock-outs in compliance with SOP.
- Identifies, locates and rectifies or causes to be rectified operational and quality faults.
- Confirms and maintains required production throughput after restart.
- Maintains plant operation within specification.
- Communicates with appropriate personnel.
- Works within OH&S, SOP, environment and safe working requirements and practices.



## Electrical Power Generation

FPPEPG1A: Manage a power generation system start-up.

FPPEPG2A: Monitor and control power generation system.

FPPEPG3A: Co-ordinate power generation system shutdown.

FPPEPG4A: Conduct a technical inspection of power generation plant and equipment.

FPPEPG5A: A Troubleshoot and rectify power generation system.

### **Please note:**

A single Range Statement has been prepared to cover all Units in Electrical Power Generation. The actual context/conditions for each Unit would be drawn from the mill's customised version of this Range Statement.

## **RANGE STATEMENT**

The competencies in this unit refer to those related to the management and operation of power generation and includes steam turbine driven alternators, auxiliary plant, electricity generation, regulation and distribution systems used in the pulp and paper making industry.

### **Materials/supplies:**

- water
- steam
- electricity
- gas

### **Equipment:**

Equipment appropriate to power generation processes, and may include the following:

- boilers
- high and low voltage transformers
- steam/gas turbines
- and switchboards
- water systems and auxiliary plant
- circuit breakers
- AC/DC generation and distribution systems
- protective equipment
- measuring/recording equipment

### **Legislation, policy and procedures:**

- OH&S
- appropriate endorsed operator
- environmental and statutory legislation
- licences
- enterprise policies and procedures
- local power authority policies and procedures
- Standard Operating Procedures (SOP)

### **Documentation/procedures/reports:**

- operational logs/reports

- maintenance logs
- SOP documentation
- Materials Safety Data Sheets (MSDS)
- Process and instrument diagrams

**Maintenance:**

- as per site agreement
- maintenance schedules
- maintenance systems

**Sampling/testing:**

- plant/system operations and process steam supply monitoring
- as per site agreements

**Technology:**

- full and semi automated plant and equipment
- manually operated plant and equipment
- controlled systems - PLC or DCS
- electronic measuring and monitoring equipment

**Communication channels:**

- internal/external suppliers and customers
- maintenance services
- team members
- product/services co-ordinator

# **FPPEPG1A: Manage a Power Generation System Start-Up**

## **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

### **1 Conduct local inspections and pre-operational safety checks.**

- 1.1 Plant status and work requirements are determined in conjunction with power authorities.
- 1.2 Operational prerequisites are established in accordance with Standard Operating Procedures.
- 1.3 Sequencing for plant start-up to suit current circumstances is determined in accordance with SOP.
- 1.4 Operational maintenance requirements are undertaken in accordance with SOP.
- 1.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **2 Initiate start-up procedures.**

- 2.1 Sequence for start-up of plant is commenced in compliance with SOP.
- 2.2 Generation system start is co-ordinated with distribution and ancillary systems and brought on-line according to SOP.
- 2.3 System/plant is observed for correct operational response.
- 2.4 Super heater or steam drains are monitored to ensure Environmental Protection Authority (EPA) noise compliance.
- 2.5 Variations from required operational conditions are detected and corrective action taken to rectify.
- 2.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **3 Implement area housekeeping and cleaning.**

- 3.1 Potential work area hazards are identified and reported.
- 3.2 Prevention/control measures are employed to contain hazards.
- 3.3 Routine documentation is maintained and logged in accordance with SOP.
- 3.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

## EVIDENCE GUIDE

- Explains plant and equipment operation.
- Describes AC/DC generation principles.
- Describes output control/regulation principles.
- Outlines power factor characteristics, effects and correction techniques.
- Explains electrical isolation procedures.
- Explains principles of operation of transformers and circuit protection systems.
- Describes power distribution systems.
- Explains power systems testing and test procedures.
- Uses tools and equipment.
- Explains environmental impact requirements.
- Diagnoses systems faults, causes and effects.
- Applies problem-solving principles.
- Uses effective communication skills.
- Explain the effect of steam quality on turbine operation.
- Explain the paralleling procedure and identify problems with failing to come into parallel.
- Maintains a clean and hazard free workplace.
- Starts up plant in accordance with SOP.
- Parallels alternator output successfully with existing internal and external supply grids.
- Conducts appropriate adjustments to maintain operation at required levels.
- Communicates with customers and other relevant personnel.
- Works within OH&S, SOP, environment and safe working requirements and practices.

# **FPPEPG2A: Monitor and Control Power Generation System**

## **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

### **1 Confirm operational status.**

- 1.1 Continuing process supplies are maintained.
- 1.2 Power generation processes are confirmed to be within operational specifications.
- 1.3 Operational log confirms turbine performance parameters have been within specifications.
- 1.4 Operational status is communicated to relevant personnel.
- 1.5 Work is completed within OH&S, Standard Operating Procedures, environmental and safe working requirements and practices.

### **2 Control power generation and ancillary plant operation.**

- 2.1 Power generation plant and equipment is operated and monitored in accordance with manufacturer specifications and SOP.
- 2.2 Process supplies are monitored according to SOP.
- 2.3 Operational status is confirmed by visual and audible observations and process monitoring systems.
- 2.4 Turbine and generation control adjustments are made to maintain operation within specification.
- 2.5 Power output demand and distribution systems operation is monitored and maintained to meet client requirements.
- 2.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **3 Record and document turbine and generation plant performance.**

- 3.1 Turbine pressures and temperatures and flows are measured and recorded in accordance with SOP.
- 3.2 Operating log is maintained in accordance with enterprise requirements.
- 3.3 Maintenance requirements are identified and documented.

## EVIDENCE GUIDE

- Explains plant and equipment operation.
- Describes AC/DC generation principles.
- Describes output control/regulation principles.
- Outlines power factor characteristics, effects and correction techniques.
- Explains electrical isolation procedures.
- Explains principles of operation of transformers and circuit protection systems.
- Describes power distribution systems.
- Explains power systems testing and test procedures.
- Uses tools and equipment.
- Explains environmental impact requirements.
- Explains causes and effects of system faults and rectification requirements.
- Applies problem-solving principles.
- Uses effective communication skills.
- Explain the effect of steam quality on turbine operation.
- Maintains a clean and hazard free workplace.
- Starts up plant in accordance with SOP.
- Parallels alternator output successfully with existing internal and external supply grids.
- Responds appropriately to monitoring and warning devices.
- Conducts appropriate adjustments to maintain operation at required levels.
- Communicates with customers and other relevant personnel.
- Diagnoses system faults, causes and effects.
- Works harmoniously with other personnel.
- Works within OH&S, SOP, environment and safe working requirements and practices.

# FPPEPG3A: Co-ordinate Power Generation System Shutdown

## ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA

### 1 Establish and/or assess cause and effect of malfunction/shutdown

- 1.1 Planned shutdown is established from work area instructions or maintenance schedules.
- 1.2 Abnormal operating conditions are identified by analysis of technical and operational information and other diagnostic procedures.
- 1.3 Effects of abnormal conditions are determined to enable appropriate action to be taken in accordance with Standard Operating Procedures.
- 1.4 Source of shutdown cause is located to ensure rectification in accordance with SOP.
- 1.5 Faulty plant is isolated/contained where possible to allow continued production.
- 1.6 Appropriate personnel and local authorities are notified when abnormal operating conditions prevail.
- 1.7 Safety issues are identified to ensure compliance with SOP.
- 1.8 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### 2 Implement shutdown procedures.

- 2.1 Isolation/lock-out requirements are implemented according to SOP.
- 2.2 Process supplies shutdown procedures are followed as required.
- 2.3 Plant/system shutdown is managed in accordance with relevant procedures.
- 2.4 Plant integrity/personnel safety is ensured in compliance with SOP.
- 2.5 Shutdown information is communicated to relevant personnel as required.
- 2.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.



### **3 Record and report shutdown data.**

- 3.1 Planned/crash shutdown data is entered/logged as required by SOP.
- 3.2 Assessments and evaluations of causes and corrective actions undertaken is recorded as required.
- 3.3 Relevant information is communicated to appropriate personnel in accordance with operational requirements.

### **4 Respond to crash/emergency shutdowns.**

- 4.1 Crash is responded to immediately in accordance with SOP.
- 4.2 Emergency conditions are complied with in accordance with legislative and enterprise requirements.
- 4.3 Cause of crash is identified and located where possible.
- 4.4 Immediate safety of personnel and plant is ensured in compliance with SOP.
- 4.5 Continuing plant/systems operation is monitored and maintained in safe working conditions and customers are notified.
- 4.6 Relevant personnel are notified to rectify and make plant ready for restart.
- 4.7 Work is completed within OH&S, SOP, environmental and safe working requirements and practices

### **EVIDENCE GUIDE**

- Explains plant and equipment operation.
- Describes AC/DC generation principles.
- Describes output control/regulation principles.
- Outlines power factor characteristics, effects and correction techniques.
- Explains electrical isolation procedures.
- Explains principles of operation of transformers and circuit protection systems.
- Describes power distribution systems.
- Explains power systems testing and test procedures.
- Uses tools and equipment.
- Explains environmental impact requirements.
- Diagnoses systems faults, causes and effects.

- Applies problem-solving principles.
- Uses effective communication skills.
- Explain the effect of steam quality on turbine operation.
- Describes the post shutdown operation.
- Maintains a clean and hazard free work area.
- Starts up plant in accordance with SOP.
- Parallels alternator output successfully with existing internal and external supply grids.
- Responds appropriately to monitoring and warning devices.
- Conducts appropriate adjustments to maintain operation at required levels.
- Communicates with customers and other relevant personnel.
- Works within OH&S, SOP, environment and safe working requirements and practices.

## **FPPEPG4A: Conduct a Technical Inspection of Power Generation Plant and Equipment**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Prepare for plant inspection/test.**

- 1.1 Plant inspection outcomes defined in accordance with available options.
- 1.2 Potential causes of faulty plant operation identified.
- 1.3 Relevant maintenance and operational data is consulted.
- 1.4 Isolations, lock-out procedures are initiated in accordance with Standard Operating Procedures and relevant OH&S requirements.

#### **2 Conduct plant inspection/test.**

- 2.1 Plant for inspection is correctly identified and operational status established.
- 2.2 Inspections are conducted in accordance with SOP.
- 2.3 Plant is left in a safe condition and its status is declared at completion of inspection/test.
- 2.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Evaluate and report inspection/test findings.**

- 3.1 Inspection/test results and data are analysed according to SOP.
- 3.2 Potential options and recommendations for action are prepared and documented as required.
- 3.3 Action plan for remedial action is prepared and communicated to relevant personnel.
- 3.4 Relevant records and documentation are completed in compliance with statutory and enterprise requirements.

### **EVIDENCE GUIDE**

- Explains plant and equipment operation.
- Describes AC/DC generation principles.
- Describes output control/regulation principles.
- Outlines power factor characteristics, effects and correction techniques.

- Explains electrical isolation procedures.
- Explains principles of operation of transformers and circuit protection systems.
- Describes power distribution systems.
- Explains power systems testing and test procedures.
- Uses tools and equipment.
- Explains environmental impact requirements.
- Diagnoses systems faults, causes and effects.
- Applies problem-solving principles.
- Uses effective communication skills.
- Explain the effect of steam quality on turbine operation.
- Describes operational tolerances of the turbine system and the effect of operating outside these tolerances.
- Maintains a clean and hazard free work area.
- Conducts inspections within statutory requirements and in compliance with SOP.
- Completes inspection documentation according to SOP.
- Starts up plant in accordance with SOP.
- Parallels alternator output successfully with existing internal and external supply grids.
- Responds appropriately to monitoring and warning devices.
- Conducts appropriate adjustments to maintain operation at required levels.
- Communicates with customers and other relevant personnel.
- Works within OH&S, SOP, environment and safe working requirements and practices.

