



**Australian Government**

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

# **FDFGR4003A Manage mill logistics and support services**

**Release 1**

## **FDFGR4003A Manage mill logistics and support services**

### **Modification History**

Not applicable.

### **Unit Descriptor**

This Unit covers the management of support and logistics services to ensure safe and efficient operation of a flour mill. The Unit covers establishing and supervising the handling, storage, despatch and distribution of materials including grain, flour and byproducts. It also covers supervision of hygiene, OHS, pest control and security procedures.

### **Application of the Unit**

This Unit applies to a flour mill manager and other senior staff who are responsible for determining and supervising logistics and support services for a flour mill to ensure efficient operation of the mill and compliance with regulatory and commercial requirements. The Unit applies to industrial milling of all types of grain. Logistics and services covered by the Unit include stock control, transport and storage, blending, packing and despatch, security, and pest control. Supervision of dust control procedures is also covered in the Unit.

### **Licensing/Regulatory Information**

Not applicable.

### **Pre-Requisites**

Nil.

### **Employability Skills Information**

This Unit contains employability skills.

### **Elements and Performance Criteria Pre-Content**

Elements describe the essential outcomes of a Unit of Competency.

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

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Review mill plan and flow diagram to ensure all logistics and support services are correctly identified	1.1 Ensure incorporation of grain and other materials receiving locations. 1.2 Ensure incorporation of all grain, flour and by-product storage facilities. 1.3 Review mill flow diagram for inclusion of all break and reduction system equipment and intermediate storage facilities. 1.4 Ensure incorporation of all administration, maintenance, utilities and storage areas. 1.5 Identify directly milled and blended flour products in product flow diagrams and relate to storage and despatch facilities.
2. Support product flow through mill	2.1 Review facilities and set operating procedures for grain receipt. 2.2 Ensure operators have required training and test materials for testing grain. 2.3 Ensure storage availability for received grain including any divisions. 2.4 Determine intermediate storage requirements based on forward production schedule. 2.5 Establish product handling, storage and despatch procedures for just-in-time customers. 2.6 Establish product handling, storage and despatch procedures for daily, weekly or other regular deliveries. 2.7 Identify any non-standard storage and despatch requirements. 2.8 Establish and supervise inspection and cleaning regime for bins and silos. 2.9 Establish and supervise temperature and moisture testing for storage bins and silos.
3. Establish mill stock control system	3.1 Integrate warehouse control and information requirements with mill management and control system. 3.2 Ensure customer orders are passed as soon as possible after receipt to production, storage, and transport departments. 3.3 Establish bin stock measuring frequency and method. 3.4 Set and monitor weighbridge operation and recording procedures for all bulk inward and outward grain and mill products. 3.5 Identify locations for automatic and manual recording of internal product transfers. 3.6 Establish authorisation and access procedures for use of additives and adjuncts.
4. Supervise blending of	4.1 Supervise internal transfer of flour to holding bins.

- flours to meet orders
- 4.2 Determine if volumetric, on-line or batch blending is to be used.
  - 4.3 Determine formula for required blend including any required additives and adjuncts.
  - 4.4 Specify flours to be used to most economically achieve required formula.
  - 4.5 Supervise blending operation including data entry into batch or process control computer.
  - 4.6 Supervise transfer of blended flour to packing, despatch or storage.

5. Supervise product despatch
  - 5.1 Set and monitor "give away" margin above minimum weight in packed flour.
  - 5.2 Supervise operation of bag and sack packing, closing equipment.
  - 5.3 Determine where required if enterprise or contract vehicles are to be used.
  - 5.4 Supervise bag, sack and bulk flour despatch as appropriate.
  - 5.5 Supervise packing and despatch of by-products including palletisation of wheatfeed where required.
6. Manage OHS, mill safety, security and regulatory procedures for mill or area of responsibility
  - 6.1 Establish or review perimeter security.
  - 6.2 Establish site access control point for all vehicle and pedestrian traffic.
  - 6.3 Review adequacy of truck holding and turnaround facilities.
  - 6.4 Establish or review site OHS plan and procedures.
  - 6.5 Ensure personal protective equipment (PPE), pedestrian walkways, and other pedestrian safety procedures are known and followed.
  - 6.6 Review fire protection plan and fire protection facilities including location and type of extinguishers, suppression systems and alarms.
  - 6.7 Review visitor reception, registration and escort protocols for visitor access to non-administration areas.
  - 6.8 Establish compliance procedures for environmental, food safety and other regulatory requirements.
7. Review mill dust control procedures
  - 7.1 Review equipment and storage cleaning schedule and procedures for dust control effectiveness.
  - 7.2 Arrange regular inspections for potential ignition sources.
  - 7.3 Review current dust control and dust explosion relief equipment and arrange for any required maintenance or additional dust control/dust explosion relief equipment.
  - 7.4 Establish training in dust control procedures for all employees and contractors.
8. Manage pest control procedures
  - 8.1 Review site pest control plan.
  - 8.2 Ensure all employees are trained to identify signs of insect, rodent and bird infestation.
  - 8.3 Establish inspection, sampling and testing regime for all equipment, storage areas and all inward and outward goods.
  - 8.4 Determine cause and type of infestations.
  - 8.5 Specify appropriate control measures for insect.
  - 8.6 Supervise protection of employees, community and product during treatments.
  - 8.7 Ensure compliance with regulations and environmental guidelines.
  - 8.8 Establish pest reporting and treatment recording procedures.
9. Manage contractors for mill or area of
  - 9.1 Establish schedule of contractors and their capabilities for services not performed in-house.

responsibility

9.2 Establish procedures and delegations for engaging contractors.

9.3 Establish site access register for contractors.

9.4 Ensure contractors are briefed on all mill regulatory and commercial requirements.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- interpret drawings and schematics
- calculate grain holding capacity including in terms of days of production
- specify grain divisions on receipt to suit later blending requirements
- schedule flour blending to suit customer requirements and transport logistics
- identify pests
- assess equipment and storage areas for dust control risks.