## **FPPEPG5A: Troubleshoot and Rectify Power Generation System**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Identify and diagnose causes of faults.**

- 1.1 Visual assessments and system alarm systems are interpreted to determine fault type and location.
- 1.2 Routine physical inspections of plant and processes are made to identify faults.
- 1.3 Cause and source of problem is identified and located using appropriate diagnostic procedures.
- 1.4 Relevant historical data accessed/referred to, to confirm diagnosis.
- 1.5 Diagnoses are communicated to relevant personnel.
- 1.6 Work is completed within OH&S, Standard Operating Procedures, environmental and safe working requirements and practices.

#### **2 Rectify systems/plant equipment faults.**

- 2.1 Emergency stop/shutdown, isolation and lock-out procedures are initiated prior to fault rectification.
- 2.2 Faulty equipment/instrumentation is isolated and repaired/replaced.
- 2.3 Corrective adjustments and maintenance requirements to machinery/systems operation are made following restoration.
- 2.4 Restoration of machine/system to normal operation is verified and communicated to relevant personnel.
- 2.5 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Rectify power quality and distribution faults.**

- 3.1 Power quality faults/variations are identified by observation, systematic sampling and testing.
- 3.2 Measurements are taken and tests conducted according to established enterprise procedures and SOP.
- 3.3 Power quality is adjusted whilst generator is on-line to correct variations from specification.

3.4 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **4 Record and report operational data.**

4.1 Variations from required production output and systems operation faults are documented/logged.

4.2 Indications of performance variation are entered in log.

4.3 Assessment and evaluation of causes of variations, and corrective action undertaken is recorded as required.

4.4 Relevant information is communicated to appropriate personnel to prepare for modification to the production run.

#### **EVIDENCE GUIDE**

- Explains types, causes and effects of power generation plant shutdowns.
- Explains plant and equipment operation.
- Describes AC/DC generation principles.
- Describes output control/regulation principles.
- Outlines power factor characteristics, effects and correction techniques.
- Explains electrical isolation procedures.
- Explains principles of operation of transformers and circuit protection systems.
- Describes power distribution systems.
- Explains power systems testing and test procedures.
- Uses tools and equipment.
- Explains causes and effects of system faults and rectification requirements.
- Implements troubleshooting guides and diagnostic procedures.
- Explains environmental impact requirements.
- Diagnoses production and quality faults, causes and effects.
- Gathers, analyses and interprets data.
- Conducts routine checking procedures during plant/systems operation.
- Describes types and purpose of tests.
- Sets up and operates test equipment.
- Describes sampling and testing procedures.
- Applies problem-solving principles.

- Uses effective communication skills.
- Explain the effect of steam quality on turbine operation.
- Describes operational tolerances of the turbine system and the effect of operating outside these tolerances.
- Maintains a safe and hazard free workplace.
- Identified and rectifies or causes to be rectified, power generation faults, in accordance with site agreements.
- Identifies and responds appropriately to shutdown causes.
- Initiates isolations and lock-outs in compliance with SOP.
- Identifies, locates and rectifies, or causes to be rectified operational and quality faults/causes with minimal delay to production, in accordance with site agreements.
- Maintains required power outputs consistently to specification.
- Maintains plant operation consistently to specification.
- Communicates with appropriate personnel.
- Works within OH&S, SOP, environment and safe working requirements and practices.

# **Chemical Preparation**

FPPCPR1A: Prepare chemicals



## **RANGE STATEMENT**

The competencies for this unit relate to those systems and functions involved in preparing chemicals.

### **Materials/supplies:**

- water
- chemicals

### **Equipment:**

- chemical production equipment

### **Legislation, policy and procedures:**

- enterprise policy, procedures and guidelines
- OH&S and environmental regulatory requirements (state and commonwealth)
- quality assurance requirements
- Standard Operating Procedures (SOP)

### **Documentation/procedures/reports:**

- Material Safety Data Sheets (MSDS)
- Standard Operating Procedures (SOP)

### **Maintenance:**

- as per site agreement
- operator maintenance schedules
- maintenance systems

### **Sampling/testing/quality checks:**

- as per chemical manufacturers specifications

### **Technology:**

- process control and monitoring equipment, input and extract data

### **Communication channels:**

- production sections
- maintenance services
- service sections

- supervisors
- team members
- chemical suppliers

## **FPPCPR1A: Prepare Chemicals**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Establish Chemical Requirements**

- 1.1 Chemical requirements are determined and their delivery systems set for operation.
- 1.2 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

#### **2 Inspect and prepare chemical systems**

- 2.1 Isolations are removed according to SOP.
- 2.2 All power supplies are determined to be operationally ready to commence production.
- 2.3 Appropriate systems are closed and/or activated for production.
- 2.4 Work is completed with OH&S, SOP, environmental and safe working requirements and practices.

#### **3 Monitor and maintain chemical system**

- 3.1 Additives are mixed to required specifications.
- 3.2 Quality checks are conducted as per SOP.
- 3.3 Process adjustments are made to ensure product quality.
- 3.4 Documentation is maintained to enterprise requirements.
- 3.5 Faulty equipment is identified and repaired/replaced according to SOP..
- 3.6 Work is completed with OH&S, SOP, environmental and safe working requirements and practices.

#### **4 Implement shutdown procedures**

- 4.1 Shutdown is managed, planned, organised and responded to according to type of shutdown.
- 4.2 Work is completed with OH&S, SOP, environmental and safe working requirements and practices.

## **5 Implement area housekeeping requirements**

- 5.1 Routine checks and maintenance of work area are undertaken.
- 5.2 Housekeeping/cleaning activities are conducted to ensure a safe and clean work area.
- 5.3 Potential waste hazards are removed to designated areas, in compliance with SOP.
- 5.4 Chemical/hazardous materials are disposed of as required by SOP.
- 5.5 Work is completed with OH&S, SOP, environmental and safe working requirements and practices.

### **EVIDENCE GUIDE**

- Interprets documentation.
- Explains chemical preparation processes and systems.
- Identifies the process controls within the system.
- Plans work within standard procedures.
- Explains and implements OH&S standards.
- Communicates information clearly to internal and external contacts.
- Accesses and interprets computer information.
- Collects and collates information for decision-making.
- Demonstrates the ability to prepare chemical system.
- Maintains a clear and hazard free work area.
- Describes cause and affects of operational equipment faults and takes appropriate rectification action.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## Communication

FPPCOM1A: Use basic workplace communication.

FPPCOM2A: Prepare and present verbal and written workplace information.

FPPCOM3A: Use advanced workplace communication.

FPPCOM4A: Engage in complex workplace communication.

## **RANGE STATEMENT**

### **Company policy and procedures may include:**

- OH&S
- quality assurance
- Standard Operating Procedures (SOP)
- environmental
- workplace agreements

### **Communication may be with people from a range of social, cultural and ethical backgrounds who are:**

- team members
- peers
- management

### **Types of text may include:**

- single words
- short sentences
- symbols
- codes
- signs
- sketches

### **Text may be conveyed in:**

- printed form
- screen based form

### **Language may be:**

- everyday workplace use
- technical terms

### **Negotiation of issues is conducted in a supportive environment with assistance from others such as:**

- team leader
- shop steward

- management

Personal notes may be kept in style and language appropriate to individual.

**Types of documents may include:**

- work reports
- personal employment forms
- Material Safety Data Sheets (MSDS)
- work instructions
- manuals

**Recording may be by using:**

- symbols
- short sentences
- computer system

# **FPPCOM1A: Use Basic Workplace Communication**

## **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

### **1 Exchange verbal information.**

- 1.1 Verbal information is exchanged in order to outline routine work requirements.
- 1.2 Questions are asked to seek clarification.
- 1.3 Group processes are followed to respond to work related questions.

### **2 Locate and use written information.**

- 2.1 Text is located and used to identify routine work information.

### **3 Record routine data and personal notes.**

- 3.1 Routine data is recorded on standard forms.
- 3.2 Notes of discussions are recorded for use as a personal reference.

## **EVIDENCE GUIDE**

- Outlines own job tasks and responsibilities.
- Repeats and explains day to day workplace information such as work instructions.
- Explains acceptable behaviour.
- Explains the consequences of not following acceptable workplace behaviour.
- Describes basic employment conditions.
- Describes areas covered by industrial awards.
- Describes company policies and procedures and how they relate to own job.
- Uses pronunciation that is clear and intelligible.
- Identifies information requirements and formulates questions to clarify work requirements or instructions.
- Expresses opinions in response to questions to contribute to problem solving processes.
- Demonstrates group processes such as turn-taking, participating in discussions and tolerating views of others in a way that contributes to the overall goal of the group.
- Indicates the usual source(s) of written information relevant to implementing work responsibilities.



- Explains the purpose of the text.
- Uses text to identify required information.
- Locates and explains the purpose of forms.
- Records information in a manner which is complete, accurate and legible.
- Prepares notes of discussion so that they can be clearly interpreted by the writer.

## **FPPCOM2A: Present Verbal and Written Workplace Information**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Select and present verbal information.**

- 1.1 Issues are presented, discussed and negotiated in order to meet work requirements.
- 1.2 Verbal information is selected, structured and presented to convey meaning to others.
- 1.3 Group processes are followed to assist group objectives.

#### **2 Read routine instructions and reports.**

- 2.1 Routine written instructions and reports in standard format are used to assist person to complete work functions/tasks.

#### **3 Prepare brief written statements.**

- 3.1 Brief written documents in standard format are prepared to communicate information regarding the person's immediate work responsibilities.
- 3.2 Information is prepared for personal use or use in immediate workplace.

### **EVIDENCE GUIDE**

- Explains immediate work related issues or problems.
- Outlines personal views on work related issues.
- Seeks views of others in order to discuss processes and options for improvements relating to own job and immediate work environment.
- Uses appropriate sequence and order of information to convey meaning.
- Explains the object of group or team-based processes.
- Locates and extracts relevant information from routine workplace text.
- Explains the message conveyed in minutes and ad hoc notes recording group activity.
- Organises information and prepares brief routine reports to explain workplace information.

## **FPPCOM3A: Use Advanced Workplace Communication**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Express views verbally.**

- 1.1 Sensitive issues are discussed and negotiated in an appropriate manner.
- 1.2 Information gathering techniques are used to identify views of others.
- 1.3 Views and ideas of others are accurately represented.
- 1.4 Information is reported back.
- 1.5 Group processes are followed.

#### **2 Read non-routine text.**

- 2.1 Written information is used to co-ordinate, prepare and monitor workplace performance.

#### **3 Prepare written information to support groups and teams.**

- 3.1 Written information associated with group activities is prepared in standard format in language understood by the receiver.

### **EVIDENCE GUIDE**

- Ascertains views of others by asking questions or convening small group discussions.
- Summarises views of others to retain key points and reports back.
- Contributes to participative processes.
- Uses appropriate language and sensitivity when considering and discussing sensitive issues, eg. skill assessments, sexual harassment complaints, etc.
- States the purpose of range of documentation used in person's work area.
- Summarises information in reports.
- Prepares agenda in standard format.
- Prepares minutes so that they accurately and succinctly record the business of the meeting.

# **FPPCOM4A: Engage in Complex Workplace Communication**

## **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

### **1 Engage in complex verbal communication.**

- 1.1 Group processes are facilitated and monitored to support group objectives.
- 1.2 One-to-one counselling of team members is provided to provide effective support.
- 1.3 Work instructions and expectations are negotiated with others.

### **2 Read complex text.**

- 2.1 Written information is read, analysed and used to assist person to oversee workplace performance.
- 2.2 Technical information from written source is used to examine and introduce new procedure and approaches to improve workplace performance.

### **3 Prepare written information for a range of audiences and applications.**

- 3.1 Routine and specialist reports are consolidated and summarised to convey key points.
- 3.2 Procedures and instructions related to existing and new functions/tasks are written for others to follow and implement.

## **EVIDENCE GUIDE**

- Uses facilitation skills to ensure participation from all group members.
- Demonstrates conflict resolution techniques.
- Demonstrates participative problem-solving techniques to resolve workplace problems.
- Resolves or progresses issues in complex and/or hostile environments.
- Conveys information which may be complex or technical or involves a change to a familiar process, to people who may not have a technical background.
- Conveys workplace information such as work instructions, in a way that facilitates learning by others.
- Counsels team members on work and related matters affecting work performance.
- Outlines the roles and expectations of customers, suppliers and participants in the work process.

- Demonstrates techniques to check that information has been understood.
- Explains and demonstrates communication styles relevant to conveying information to employees from a range of social, cultural and ethnic backgrounds.
- Locates and extracts relevant information from technical documentation.
- Analyses written information from a variety of sources to assist with decision-making process.
- Explains the purpose of the reports and other documentation used in the work area.
- Collects and organises data to present information which may be drawn from a range of sources.
- Writes information legibly and in a style which is understood by the receiver.

## **Computer Skills**

FPPCSK1A: Access and modify computer records and documents.

FPPCSK2B: Operate a process control computer system.

## **RANGE STATEMENT**

### **Appropriate software may include:**

- Word processing
- Spreadsheets
- Databases
- Scheduling
- Electronic mail
- Process control [*excludes Unit CSK1*]

### **Access/storage of information may include:**

- Hard drives
- Floppy disks
- Networks

### **Types of computer information and activities may include:**

- maintenance of enterprise records
- tracking of jobs/orders through an enterprise
- accessing and modifying of production information
- using and modifying inventories

### **Variety of systems and computers.**

# **FPPCSK1A: Access and Modify Computer Records and Documents**

## **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

### **1 Edit organisational records and documents.**

- 1.1 Computer is turned on in correct manner.
- 1.2 Appropriate software is loaded or selected from menu.
- 1.3 File(s) are correctly identified and opened.
- 1.4 Information to be edited is identified.
- 1.5 Information is entered, changed or deleted using appropriate input device(s) (keyboard, mouse, joystick, etc.).
- 1.6 Document is saved regularly to avoid loss of data.
- 1.7 Document is printed as required.
- 1.8 Edited information is checked against original for accuracy of contents.
- 1.9 Edited document or record is saved.
- 1.10 Back-up copies are created and stored in accordance with specified procedures.
- 1.11 Files are closed and programs exited in accordance with specified procedures.

### **2 Produce documentation to required specifications.**

- 2.1 Software selected is appropriate to task.
- 2.2 Structure and style of document is checked to ensure it is suitable for information being inserted.
- 2.3 Information is entered and edited accurately.
- 2.4 Range of functions is used to ensure efficient and accurate completion of task within nominated deadlines.
- 2.5 Information from other documents is inserted as required.
- 2.6 Documents are printed and proofread for accuracy and consistency of layout and style.
- 2.7 Documents are presented to designated person/section for approval prior to completion and/or final printing.
- 2.8 Modifications are made to meet required specifications.



## **EVIDENCE GUIDE**

- Demonstrates basic keyboard skills.
- Demonstrates familiarity with general principles of computer use.
- Produces simple or previously structured documents.
- Accesses, edits and saves information.

## **FPPCSK2B: Operate a process control computer system**

This competency standard replaces FPPCSK2A from the previously endorsed Pulp and Paper Manufacturing Industry Training Package.

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Access information.**

- 1.1 Process control computer program is accessed in the correct manner.
- 1.2 Required screen display and information is accessed.

#### **2 Extract information**

- 2.1 Information provided by the computer system is interpreted correctly
- 2.2 Information is sent to other devices such as printers, other computer application software programs

#### **3 Enter/modify information**

- 3.1 Information is entered or changed as appropriate

### **EVIDENCE GUIDE**

- Explains the role of the process control computer system.
- Explains how to access and exit system
- Accesses computer program in the correct manner.
- Moves between screen displays in a logical sequence
- Accesses required information
- Interprets accessed information
- Outputs information, such as, send to printer, as required
- Explains how to enter and change information.
- Enters and changes information in the system
- Exits system appropriately

## Emergency Procedures

FPPEME1A: Prepare equipment for an emergency response.

FPPEME2B: Respond to an emergency situation.

## **RANGE STATEMENT**

### **Emergencies may include:**

- fire
- chemical or oil spill
- gas leak or vapour emission
- utilities failure.

### **Resources:**

- personal protective equipment
- emergency response equipment
- SOP
- emergency services - police, fire, ambulance.
- material safety data sheets

### **Indicative functions include:**

- inspection
  - visual
  - mechanical checks
- containment of
  - fire
  - spillage
  - leaks
- servicing
  - lubrication
  - pressure checks
  - refilling.
- communication
  - maintenance
  - external authorities
- first aid
  - application of procedures

### **Equipment may include:**

- fire extinguishers
- hoses
- pumps

- branches fittings/nozzles
- personal protective clothing and equipment
- breathing apparatus
- deluge/safety showers.

## **FPPEME1A: Prepare Equipment for an Emergency Response**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **.1 Identify emergency equipment.**

- 1.1 Location of emergency equipment is determined.
- 1.2 Access to emergency equipment is ensured.

#### **.2 Inspect and assemble emergency equipment.**

- 2.1 Emergency equipment is inspected for faults or damage.
- 2.2 Couplings/connections and operational status are determined and secured.
- 2.3 Equipment is assembled in accordance with manufacturer's specifications.
- 2.4 Missing or damaged parts are identified and reported in accordance with standard procedures.

#### **3 Carry out minor servicing of equipment.**

- 3.1 Equipment is cleaned and maintained according to specifications/standard procedures.
- 3.2 Servicing is carried out according to specifications/standard procedures.
- 3.3 Equipment is "made ready" and stored in designated location.
- 3.4 Equipment functions according to specifications.

#### **4 Report and record emergency information.**

- 4.1 Equipment status is recorded and reported in accordance with standard procedures.
- 4.2 Maintenance requests are raised as appropriate.
- 4.3 Corrective action is undertaken and followed up as appropriate.

### **EVIDENCE GUIDE**

- Explains the location of emergency response equipment.
- Demonstrates ability to test emergency response equipment.
- Identifies faulty emergency response equipment.

- Conducts routine maintenance on emergency response equipment.
- Maintains emergency response equipment inventory.

## **FPPEME2B: Respond to an Emergency Situation**

This competency standard replaces FPPEME2A from the previously endorsed Pulp and Paper Manufacturing Industry Training Package.

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Identify emergency situation.**

- 1.1 Nature, location and scope of emergency is assessed and communicated.
- 1.2 Alarms are raised in accordance with standard procedures.
- 1.3 Emergency equipment is located and utilised.

#### **2 Assess appropriate level of response**

- 2.1 Hazard information systems are accessed as appropriate.
- 2.2 Familiarity with emergency procedures is demonstrated.
- 2.3 Frequency/duration/actual and potential outcome is assessed.

#### **3 Notify responsible authorities.**

- 3.1 Emergency reporting procedures are followed.
- 3.2 Appropriate authorities are identified and notified.
- 3.3 Communication regarding the emergency is clear and unambiguous.

#### **4 Minimise effect of the emergency.**

- 4.1 Emergency response procedures are applied as appropriate.
- 4.2 The area is cleared and secured as required.
- 4.3 Emergency equipment is accessed and operated in accordance with SOP.

#### **5 Monitor and review emergency situation.**

- 5.1 Information is processed, recorded and communicated to appropriate personnel/authorities.
- 5.2 Corrective action procedures are monitored.
- 5.3 Changes in the situation are communicated to appropriate personnel/authorities.



- 5.4 Personal emergency response is -evaluated.
- 5.5 Appropriate revisions to the emergency procedures are communicated to relevant personnel, as required.

### **EVIDENCE GUIDE**

- Identifies and responds appropriately to an emergency situation.
- Follows the organisation's emergency procedures.
- Provides guidance to others on how to respond in an emergency.
- Monitors and communicates changes in emergency situation.
- Explains procedures to ensure protection of workforce.
- Evaluates personal emergency response
- Communicates the need for revision to emergency procedures, as required.

## **Environmental Monitoring**

FPPENV1A: Identify and monitor environmental discharges/emissions.

FPPENV2A: Monitor and control environmental hazards.

## **RANGE STATEMENT**

### **Indicative functions include:**

- monitoring of all physical sensors, instrumentation, compliance with licensing arrangements
- communication, using in-plant reporting systems.

### **Resources:**

- containment equipment
- personal protective equipment
- monitoring equipment.

### **Legislation, policies and procedures:**

- Occupational Health and Safety
- HAZCHEM
- duty of care
- dangerous goods
- external licensing requirements (for example, EPA, water authorities, local councils)
- internal environmental control standards.

### **Emissions/discharges include:**

- noise
- light
- odour
- gas
- smoke
- vapour
- liquid and solids
- particulates
- fumes.

# **FPPENV1A: Identify and Monitor Environmental Discharges/Emissions**

## **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

### **1 Monitor environmental discharges/emissions.**

- 1.1 Discharge/emission levels are recognised and described.
- 1.2 Emission levels are monitored and measured in accordance with Standard Operating Procedures (SOP).
- 1.3 The consequences of exceeding allowable emission levels are explained.
- 1.4 Discharges and emissions are kept within targeted limits.
- 1.5 Waste removal from site complies with internal and external regulations.

### **2 Respond to abnormal environmental discharges/emissions.**

- 2.1 Abnormal emissions are reported to appropriate personnel.
- 2.2 Containment procedures are applied in accordance with SOP where appropriate.
- 2.3 Correct safety procedures are followed and personal protective equipment utilised.

## **EVIDENCE GUIDE**

- Identifies unacceptable environmental discharges.
- Explains environmental consequences of unacceptable discharges.
- Explains company policy related to environmental monitoring and control.
- Explains the reporting system.
- Explains the role and responsibility of regulatory bodies.
- Demonstrates work practices within regulatory requirements.
- Explains the occupational health and safety implications of unacceptable control of environmental hazards.

## **FPPENV2A: Monitor and Control Environmental Hazards**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Identify environmental hazards.**

- 1.1 Environmental hazards are identified.
- 1.2 Location and severity of hazard is assessed and communicated to appropriate personnel.
- 1.3 Cause/source of environmental hazard is diagnosed.

#### **2 Respond to environmental hazard.**

- 2.1 Environmental alarms are activated where appropriate.
- 2.2 Environmental hazard is measured and controlled in accordance with SOP.
- 2.3 Hazardous incident is documented and reported in accordance with SOP.

#### **3 Liaise with internal and external bodies.**

- 3.1 Relevant licensing authorities/bodies are identified and notified in accordance with SOP.
- 3.2 Status of the environmental hazard is monitored and communicated with appropriate personnel on an on-going basis in accordance with SOP.

#### **4 Participate in investigation of environmental incident.**

- 4.1 Documentation and reports are completed in accordance with SOP.
- 4.2 Investigations are undertaken in accordance with SOP.
- 4.3 Findings are documented and reported in accordance with SOP.

### **EVIDENCE GUIDE**

- Identifies and investigates reasons for environmental hazard.
- Explains company procedures for identifying, recording and reporting environmental hazards.
- Demonstrates ability to take emergency action associated with environmental hazard.
- Communicates with appropriate internal and external bodies.

- Demonstrates ability to use approved OH&S procedures and practices in dealing with environmental hazards.

## **First Aid**

FPPAID1A: Apply basic first aid techniques.

FPPAID2A: Administer first aid procedures.

## **RANGE STATEMENT**

- State/territory legislation, standards and codes of practice applying to occupational health and safety and first aid.
- Australian Resuscitation Council recommendations in published policy statements.
- Conditions generally recognised and able to be treated in a first aid capacity:
  - asthma
  - external and internal bleeding
  - burns and scalds
  - cerebro-vascular accident (eg. stroke)
  - diabetes
  - electric shock
  - epileptic seizure
  - eye injuries, minor and major
  - fractures, major and minor
  - head injuries, major and minor
  - myocardial infarction (eg. heart attack)
  - poisoning - including snake bite
  - shock
  - crush injuries
  - soft tissue injuries
  - heat exhaustion and stroke
- Injuries where aggravation is avoided are those commonly found in the industry, eg. falls, crush, manual handling, and machinery.