### Required knowledge includes:

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#### Knowledge of:

- methods of storing grain, flour, bran and byproducts
- temperature and moisture testing techniques for grain storage bins and silos
- dust control techniques
- dust explosion relief systems and equipment
- fire warning and control techniques
- flour blending techniques and equipment
- flour milling process including purpose of the break and reduction systems
- advantages and disadvantages of volumetric, batch and on-line flour blending techniques
- equipment used in flour blending including:
  - weighers
  - mixers and homogenisers
  - pneumatic and mechanical feeders and conveyors
  - magnets, sifters and exhausts
- identification characteristics for pest insects, rodents and birds
- signs of insect and rodent infestation
- strategies to eliminate or reduce pests
- optimum treatments for insect, rodent and bird infestations
- safe procedures for handling, using and storing pesticides and dangerous goods, identifying identification of information provided on labels, and where required, handling of gas cylinders
- typical risk management and contingency planning techniques for a flour mill.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this Unit must be achieved in accordance with food safety standards and regulations.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this Unit</p>	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• relate rate of production to storage capacity</li> <li>• identify requirements of mill customers and determine if orders are to be directly filled or met out of storage</li> <li>• interpret customer flour requirements and determine best blend recipe</li> <li>• manage pest and dust control techniques in a mill</li> <li>• access and use mill control system.</li> </ul>
<p>Context of and specific resources for assessment</p>	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment</li> <li>• work procedures, including advice on safe work practices, food safety, quality and environmental requirements</li> <li>• equipment manuals including operating parameters</li> <li>• specifications, control points and processing parameters</li> <li>• break and reduction roll process and related equipment and services</li> <li>• conditioned grain suitable for the break and reduction roll process</li> <li>• sampling schedules and test procedures and equipment as required</li> <li>• documentation and recording requirements and procedures</li> <li>• cleaning procedures, materials and equipment as required.</li> </ul>
<p>Method of assessment</p>	<p>This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.</p>



Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.
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## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Mill</p>	<p>The term mill is used to refer to the whole mill site including the actual milling equipment, equipment used for associated processes, and transport, warehouse, maintenance, testing and administration facilities.</p>
<p>Mill management and control system</p>	<p>Most flour mills will use a software program and associated hardware to control and manage all or part of a mill. These mill management and control systems can be known by a variety of generic and proprietary names including:</p> <ul style="list-style-type: none"> <li>• Systems Control and Data Acquisition (SCADA) software</li> <li>• Enterprise Resource Planning (ERP) systems</li> <li>• Materials Resource Planning (MRP) systems</li> <li>• various proprietary names.</li> </ul>
<p>Non-standard storage and despatch requirements</p>	<p>Non-standard storage and despatch requirements include:</p> <ul style="list-style-type: none"> <li>• storage location and time for any products that need ageing before despatch</li> <li>• buffer product requirements for market fluctuations, irregular orders, shutdowns and other non-production periods</li> <li>• contingency product storage requirements.</li> </ul>
<p>Site OHS plan and procedures include:</p>	<ul style="list-style-type: none"> <li>• employee training</li> <li>• tagging and lock-out procedures</li> <li>• PPE distribution and use requirements</li> <li>• marking of pedestrian walkways</li> <li>• confined space procedures</li> <li>• visitor registration and allowed/restricted access areas</li> <li>• incident procedures</li> <li>• evacuation assembly areas</li> <li>• first-aid facilities</li> <li>• notification protocols to emergency services</li> </ul>

	<ul style="list-style-type: none"> <li>• training and registration of fire and first aid wardens.</li> </ul>
Pest control methods may include:	<ul style="list-style-type: none"> <li>• fumigation</li> <li>• application of insecticides, dusts, gas and/or baits (using registered controlled and generally available substances).</li> </ul> <p>Where use of pesticides include work conditions covered by SafeWork Australia and/or State and Territory health and safety authorities, the assessment criteria and methods prescribed by these authorities must also be met.</p>
Fire protection plan and fire protection facilities include:	<ul style="list-style-type: none"> <li>• location and type of extinguishers</li> <li>• suppression systems</li> <li>• alarms</li> <li>• appointment of wardens</li> <li>• evacuation areas and procedures</li> <li>• notification and liaison procedures for emergency services.</li> </ul>
Contractors	<p>Contractors used will vary according to each mill and may include contractors for:</p> <ul style="list-style-type: none"> <li>• maintenance</li> <li>• transport</li> <li>• testing and accreditation services</li> <li>• labour supply</li> <li>• security.</li> </ul>

## Unit Sector(s)

Grain Processing