### **Sources of advice and referral including:**

- qualified first aid personnel
  - workplace first aid centre
  - poisons centre
  - medical practitioners
  - ambulance service
  - hospitals
- OH&S legislation relating to the administration of first aid.



## **FPPAID1A: Apply Basic First Aid Techniques**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Treat minor skin injuries.**

- 1.1 Skin injuries are treated in accordance with standard first-aid techniques.
- 1.2 Splinters are removed using recognised first aid techniques.
- 1.3 Skin injuries are appropriately protected while working, in accordance with recognised first aid practice.
- 1.4 Injuries requiring professional treatment are identified and arrangements are made as far as possible to ensure treatment is obtained.

#### **2 Avoid aggravation of injuries.**

- 2.1 Potential for further injury to victim and others present from injury-causing agent is determined.
- 2.2 Victim and others are removed from injury-causing agent where appropriate, using recognised techniques.
- 2.3 Professional advice is obtained promptly, according to circumstances of injury.

#### **3 Provide emergency assistance where hazardous substances may have been absorbed.**

- 3.1 Symptoms of suspected poisoning are identified by observation, questioning and documentation.
- 3.2 Route through which poison entered the body is ascertained as far as possible.
- 3.3 Treatment for poisoning is in accordance with the Poisons Information Centre procedures, workplace documentation, material safety data sheets and container labels.
- 3.4 Professional advice is obtained promptly.

#### **4 Stop bleeding.**

- 4.1 Casualty's trunk and limbs are positioned according to standard first aid techniques.
- 4.2 Wound is checked to ensure it does not contain foreign bodies or protruding bones.

- 4.3 Wounds clear of protruding matter have direct pressure applied to them using hands, pads and/or bandages according to standard first aid techniques.
- 4.4 Casualty is monitored for shock.
- 4.5 Professional medical assistance is obtained promptly.

## **5 Report accident and treatment.**

- 5.1 Accident/incident is reported to enterprise procedures.
- 5.2 Treatment is reported to person in charge of first aid or recorded to enterprise procedures.

## **EVIDENCE GUIDE**

- Demonstrates competence in first aid procedures by performance in simulated situations, eg. skin injuries, aggravation of injury.
- Demonstrates knowledge of referral procedures by appropriate answers to questions related to simulated situation or to questions about procedures.
- Identifies common poisonous substances in industry.

## **FPPAID2A: Administer First Aid Procedures**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Assess crisis situation.**

- 1.1 Accident scene is checked for existing or potential hazards.
- 1.2 Casualty is approached only when it is safe to do so.
- 1.3 Casualty is moved only if absolutely necessary.
- 1.4 Nature of injuries are identified as far as possible.

#### **2 Seek professional help.**

- 2.1 Ambulance and/or professional services are called and appropriate information provided to obtain additional treatment in more serious cases.
- 2.2 Casualty is reassured.
- 2.3 Casualty is monitored until professional help arrives.

#### **3 Apply cross infection and hygiene procedures for protection of self and victim.**

- 3.1 Procedures recommended by the St. John's Ambulance/Red Cross are used to prevent cross-infection between victim, self, others and surroundings.
- 3.2 First aid materials are appropriately disposed of.
- 3.3 Instruments are cleaned and disinfected.

#### **4 Maintain breathing and circulation of victim.**

- 4.1 Breathing and circulation is checked.
- 4.2 Cardiopulmonary resuscitation procedures or expired air resuscitation techniques as recommended by the Australian Resuscitation Council are applied to maintain breathing and circulation where required.

#### **5 Minimise the effects of injury or illness.**

- 5.1 Symptoms and signs of common conditions are recognised and conditions are appropriately managed in a first aid capacity.
- 5.2 Condition of casualty is assessed and most serious condition attended to first.

5.3 Wounds are treated according to recognised procedures.

**6 Maintain required records.**

6.1 Accident/injury forms as required by State/Territory legislation are completed for later reference.

6.2 Completed forms are securely stored in accordance with privacy and legislative requirements.

**EVIDENCE GUIDE**

- Demonstrates and explains performance of first aid procedures in simulated situations.
- Demonstrates referral, infection prevention and recording procedures by answers to questions related to the simulated situation or to questions about the procedures.

## Hand Tools

FPPHTL1B: Use hand held tools.

## **RANGE STATEMENT**

### **Hand tool use includes but is not limited to:**

- hand saws
- knives
- chisels
- hammers
- hand drills
- files
- rasps

### **Hand held power tool use includes, but is not limited to:**

- electric drills
- grinders
- sanders

### **Operational maintenance tasks include:**

- cleaning
- lubricating
- tightening
- adjusting

## **FPPHTL1B: Use Hand Held Tools**

This competency standard replaces FPPHTL1A from the previously endorsed Pulp and Paper Manufacturing Industry Training Package.

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Select appropriate hand operated and/or hand held power tools.**

- 1.1 Appropriate hand and/or power tools are selected according to task requirements.
- 1.2 Selected hand and/or power tools are handled safely
- 1.3 Hand tool and /or power tools are handled so as to not cause risk to self and damage to tool
- 1.4 Tools are checked before use and unsafe or faulty items identified and marked for repair according to SOP.

#### **2 Operate hand operated and/or hand held power tools.**

- 2.1 Hand tool and/or power tools are adjusted, if required, to meet the specifications of its operation
- 2.2 Hand tools and/or power tools are used safely according to manufacturers' recommendations, OH&S, SOP and environmental requirements.
- 2.3 Hand tools and/or power tools are used without damaging it.
- 2.4 Hand tools and/or power tools are used to obtain required outcome.
- 2.5 Tool operation and work results produced are checked to identify need for tool maintenance or replacement and marked for repair according to SOP.
- 2.6 Hand and/or power tools are maintained according to manufacturer's specifications.
- 2.7 Tools are stored safely and in appropriate location.

### **EVIDENCE GUIDE**

- Describes the operation of the hand and/or power tool
- Selects and handles appropriate tools for a range of typical tasks.
- Checks tool for damage and potential poor operation.

- Describes the procedure for removing faulty or damaged tools for maintenance or replacement
- Describes the OH&S risks associated with handling the hand and or power tools
- Describes why the tool is rejected for use and the reason for that rejection
- Explain the adjustments that can be made, if any, to the hand and/or power tool
- Describe the operational OH&S risks and how to reduce them
- Demonstrates the ability to use a range of hand operated and/or hand held power tools.
- Describe the result that must be produced by the tool.



## **Materials Handling Vehicles and Equipment**

FPPMHV1A: Operate materials handling vehicles and equipment.

FPPMHV2A: Operate overhead crane.

## **RANGE STATEMENT**

### **Materials handling equipment and accessories: [excludes FPPMHV2A]**

- fork lift
- side loader
- straddle truck
- slewing or non-slewing mobile crane
- front end loader
- fork lift tines
- crane hooks
- chains
- slings and straps
- roll grabs

### **Overhead cranes and accessories: [excludes FPPMHV1A]**

- pedestrian or remote operated
- cabin operated
- crane attachments

### **Operations may include the following conditions: [excludes FPPMHV2A]**

- mill and roads
- even and irregular ground

### **Job accessories may include:**

- safety clothing and equipment
- vehicle manuals
- vehicle tools
- job and vehicle records and writing equipment
- first aid kit
- breakdown gear

### **Range of loads and lifting procedures:**

- standard mill loads
- non-standard requiring trial lifts

**Legislation, policy and procedures:**

- enterprise policy, procedures and guidelines
- OH&S and environmental regulatory requirements (state and commonwealth)
- quality assurance requirements
- Standard Operating Procedures (SOP)

**Maintenance:**

- as per site agreement
- operator maintenance schedules
- maintenance systems

**Communication:**

- team members
- management
- maintenance

# FPPMHV1A: Operate Materials Handling Vehicles and Equipment

## ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA

### 1 Perform routine checks and maintenance on equipment.

- 1.1 Cab interior is cleaned to ensure maximum visibility and freedom of movement.
- 1.2 Vehicle is cleaned to ensure safe and tidy operation to enterprise procedures.
- 1.3 Pre-operating checks are completed according to the manufacturer's specifications and enterprise procedures.

### 2 Select equipment and prepare to shift loads.

- 2.1 Equipment and/or attachments suitable for the loads are selected and fitted as required for task.
- 2.2 Check is made of equipment and accessories in accordance with manufacturer's instructions or equivalent.
- 2.3 Operating area is inspected to identify hazards within the vehicle operational area to:
  - remove them where appropriate
  - plan to control them.
- 2.4 Nearby personnel are advised of impending vehicle operation as appropriate.
- 2.5 Communication signals to be used are confirmed with appropriate personnel.
- 2.6 Engine is started in accordance with manufacturer's guidelines and enterprise start-up procedures.
- 2.7 Instruments and gauges are monitored to ensure vehicle operation is safe according to manufacturer's specifications and safety rules.
- 2.8 Checks are made of various components of the vehicle to ensure they are operational in accordance with enterprise and manufacturer's documentation and safety rules.
- 2.9 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **3 Shutdown and secure equipment.**

- 3.1 Vehicle is parked to avoid site and equipment hazards.
- 3.2 Shutdown procedure is completed to manufacturer's requirements and enterprise procedures ensuring safety locks and implements are in place.
- 3.3 Equipment faults are reported to enterprise procedures.

### **4 Identify and lift load.**

- 4.1 Load location is identified from load sheet/instructions in accordance with enterprise procedures.
- 4.2 Weight of load is assessed to ensure compliance with equipment load-plate specifications.
- 4.3 Multiple loads are stacked for combined lift.
- 4.4 Stability of load over transport route is assessed.
- 4.5 Vehicle is steered, manoeuvred and positioned to ensure efficient and safe operation in co-operation with other personnel, and according to enterprise and site regulations and procedures.
- 4.6 Vehicle speeds and engine power are managed to safe operating limits and manufacturer's specifications.
- 4.7 Communications with loading personnel are maintained according to agreed signals.
- 4.8 Loads are lifted so that stability of load and vehicle are maintained.
- 4.9 Vehicle is constantly monitored using gauges, warning devices and observation of vehicle performance to determine operating faults.
- 4.10 Equipment faults creating hazardous operations are identified, operations suspended and the fault reported to enterprise procedures.
- 4.11 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **EVIDENCE GUIDE**

- Demonstrates knowledge of:
  - manufacturer's and enterprise requirements on equipment operation for yard and road operations
  - mill, yard and road hazards.

- Explains movement of range of unit and multiple-unit loads within yard and on road.
- Demonstration of equipment operation should cover:
  - appropriate and controlled movements to manufacturer's specifications and standard operating procedures
  - no injury occurs to personnel no damage occurs to property, equipment or load
  - efficient utilisation of loading area.
- Works within OH&S requirements.
- Explains the layout of the area of operation.
- Explains the most efficient movement around mill to transfer loads.
- Conducts routine maintenance within SOP.

## **FPPMHV2A: Operate Overhead Crane**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Check crane operation and work area.**

- 1.1 External and operational check is made of crane in accordance with manufacturer's instructions and enterprise standards.
- 1.2 Attachments are inspected to ensure security.
- 1.3 Crane service log book is checked to ensure all service requirements have been met.
- 1.4 Site hazards are identified and assessed in accordance with Australian Standards and OH&S procedures.
- 1.5 Weather conditions are assessed, where appropriate, to determine safe operating conditions for outside cranes.
- 1.6 Nearby personnel are notified of impending crane operation as required.
- 1.7 Communication signals are confirmed with any assisting personnel.
- 1.8 Safety procedures are followed in energising equipment, to enterprise procedures.
- 1.9 Checks are made for abnormal noise and operation after the crane has been started.
- 1.10 Crane equipment and controls are located and identified and their correct operation testing in accordance with prescribed procedures.
- 1.11 Lifting gear is inspected to segregate defective items.
- 1.12 Defective equipment is reported according to enterprise procedures and defects noted in crane service log book.
- 1.13 Work is completed within OH&S, SOP, environmental and safe work requirements and practices.

#### **2 Secure and transfer loads.**

- 2.1 Work requirements are obtained according to enterprise procedures.
- 2.2 Work is planned to maintain mill work flow and minimise unloaded movement.
- 2.3 Weight of load is estimated to determine lifting requirement.

- 2.4 Configuration of lifting gear proposed for load is checked against Australian Standards and codes of practice.
- 2.5 Appropriate checks are made on non-standard loads to ensure safe lifting conditions.
- 2.6 Load is lowered for corrective action to be taken where trial lift reveals an unacceptable operational situation.
- 2.7 Hazard control strategies are implemented for identified hazards.
- 2.8 Load is hoisted and lowered into position using all relevant crane movements in accordance with Australian Standards, and enterprise requirements.
- 2.9 Gantry and carriage is positioned to ensure load to be lifted is plumbed under hook.
- 2.10 Tagline is used where control of load is critical.
- 2.11 Stability of load is maintained at all times.
- 2.12 Signals are made and interpreted with associated persons to co-ordinate work.
- 2.13 Work is completed within OH&S, SOP, environmental and safe work requirements and practices.

### **3 Shutdown crane.**

- 3.1 Crane is shutdown in accordance with manufacturer's instructions.
- 3.2 Safety locks, brakes and securing procedures are applied in accordance with Australian Standards to prevent accidental crane movements.
- 3.3 Lifting gear is checked and defective equipment is segregated and reported to enterprise procedures.

### **EVIDENCE GUIDE**

- Demonstrates knowledge of crane and mill hazards, manufacturer's, Australian Standards and enterprise requirements on crane operation.
- Demonstrates start-up and shutdown procedures.
- Demonstrates movement of standard and non-standard loads ensuring:
  - load is correctly slung
  - correct operation of crane
 load is within crane limits, particularly where load measuring devices are fitted.
- Demonstrates scheduling of movements to maintain material flow in mill to required timing.



- Implements OH&S requirements.
- Works within SOP for overhead crane operation.
- Demonstrates hand signals.

## **Numeracy**

FPPNUM1A: Estimate and calculate basic data.

FPPNUM2A: Measure and calculate routine information.

FPPNUM3A: Calculate basic performance measures.

FPPNUM4A: Calculate and analyse production and financial performance.

## **RANGE STATEMENT**

### **The arithmetic processes include:**

- addition
- subtraction
- multiplication
- division.

### **Product characteristics can include:**

- length
- weight
- capacity
- time
- temperature.

### **Estimates and calculations may be applied to:**

- product characteristics, eg. weight, length, volume
- production tallies.

### **Forms for recording information may include:**

- Statistical Process Charts
- Production Tally Sheets.

**Calculations may be undertaken manually or through the use of a calculator.**

### **Records may be kept:**

- manually
- in computer-based systems.

### **Measuring devices may typically include: *[excludes FPPNUM1A]***

- scales
- vernier callipers
- meters
- gauges.

**Calibrations will typically relate to measuring associated with: *[excludes Units FPPNUMIA-3]***

- weight
- volume
- temperature
- length.

**Estimating techniques should be used to confirm the general accuracy of calculations.**

## **FPPNUM1A: Estimate and Calculate Basic Data**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Estimate, calculate and record basic workplace data**

- 1.1 Product characteristics are estimated to check variation requirements.
- 1.2 Addition, subtraction, multiplication and division are used for workplace calculations.
- 1.3 Amounts are recorded in standard format.

### **EVIDENCE GUIDE**

- Estimate measures using whole numbers and decimals.
- Calculate results using whole numbers and/or fractions and decimals.
- Record statistical data on standard forms.
- Write numbers accurately and legibly.

## **FPPNUM2A: Measure and Calculate Routine Information**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Use routine measuring instruments.**

- 1.1 Measuring instruments are selected and used to accurately measure common workplace units.
- 1.2 Measuring instrument faults are identified and reported to ensure that they are available for subsequent use.

#### **2 Complete routine arithmetic calculations.**

- 2.1 Basic arithmetic processes are used to calculate routine workplace measures.
- 2.2 Estimating techniques are verified by use of arithmetic calculations.

#### **3 Record data.**

- 3.1 Results are recorded using standard methods.
- 3.2 Incorrect recording is identified and amended to ensure that fault is rectified.

### **EVIDENCE GUIDE**

- Explains the purpose of measuring instruments.
- Operates instruments to measure dimensions.
- Identifies routine faults in measuring instruments.
- Calculates routine measures using arithmetic processes involving:
  - whole numbers
  - fractions
  - decimals.
- Verifies estimations by calculations.
- Explains purpose of recording statistical data.
- Records information accurately in company format.

## **FPPNUM3A: Calculate Basic Performance Measures**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Calculate performance measures.**

- 1.1 Percentages, ratios and proportion are calculated to derive workplace information.
- 1.2 Deviations in performance from specification are estimated and calculated to determine the extent of the variation.

### **EVIDENCE GUIDE**

- Explains the purpose of calculating percentages, ratios and proportions in the workplace.
- Identifies situations in which such calculations are used.
- Calculate each measure:
  - percentages
  - ratios
  - proportions
- Explains the meaning of the outcome of the calculations.
- Explains the purpose of identifying variations in performance.
- Estimates variation from specification.
- Calculates amount and percentage of the variation.

# **FPPNUM4A: Calculate and Analyse Production and Financial Performance**

## **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

### **1 Calculate yield, wastage and productivity indicators.**

- 1.1 Yield, wastage and productivity measures are calculated to determine performance outcomes.
- 1.2 Yield, wastage and productivity measures are compared with targets to determine variation of actual with planned performance.

### **2 Calculate and compare actual and budget performance.**

- 2.1 Costs are calculated and compared with standards/budgets to identify variance from planned performance.
- 2.2 Financial results are analysed to identify costs which require particular attention in improving financial performance.

### **3 Prepare and analyse data.**

- 3.1 Data is consolidated with standard reporting format to report performance/activity.
- 3.2 Time series data is interpreted from tables and graphs to identify performance trends.

### **4 Calculate calibration adjustments.**

- 4.1 Mathematical concepts associated with equipment calibration are understood and used to determine adjustment to equipment settings.
- 4.2 Calibration calculation is verified by checking the accuracy of the adjustment in the actual work performance.

## **EVIDENCE GUIDE**

- States the purpose of yield, wastage, productivity.
- Calculates yield, wastage and productivity.
- Determines and explains variation of planned with actual.
- Explains the purpose of comparing cost with budget.
- Calculates variance of cost from budget.



- Explains the purpose of the data the company uses to record performance.
- Consolidates information from primary collection to format required and standard reporting clients.
- Explains the key features of time series data presented in tables and graphs.
- Explains the trends illustrated in tables and graphs.
- Explains the purpose of calibrating of equipment.
- Applies mathematical concepts to determine whether equipment settings require adjustments.
- Verifies calibration calculation.

## **Occupational Health and Safety**

FPPOHS1A: Follow defined OH&S procedures.

FPPOHS2B: Implement and monitor OH&S policies and procedures.

FPPOHS3B: Maintain and evaluate OH&S system.

FPPOHS4A: Establish OH&S system.

## **RANGE STATEMENT**

### **Relevant occupational health and safety legislation, particularly:**

- general duty of care
- requirements for the maintenance and confidentiality of records of occupational injury and disease
- provision of information and training
- regulations and codes of practice relating to hazards present in work area
- health and safety representatives and occupational health and safety committees
- issues resolution.

### **Relevant workplace procedures will typically include:**

- hazard policies and procedures
- emergency, fire and accident procedures
- procedures for the use of personal protective clothing and equipment
- hazard identification and issue resolution procedures
- job procedures and work instructions
- inspection
- housekeeping
- consultation processes, either general or specific to occupational health and safety
- training and assessment
- specific hazard policies and procedures
- occupational health and safety information
- occupational health and safety record keeping
- maintenance of plant and equipment.

**Hazardous events include accidents, fires and emergencies such as chemical spills.**

### **Procedures for dealing with hazardous events include:**

- evacuation
- chemical containment
- first aid procedures.

**Processes for consultation include:**

- occupational health and safety committees
- consultation with health and safety representatives
- issue resolution procedures
- participative/consultative procedures.

**Monitoring of activities may include the review of: [excludes FPPOHSIA]**

- written reports
- performance appraisal
- auditing procedures.

## **FPPOHS1A: Follow defined OH&S procedures.**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Follow workplace procedures for hazard identification and risk control.**

- 1.1 Hazards in the work area are recognised and reported to designated personnel according to workplace procedures.
- 1.2 Workplace procedures and work instructions for controlling risks are followed accurately.
- 1.3 Workplace procedures for dealing with accidents, fires and emergencies are followed whenever necessary within scope of responsibilities and competencies.

#### **2 Contribute to participative arrangements for the management of occupational health and safety.**

- 2.1 Occupational health and safety issues are raised with designated personnel in accordance with workplace procedures and relevant occupational health and safety legislation.
- 2.2 Contribute to participative arrangements for occupational health and safety management in the workplace within organisational procedures and scope of responsibilities and competencies.

### **EVIDENCE GUIDE**

- Demonstrates understanding of information regarding occupational health and safety legislation, codes of practice, workplace procedures and work instructions.
- Identifies and explains significant hazards in the workplace.
- Explains symbols used for occupational health and safety signs.
- Reports hazardous situations.

## **FPPOHS2B: Implement and monitor OH&S policies and procedures within the work area.**

This competency standard replaces FPPOHS2A from the previously endorsed Pulp and Paper Manufacturing Industry Training Package.

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Provide information to the work group about the work area's OH&S policies, procedures and programs.**

- 1.1 Application of relevant provisions of OH&S legislation and codes of practice are accurately and clearly explained to the work group.
- 1.2 Information on the organisation's OH&S policies, procedures and programs that affects the work area is provided.
- 1.3 Information on the organisation's OH&S policies, procedures and programs is accurately and clearly explained to the work group.
- 1.4 Information about identified hazards and the outcomes of risk assessment and risk control procedures is regularly provided.
- 1.5 Information about identified hazards and the outcomes of risk assessment and risk control procedures is accurately and clearly explained to the work group.

#### **2 Implement and monitor the work area's participative arrangements for the management of OH&S issues.**

- 2.1 OH&S legislation and OH&S consultative procedures are implemented and monitored within the work area to ensure that all members of the work group have the opportunity to contribute.
- 2.2 OH&S issues raised through consultation within the work area are dealt with and resolved promptly or referred to the appropriate personnel for resolution in accordance with organisation's procedures for issue resolution.
- 2.3 Information about the outcomes of participation and consultation is provided in a manner accessible to the work group.

**3 Implement and monitor the organisation's procedures for identifying hazards and assessing risks within the work area.**

- 3.1 Existing and potential hazards within the work area are identified and reported so that risk assessment and risk control procedures can be applied.

**4 Implement and/or monitor the organisation's procedure for controlling risks within the work area.**

- 4.1 Work procedures to control risks are implemented and /or monitored within the work area.
- 4.2 Existing risk control measures are monitored within the work area and results reported regularly in accordance with workplace procedures.
- 4.3 Resource allocation for implementation of risk control measures within the work area are monitored and reported to designated personnel.

**5 Implement the organisation's procedures for dealing with a hazardous event within the work area.**

- 5.1 Workplace procedures for dealing with hazardous events are implemented within the work area whenever necessary to ensure that prompt control action is taken.
- 5.2 Hazardous events are investigated within the work area to identify their cause in accordance with investigation procedures.
- 5.3 Control measures to minimise risks and prevent recurrence of hazardous events within the work area are put into place according to the organisation's procedure.

**6 Monitor the provision of OH&S training within the work area.**

- 6.1 OH&S training needs of group members within the work area are accurately identified.
- 6.2 Communicates identified OH&S training needs to relevant personnel.

## **7 Monitor the maintenance of OH&S records within the work area.**

- 7.1 OH&S records for the work area are accurately and legibly completed in accordance with workplace and legal requirements.

### **EVIDENCE GUIDE**

- Researches and/or explains the application of relevant OH&S legislation and codes of practice within the work area.
- Clearly explains application of relevant organisational OH&S policies, procedures and programs to members of the work area.
- Provides information about identified hazards and the outcomes of risk assessment and risk control procedures to members of the work group.
- Provides an opportunity for all members of the work group to contribute to OH&S issues.
- Explains organisation's procedures and policies in relation to OH&S consultation.
- Applies organisation's OH&S consultation procedures within the work area.
- Deals with OH&S issues within the work area according to organisations OH&S procedures.
- Communicates outcomes of work area OH&S issues.
- Explains identification of hazards.
- Explains methods of risk control.
- Conducts and reports hazard assessments within the work area.
- Implements and/or monitors risk control activities by members of the work area group.
- Monitors and reports resource allocation in relation to OH&S issues within the work area to designated personnel according to organisational procedure.
- Explains the organisation's procedure for dealing with a hazardous event.
- Explains the organisation's procedure for investigation and minimisation of associated risks after the occurrence of a hazardous event.
- Identifies OH&S training requirements of members of the group.
- Ensures OH&S training requirements of members of the group takes place.
- Keeps OH&S records compliant with organisational and legal requirements.



## **FPP0HS3B: Maintain and evaluate OH&S system.**

This competency standard replaces FPP0HS3A from the previously endorsed Pulp and Paper Manufacturing Industry Training Package.

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Maintain the framework for the OH&S system.**

- 1.1 Financial and human resources for the operation of the OH&S system are identified, sought and/or provided in a timely manner.
- 1.2 Information on the OH&S system and procedures is provided and explained in a form which is readily accessible to employees.

#### **2 Maintain participative arrangements for the management of OH&S issues.**

- 2.1 OH&S legislation and OH&S consultative procedures are monitored to ensure that all employees have the opportunity to contribute.
- 2.2 OH&S issues raised through participation and consultation are dealt with and resolved promptly and effectively in accordance with OH&S consultative procedures.
- 2.3 Information about the outcomes of participation and consultation is provided in a manner accessible to employees.

#### **3 Maintain and evaluate procedures for identifying hazards.**

- 3.1 The procedure for identifying existing and potential hazards utilising OH&S legislation, codes of practice, the organisation's OH&S procedure and trends identified from the OH&S records system is monitored and evaluated.
- 3.2 The need for revision to the procedure for identifying hazards is communicated to relevant personnel for consideration.

#### **4 Maintain and evaluate procedures for assessing risks.**

- 4.1 The outcomes and procedure for the assessment of risks, presented by identified hazards, are monitored and evaluated in accordance with OH&S legislation, codes of practice and the organisation's OH&S procedure.

- 4.2 The need for revision to the procedure for assessing risks is communicated to relevant personnel for consideration.

**5 Maintain and evaluate procedures for controlling risks.**

- 5.1 Risk control procedures are monitored and evaluated in accordance with relevant OH&S legislation, codes of practice, OH&S organisational procedure and trends identified from the OH&S records system.
- 5.2 The need for revision to the procedure for controlling risks is communicated to relevant personnel for consideration.
- 5.3 When measures which control a risk at its source are not immediately practicable, monitors interim solutions until a permanent control measure is developed.
- 5.4 Activities are monitored to ensure that the revised risk control procedure is adopted effectively.
- 5.5 Resources enabling implementation of revised risk control measures are provided.

**6 Maintain and evaluate organisational procedures for dealing with hazardous events.**

- 6.1 Workplace procedures for dealing with hazardous events are monitored and evaluated to ensure that prompt control action is taken.
- 6.2 The need for revision to the procedure for dealing with hazardous events is communicated to relevant personnel for consideration.

**7 Maintain and evaluate an OH&S training program.**

- 7.1 The timely provision of OH&S training is monitored and evaluated.
- 7.2 The content of the OH&S training program is monitored and evaluated to ensure it meets the outcomes.
- 7.3 The need for revision to the OH&S training program is communicated to relevant personnel for consideration.

**8 Maintain and evaluate the OH&S records system.**

- 8.1 The OH&S records system is monitored, evaluated and revised to allow identification of patterns of occupational injury and disease.

8.2 The need for revision to the OH&S records system is communicated to relevant personnel for consideration.

**EVIDENCE GUIDE**

- Explains applicable OH&S legislation and codes of practice within the work area.
- Identifies, seeks and/or provides financial and human resources for the operation of the OH&S system in a timely manner.
- Provides readily accessible and succinct information on the OH&S system to employees.
- Explains the organisation's OH&S consultative process.
- Monitors the application OH&S consultative procedures and employee participation.
- Deals and resolves OH&S issues raised through the consultative process.
- Clearly disseminates outcomes of OH&S issues raised through the consultative process
- Explains the organisation's procedure for identifying hazards.
- Monitors and evaluates, when appropriate, the procedure for identifying hazards.
- Communicates the need for a revised hazard identification procedure to the relevant personnel, if required.
- Explains the organisation's procedure for risk assessment.
- Monitors and evaluates, when appropriate, the procedure for risk assessment.
- Communicates the need for a revised risk assessment procedure to the relevant personnel, if required.
- Explains the organisation's procedure for controlling risks.
- Monitors and evaluates, when appropriate, the procedure for controlling risks.
- Communicates the need for a revised procedure for controlling risks to the relevant personnel, if required.
- Monitors the implementation of interim solutions to control a risk at its source when a permanent control measure is not immediately practicable.
- Explains the procedure for implementing and providing resources for a revised risk control measure.
- Provides resources to enable the implementation of revised risk control measures, if required.
- Explains the organisation's procedure for dealing with a hazardous event.
- Monitors and evaluates, when appropriate, the procedure for dealing with hazardous event.
- Communicates the need for a revised procedure for dealing with hazardous event to the relevant personnel, if required.

- Provides, OH&S training programs in a timely manner.
- Monitors and evaluates OH&S training programs.
- Explains the organisation's OH&S records system.
- Monitors and evaluates when appropriate, the OH&S records system.
- Communicates the need for modifications to the OH&S records system to the relevant personnel, if required.

## **FPPOHS4A: Establish OH&S system.**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Establish the framework for the occupational health and safety system in the area of responsibility.**

- 1.1 Occupational health and safety policies are developed which clearly express the organisation's commitment with respect to occupational health and safety within the area of managerial responsibility and how relevant occupational health and safety legislation will be implemented, consistent with overall organisational policies.
- 1.2 Occupational health and safety responsibilities and duties which will allow implementation and integration of the occupational health and safety system are clearly defined, allocated and included in job descriptions and duty statements for all relevant positions.
- 1.3 Financial and human resources for the operation of the occupational health and safety system are identified, sought and/or provided in a timely and consistent manner.
- 1.4 Information on the occupational health and safety system and procedures for the area of responsibility is provided and explained in a form which is readily accessible to employees.

#### **2 Establish participative arrangements for the management of occupational health and safety.**

- 2.1 Appropriate consultative processes are established in consultation with employees and their representatives in accordance with relevant occupational health and safety legislation and consistent with the organisation's overall process for consultation.
- 2.2 Information about the outcomes of participation and consultation is provided in a manner accessible to employees.

#### **3 Establish procedures for identifying hazards.**

- 3.1 A procedure for on-going identification of hazards is developed and integrated within systems of work and procedures.

- 3.2 Hazard identification is addressed at the planning, design and evaluation stages of any change in the workplace to ensure that new hazards are not created.

#### **4 Establish procedures for assessing risks.**

- 4.1 Risks presented by identified hazards are correctly assessed in accordance with occupational health and safety legislation and codes of practice.
- 4.2 A procedure for on-going assessment of risks is developed and integrated within systems of work and procedures.
- 4.3 Risk assessment is addressed at the planning, design and evaluation stages of any change within the area of managerial responsibility to ensure that the risk from hazards is not increased.

#### **5 Establish procedures for controlling risks.**

- 5.1 Measures to control assessed risks are developed in accordance with the hierarchy of control, relevant occupational health and safety legislation, codes of practice and trends identified from the occupational health and safety records system.
- 5.2 A procedure for on-going control of risks, based on the hierarchy of control, is developed and integrated within general systems of work and procedures.
- 5.3 Risk control is addressed at the planning, design and evaluation stages of any change within the area of managerial responsibility to ensure that adequate risk control measures are included.
- 5.4 Inadequacies in existing risk control measures are identified in accordance with the hierarchy of control, and resources enabling implementation of new measures are sought and/or provided according to appropriate procedures.

#### **6 Establish organisational procedures for dealing with hazardous events.**

- 6.1 Potential hazardous events are correctly identified.
- 6.2 Procedures which would control the risks associated with hazardous events and meet any legislative requirements as a minimum are developed in consultation with appropriate emergency services.

- 6.3 Appropriate information and training is provided to all employees to enable implementation of the correct procedures in all relevant circumstances.

**7 Establish an occupational health and safety training program.**

- 7.1 An occupational health and safety training program is developed to identify and fulfil employees' occupational health and safety training needs as part of the organisation's general training program.

**8 Establish a system for occupational health and safety records.**

- 8.1 A system for keeping occupational health and safety records is established to allow identification of patterns of occupational injury and disease within the area of managerial responsibility.

**EVIDENCE GUIDE**

- Demonstrates knowledge of all relevant occupational health and safety legislation and codes of practice and how they will be established within the area of responsibility.
- Explains the hierarchy of control (the preferred order of risk control measures from most to least preferred, that is, elimination, engineering controls, administrative controls and, lastly, personal protective equipment).
- Explains the significance of equal employment opportunity principles and practices for occupational health and safety.
- Demonstrates use of the enterprise's management systems and procedures for occupational health and safety.

## **Planning and Organising**

FPPPLN1A: Plan and undertake a routine task.

FPPPLN2A: Plan a complete activity.

FPPPLN3A: Plan a complex activity.



## RANGE STATEMENT

Information provided to assist planning includes:

- instructions
- standard operation sheets
- specifications
- quality requirements
- time allowances
- outcome requirements
- performance requirements

Plan may or may not be documented.

Planning may involve activities performed in accordance with established procedures but may require modification of procedures to deal with unforeseen developments.

Activity may require prioritising and sequencing of individual components.

Planning will be related to work tasks and environments which are familiar to individual undertaking planning activity.

Plans may be for:

- tasks involving one or more steps or functions
- a complete activity [*excludes FPPPLN1A*]
- a complex activity. [*excludes Units FPPPLN1A, FPPPLN2A*]

## **FPPPLN1A: Plan and Undertake a Routine Task**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Identify tasks requirements.**

- 1.1 Instructions on procedures are obtained, understood and clarified.
- 1.2 Task outcomes are identified.
- 1.3 Relevant specifications for task outcomes are obtained, understood and clarified.
- 1.4 Task requirements, including completion time and quality measures are identified.

#### **2 Plan steps required to complete task.**

- 2.1 Individual steps or activities required to undertake task are understood and where necessary, clarified.
- 2.2 Planned steps and outcomes are checked to ensure conformity with instructions and relevant specifications.
- 2.3 Required sequence of activities to be completed are identified in plan.

#### **3 Review plan.**

- 3.1 Outcomes are identified and compared with (planned) objectives, task instructions, specifications and task requirements.
- 3.2 Plan is revised, when necessary, to better meet objectives and task requirements.

### **EVIDENCE GUIDE**

- Explains how to go about planning the completion of a task.
- Develops a plan for a task from information provided, incorporating technical, quality and time requirements, which is capable of achieving appropriate results.
- Modifies plans as a result of outcomes achieved.

## **FPPPLN2A: Plan a Complete Activity**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Identify activity requirements.**

- 1.1 Instructions on objectives and performance requirements are obtained, understood and clarified where necessary.
- 1.2 Activity outcomes are identified.
- 1.3 Relevant specifications for activity outcomes are obtained, understood and clarified, where necessary.
- 1.4 Activity requirements, including overall timeframe for activity, quality requirements and criteria for acceptable completion are identified.
- 1.5 Individual components of activity are identified and prioritised, based on instructions as to objectives, performance requirements and specifications.

#### **2 Implement plan.**

- 2.1 Plan is organised in readiness for implementation.
- 2.2 Plan is implemented.
- 2.3 Component activities and requirements of plan are carried out in sequence.
- 2.4 Plan is taken to completion.

#### **3 Review and modify plan.**

- 3.1 Outcomes of plan are identified and compared with original objectives.
- 3.2 Opportunities for improvement, based on implementation experience are identified.
- 3.3 Identified improvement opportunities are incorporated into existing and future planning activities.
- 3.4 Report is prepared outlining completion of activities, any unforeseen difficulties and resolutions.

### **EVIDENCE GUIDE**

- Develops a plan for an activity from information provided, incorporating technical, quality and time requirements, which is capable of appropriate results.
- Modifies plans as a result of outcomes achieved.
- Priorities components of activities to achieve performance, quality and time requirements.

## **FPPPLN3A: Plan a Complex Activity**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Identify complex activity requirements.**

- 1.1 Information recording timeframe, quality requirements, personal time availability, own and other resources available are obtained and examined.
- 1.2 Resources required for complex activity completion are identified.
- 1.3 Time available for completion of complex activity is identified.

#### **2 Identify work method.**

- 2.1 Alternative work methods to meet complex activity objectives are identified.
- 2.2 Relative advantage and disadvantage of each work method is established.
- 2.3 Most appropriate work method is selected.

#### **3 Prepare complex activity plan.**

- 3.1 Appropriate sequences of tasks are determined.
- 3.2 Critical path for completion of complex activity within time and budget is determined.
- 3.3 Individual tasks required to apply work method and meet objectives are identified.
- 3.4 Complex activity plan is documented.

### **EVIDENCE GUIDE**

- Develops a plan for a complex activity from information provided, incorporating technical, quality and time requirements, which is capable of appropriate results.
- Modifies plans as a result of outcomes achieved.
- Prioritise components of complex activities to achieve performance, quality and time requirements.

## **Preventative Maintenance**

FPPPRM1B: Undertake preventative maintenance.

## **RANGE STATEMENT**

### **Indicative functions may include:**

- inspection
- visual
- mechanical checks

### **Containment of**

- potential hazards
- spillage
- leaks

### **Servicing**

- lubrication pressure checks
- refilling
- removal/replacing
- isolation
- SOP

### **Legislation, policy and procedures:**

- OH&S policies and procedures and other statutory requirements including safe work practices and isolation procedures
- Enterprise Standard Operating Procedures
- Relevant operator licences and endorsements

### **Maintenance:**

- As per site agreement
- Maintenance systems
- Maintenance schedules

### **Resources may include:**

- Personal protective equipment and clothing
- SOP
- Compressed air
- Hand/power tools

- Machine systems

**Documentation/procedures/reports:**

- Logsheets
- Maintenance reports
- Non-conformance reports

**Communication channels**

- Team members
- Maintenance services
- Management/process co-ordinator
- Internal/external customers/suppliers

## **FPPPRM1B: Undertake Preventative Maintenance**

This competency standard replaces FPPPRM1A from the previously endorsed Pulp and Paper Manufacturing Industry Training Package.

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Carry out preventative maintenance inspections of plant & equipment**

- 1.1 Preventative maintenance inspection routines are followed
- 1.2 Faulty plant & equipment are identified
- 1.3 Action is taken to address plant & equipment faults
- 1.4 Faulty plant & equipment are reported according to SOP

#### **2 Carry out preventative maintenance of plant & equipment**

- 2.1 Preventative maintenance routines are maintained.
- 2.2 Preventative maintenance process is followed according to SOP
- 2.3 Diagrams, such as process and instrumentation diagrams, are interpreted and related equipment located.
- 2.4 Isolation procedures are followed according to site policy.
- 2.5 Appropriate tools and equipment for maintenance are selected and used correctly.
- 2.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **EVIDENCE GUIDE**

- Explains the consequences of inadequate preventative maintenance.
- Identifies & explains locations/items of potential hazards and procedures to overcome them.
- Follows maintenance inspection routines.
- Explains the use of appropriate personal senses (sight, hearing, touch) to identify plant & equipment requiring preventative maintenance
- Applies appropriate personal senses (sight, hearing, touch) to identify plant & equipment requiring preventative maintenance
- Explains to use instrumentation data as an indication of plant & equipment requiring preventative maintenance



- Interprets instrumentation data as an indication of plant & equipment requiring preventative maintenance
- Communicates preventative maintenance with team and related service personnel.
- Reports faulty plant & equipment according to SOP
- Identifies & investigates reasons for faulty equipment.
- Applies isolation procedure, when required, according to site policy.
- Applies methods to contain potential hazards, spillages and leaks.
- Selects appropriate hand and/or powertools according to task requirements.
- Checks tools before use and unsafe or faulty items identified & marked for repair according to SOP.
- Completes minor maintenance tasks in accordance with SOP.
- Makes appropriate adjustments as required to meet changing conditions.
- Removes isolations according to site policy
- Maintains a clean and hazard free work area.

## **Problem Solving**

FPPPRS1A: Solve problems in the workplace (basic).

FPPPRS2A: Solve problems in the workplace (advanced).

FPPPRS3A: Troubleshoot and rectify pulp and paper systems.

## **RANGE STATEMENT**

The competencies described in the problem solving units are applicable areas the functions and groups of functions in a paper mill.

### **Complexity of problems solved:**

- may require consultation with other departments/outside clients
- problem may be affected by number and availability of resources
- problem may involve non-routine system of work [*excludes FPPPRSIA*]
- problem offered by a broad set of factors [*excludes FPPPRSIA*]

### **Options/solutions may involved:**

- compromise
- timeframe determined by individual
- solution is determined by taking into account all variables that affect it, including resources and budget
- assisting others
- designated officer
- other departments
- peers and subordinates

### **Materials/Supplies:**

- As required for the function(s) in which the problem solving is being applied.

### **Equipment:**

- As required for the function(s) in which the problem solving is being applied:

### **Legislation, policy and procedures:**

- OH&S policies and procedures
- hazardous chemical handling
- air and gas discharges
- relevant endorsed licences
- environmental legislation/requirements
- Standard Operating Procedures (SOP)
- quality assurance requirements

- safety instructions

**Documentation/procedures/reports:**

- work instructions/purchase orders
- log sheets and shift reports
- work orders
- exception documents
- deliver/distribution documentation
- tally/production records
- Standard Operating Procedures (SOP)
- incident reports
- materials Safety Data Sheets (MSDS)
- process and instructions diagrams

**Sampling/Testing:**

- As required for the function(s) in which the problem solving is being applied.

**Technology:**

- computer data entry, retrieval and interpretations
- analog control systems

**Communication:**

- Internal/external customers and suppliers
- team member
- maintenance services
- production/service co-coordinator

## **FPPPRS1A: Solve Problems in the Workplace (Basic)**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Identify problems.**

- 1.1 Problems are identified.
- 1.2 Nature of problem is clarified.
- 1.3 Information and evidence of problem is gathered.

#### **2 Plan action to solve problem.**

- 2.1 Goals are set for dealing with problem.
- 2.2 Timeframe available for solving problem is identified.
- 2.3 Possible solutions are identified.
- 2.4 Optimal solution is chosen.

#### **3 Implement and follow-up solution.**

- 3.1 Chosen solution is implemented within timeframe.
- 3.2 Criteria are established to determine if chosen solution resolves problem.
- 3.3 Chosen solution is evaluated against determined criteria and by checking with work group or designated officer, if applicable.
- 3.4 Follow-up procedures are implemented.
- 3.5 Follow-up contingency arrangements are implemented in consultation with work group and designated officer.

### **EVIDENCE GUIDE**

- Devises and implements logical and efficient plans to solve problems.
- Evaluates action against determined criteria.
- Modifies and communicates plans in response to new circumstances.
- Assists others to solve problems, and plans and implement chosen solutions.

## **FPPPRS2A: Solve Problems in the Workplace (Advanced)**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Identify problems.**

- 1.1 Potential problems, relevant to workplace, are identified.
- 1.2 Checks of workplace environment and equipment are regularly made.
- 1.3 Signs of routine problem(s) are identified.
- 1.4 Non-routine problems are identified.
- 1.5 Nature of problem is clarified.
- 1.6 Information and evidence of problem is gathered.
- 1.7 Relevant and irrelevant components of problem are identified.

#### **2 Plan action to solve problems.**

- 2.1 Achievable goals are set for dealing with problem.
- 2.2 Timeframe available for solving problem is identified.
- 2.3 Daily duties are organised in accordance with plan to solve problems.
- 2.4 Time is managed appropriately.
- 2.5 Access to relevant information is maintained.

#### **3 Assist others to identify and resolve problems in the workplace.**

- 3.1 Other workers are assisted in anticipating or identifying signs of a problem.
- 3.2 Other workers are assisted in devising alternative options and/or strategies.
- 3.3 Other workers are assisted in implementing chosen solution.

#### **4 Implement and evaluate solutions.**

- 4.1 Possible solutions are identified.
- 4.2 Most feasible and efficient solution is chosen.
- 4.3 Chosen solution is implemented within timeframe.

- 4.4 Criteria are established to determine if chosen solution resolves problem.
- 4.5 Chosen solution is evaluated against determined criteria and by checking with work group or designated officer, if applicable.
- 4.6 Follow-up procedures are implemented.
- 4.7 Follow-up contingency arrangements are implemented in consultation with work group and designated officer.

### **EVIDENCE GUIDE**

- Devises and implements logical and efficient plans to solve complex problems.
- Evaluates action against determined criteria.
- Modifies and communicates plans in response to new circumstances.
- Assists others to solve problems, and plans and implements chosen solutions.
- Identifies the problem and the appropriate problem solving technique for the problem.

# **FPPPRS3A: Troubleshoot and Rectify Pulp and Paper Systems**

## **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

### **1 Identify and diagnose causes of faults.**

- 1.1 Alarms are interpreted to determine fault type and location.
- 1.2 Sampling and testing results are interpreted to identify variations from specifications/schedule.
- 1.3 Cause and source of problem is identified and located using appropriate diagnostic procedures.
- 1.4 Relevant sources of data are accessed/referred to, to assist diagnosis.
- 1.5 Work is completed within OH&S, Standard Operating Procedures, environmental and safe working requirements and practices.

### **2 Rectify plant and equipment faults.**

- 2.1 Emergency stop/shut down, isolation and lockout procedures are in place prior to fault rectification.
- 2.2 Faulty equipment/instrumentation is isolated, repaired or replaced.
- 2.3 Running adjustments and routine maintenance requirements are carried out.
- 2.4 Plant and equipment are returned to normal operation.
- 2.5 Verification is communicated to relevant personnel in compliance with relevant site agreements and work practices.
- 2.6 Work is completed within OH&S, SOP, environmental and safe working requirements and practices.

### **3 Rectify product quality faults.**

- 3.1 Quality faults/variations are identified by observation, systematic sampling and testing.
- 3.2 Samples for a range of tests are taken according to SOP.
- 3.3 Test results are interpreted and operations adjusted to correct faults.
- 3.4 Faults/causes are rectified if appropriate, or recommendations made for further action.



- 3.5 Out-of-specification product is managed in accordance with SOP.
- 3.6 Tests and test procedures comply with OH&S and environmental requirements, and safe work practices.

#### **4 Report and record system performance and product quality data.**

- 4.1 Variations from specification of product production and plant and equipment faults are documented/logged.
- 4.2 Signs and symptoms of performance variation are entered into log.
- 4.3 Assessment and evaluation of causes of deviation, and corrective action undertaken is recorded as required.
- 4.4 Relevant information is communicated to appropriate personnel.

#### **EVIDENCE GUIDE**

- Identifies sources of operational data.
- Interprets relevant verbal and written information.
- Explains relevant systems, processes and functions.
- Identifies and implements in-process test requirements.
- Describes cause and effects of test results and actions.
- Explains impact of inappropriate responses.
- Explains product grade and process adjustment procedures.
- Describes causes and effects of system faults and rectification requirements.
- Identifies and implements operational procedures.
- Explains use and handling requirements of chemicals used; their purpose, effects, hazards and SOP.
- Uses technology to assist work performance.
- Communicates effectively with relevant personnel.
- Demonstrates that emergencies/crash shutdowns are dealt with in accordance with SOP.
- Demonstrates that Isolations and lockouts are conducted according to SOP.
- Demonstrates that relevant tests are conducted in accordance with SOP.
- Demonstrates that available data and test results are consistently interpreted and appropriate actions are selected and initiated.

- Demonstrates that grade specification/quality is consistently maintained or appropriate action taken.
- Works within OH&S, SOP, environmental and safe working requirements and practices.

## Quality Assurance

FPPQAS1B: Apply basic quality assurance practices

FPPQAS2A: Maintain quality in work section/sub-system

FPPQAS3A: Co-ordinate quality assurance process

FPPQAS4A: Oversee quality assurance process

## **RANGE STATEMENT**

- Work will be undertaken within company quality assurance policy, practices and procedures.
- Company instructions will be provided for sampling and in-process inspection and testing activities.
- The person will be aware of the potential environmental impact of out-of-standard performance to their customers.
- Monitoring and reporting will typically involve the use and presentation of verbal and written information; the latter in standard format.
- Recording may be by manual and/or electronic methods in standard format.
- Work is carried out within legislation, policies and procedures:
  - Occupational Health & Safety
  - environmental requirements
  - enterprise policies and procedures
  - legislation (state and commonwealth)
  - Standard Operating Procedures (SOP)
  - ISO9000

## **FPPQAS1B: Apply Basic Quality Assurance Practices**

This competency standard replaces FPPQAS1A from the previously endorsed Pulp and Paper Manufacturing Industry Training Package.

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Identify critical control points at work station.**

- 1.1 Critical control points that affect product quality at person's work station are identified.
- 1.2 Critical control points at person's work station are prioritised for checking and maintaining quality.

#### **2 Monitor critical control points at work station.**

- 2.1 Production information, in relation to person's work station, based on inspections, set point values and/or testing is interpreted to maintain specified product quality.
- 2.2 The need for corrective action is prioritised.

#### **3 Conduct corrective action at work station.**

- 3.1 Adjustments are made according to SOP.
- 3.2 Out-of-standard performance is identified and reported within the organisation's communication system.
- 3.3 Routine inspections, process variable values and/or test information is recorded accurately in the reporting system according SOP.
- 3.4 Non-conforming product is treated according to SOP.
- 3.5 Faulty equipment is identified and reported according to SOP.

### **EVIDENCE GUIDE**

- Identifies critical control points for a specific task/activity.
- Prioritises work station's critical control points for checking and maintaining quality
- Outlines the relationship between the individual and his/her work station in the quality assurance program.
- Explains the regulatory requirements relevant to the person's work area.
- Explains the purpose of inspections, set point values and/or testing that is conducted at the person's work station in order to maintain specified product quality

- Monitors & interprets information in relation to critical control point at the person's work station
- Outlines the limits of acceptance for each inspection, set point value and/or test.
- Identifies out-of-standard performance and/or product
- Prioritises the need for corrective action based on potential risk or loss or damage if the required actions are not performed
- Explains the steps taken in undertaking corrective actions
- Makes adjustments to processes at the person's work station in order to maintain specified product quality
- Identifies treats out-of-standard product according to SOP
- Records inspections, process variable values and/or test information in the reporting/recording system

## FPPQAS2A: Maintain Quality in Section / Sub-System

### ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA

#### 1 Identify and monitor critical control points in section/sub-system.

- 1.1 Critical control points in the section/sub-system are identified to determine priorities for checking and maintaining quality.
- 1.2 Performance is monitored at each critical control point in the section/sub-system to assure product quality and to identify need for corrective action.

#### 2 Monitor performance quality.

- 2.1 Monitor performance to assure compliance with quality specifications.
- 2.2 Process control checks are used to record process data and to monitor performance.
- 2.3 Out-of-standard performance in the section/sub-system is promptly identified, and rectified and/or reported to minimise loss and downtime.
- 2.4 Non-conforming product is treated according to SOP.

### EVIDENCE GUIDE

- Identifies the critical control points in section/sub-system in which person is working.
- Explains the tests and actions at each of these points.
- Outlines the roles/relationships of people in the designated work area in the quality assurance plan.
- Outlines the inspection/test procedures.
- Identifies the quality limits for each control point.
- Performs in-process checks/tests.
- Explains the purpose of the process control charts.
- Identifies the control charts used in the section/sub-system.
- Describes actual/potential problems if control charts are not completed to requirements.
- Interprets control chart data to establish whether intervention is required to correct actual/emerging problems.
- Identifies out-of-standard performance.

- Explains the roles/responsibilities of designated people who attend to out-of-standard performance.
- Describes probable reasons for out-of-standard performance.
- Outlines action(s) to rectify out-of-standard performance.
- Reports inspection/test information.



## FPPQAS3A: Co-ordinate In-Process Quality Assurance

### ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA

#### 1 Identify and monitor critical control points in-process system.

- 1.1 Critical control points in the process system are identified to determine priorities for checking and maintaining quality.
- 1.2 Performance is monitored at each critical control point in the process system to assure quality and to identify need for corrective action.

#### 2 Monitor performance in the process system.

- 2.1 Product and process is monitored within the in-process quality assurance system and adjusted to achieve performance within standards.
- 2.2 Relevant performance criteria is communicated to enable the required action to be taken.
- 2.3 Product is inspected and action taken in accordance with SOP.

### EVIDENCE GUIDE

- Identifies the critical control points in the process system.
- Explains the contents of inspection/test schedules.
- Outlines the implication of inadequate attention to monitoring process and product quality.
- Explains the regulatory requirements related to product and process quality assurance.
- Explains the importance of maintaining equipment and instrument calibration.
- Identifies product and process trends from in-process inspections/test results.
- Explains action to be taken when actual/emerging performance is outside specification limits.
- Defines the quality assurance problem which needs to be addressed.
- Identifies options to rectify problems.
- Implements appropriate action to rectify problems.
- Explains roles, responsibilities and steps necessary to isolate and quarantine suspect product.

## **FPPQAS4A: Oversee Quality Assurance Process**

### **ELEMENTS OF COMPETENCY AND PERFORMANCE CRITERIA**

#### **1 Monitor inspection and test records.**

- 1.1 Inspection and test records are monitored to verify product quality and to identify performance trends.
- 1.2 Status reports contain a description of proposals to introduce improved processes/procedures.

#### **2 Review product samples.**

- 2.1 Product samples are reviewed to ensure inspection/test data accurately reflects output.
- 2.2 Post collection procedures are implemented according to standard operating procedures.

#### **3 Implement process changes.**

- 3.1 Process changes are introduced and controlled so that quality assurance requirements are accomplished.

#### **4 Create and/or update operating instructions.**

- 4.1 Operating instructions are written so that they comprehensively document the details required for competent performance.
- 4.2 Operating instructions are validated under operating conditions to verify their suitability.

### **EVIDENCE GUIDE**

- Assembles in-process inspection/test and other quality data in prescribed format.
- Interprets results of in-process inspections/tests.
- Identifies trends of in-process inspection/test results.
- Explains actual/potential problems evident from trend analysis.
- Explains appropriate course(s) of action to rectify problems.
- Prepares process and product status report recommending changes to improve processes/procedures.
- Explains purpose of review process.
- Records sample review results in prescribed format.

- Identifies risks associated with samples and how they may be minimised.
- Explains post collection and procedure for handling samples.
- Explains the importance of change control.
- Implements a change in the process.
- Identifies the actual/potential risks associated with uncontrolled changes in procedures.
- Explains the document controls associated with a procedure change.
- Explains the purpose of Standard Operating Procedures (SOP).
- Explains the actual/potential problems if SOP or their equivalent are non existent.
- Creates and/or updates SOP or their equivalent.
- Verifies the documentation.

## Imported Units of Competency (Titles Only)

Note: Complete versions of imported units can be sourced from the parent training package at [www.ntis.gov.au](http://www.ntis.gov.au)

Code	Name
<b>BSB07 Business Services Training Package</b>	
BSBADM101A	Use business equipment and resources
BSBCMN311B	Maintain workplace safety
BSBCUS301A	Deliver and monitor a service to customers
BSBCUS401A	Coordinate implementation of customer service strategies
BSBCUS501A	Manage quality customer service
BSBFLM303C	Contribute to effective workplace relationships
BSBFLM305C	Support operational plan
BSBFLM306C	Provide workplace information and resourcing plans
BSBFLM309C	Support continuous improvement systems and processes
BSBFLM311C	Support a workplace learning environment
BSBFLM312B	Contribute to team effectiveness
BSBINM401A	Implement workplace information system
BSBINM501A	Manage an information or knowledge management system
BSBINN301A	Promote innovation in a team environment
BSBINN502A	Build and sustain an innovative work environment
BSBLED401A	Develop teams and individuals
BSBLED501A	Develop a workplace learning environment
BSBMGT402A	Implement operational plan
BSBMGT403A	Implement continuous improvement
BSBMGT502B	Manage people performance
BSBMGT515A	Manage operational plan
BSBMGT516A	Facilitate continuous improvement
BSBOHS407A	Monitor a safe workplace
BSBOHS509A	Ensure a safe workplace

<b>Code</b>	<b>Name</b>
BSBWOR202A	Organise and complete daily work activities
BSBWOR301A	Organise personal work priorities and development
BSBWOR401A	Establish effective workplace relationships
BSBWOR402A	Promote team effectiveness
BSBWOR501A	Manage personal work priorities and professional development
BSBWOR502A	Ensure team effectiveness
<b>TAA04 Training and Assessment Training Package</b>	
TAAASS401C	Plan and organise assessment
TAAASS402C	Assess competence
TAAASS403B	Develop assessment tools
TAAASS404B	Participate in assessment validation
TAACMQ501B	Develop training and/or assessment organisational policies and procedures
TAACMQ503B	Lead and conduct training and/or assessment evaluations
TAADEL301C	Provide training through instruction and demonstration of work skills
TAADEL401B	Plan and organise group-based delivery
TAADEL402B	Facilitate group-based learning
TAADES402B	Design and develop learning programs
TAADES501B	Design and develop learning strategies
TAATAS501B	Undertake organisational training needs analysis
<b>MEM05 Metal and Engineering Training Package</b>	
MEM18004B	Maintain and overhaul mechanical equipment
MEM18010C	Perform equipment condition monitoring and recording
MEM18011C	Shut down and isolate machines/equipment
MEM18012B	Perform installation and removal of mechanical seals
MEM18013B	Perform gland packing
MEM18018C	Maintain pneumatic system components
MEM18020B	Maintain hydraulic system components
MEM18045B	Fault find/repair electrical equipment/components up to 250 volts single phase supply

<b>Code</b>	<b>Name</b>
MEM18055B	Dismantle repair and assemble engineering components
<b>PML04 Laboratory Operations Training Package</b>	
PMLSAMP400B	Obtain representative samples in accordance with sampling plan
PMLTEST300B	Perform basic tests
PMLTEST303B	Prepare working solutions
<b>CPP07 Property Services Training Package</b>	
CPPSEC2015A	Patrol premises
CPPSEC2011A	Control access to and exit from premises
CPPSEC3007A	Maintain security of environment
<b>TLI07 Transport &amp; Logistics Training Package</b>	
TLIA1207C	Pick and process orders
TLIA1607C	Use inventory systems to organise stock control
TLIA2107C	Despatch stock
TLIA2207C	Participate in stocktakes
TLIL1907C	Implement and monitor transport logistics
<b>NWP07 Water Training Package</b>	
NWP213B	Monitor and operate irrigation and domestic delivery systems
NWP232B	Operate water reticulation and distribution system
NWP233B	Construct and install distribution assets
NWP234B	Locate, identify and protect utility services
NWP250B	Construct and install wastewater pipelines
NWP251B	Construct open earthen channels or drains
NWP252B	Construct and install irrigation delivery and stormwater drainage assets
NWP335B	Monitor and control maintenance of wastewater collection and transfer assets
NWP311B	Monitor and operate wastewater collection and transfer systems
NWP338B	Perform odour and infiltration investigations
NWP333B	Monitor and control rural water distribution operations