



Australian Government

FBPGRA4004 Establish and supervise dust control procedures in a grain processing enterprise

Release: 1

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Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package version 1.0.

Application

This unit of competency describes the skills and knowledge required to establish and supervise dust control procedures in a grain milling enterprise. It includes procedures for the identification of risk factors, establishment of preventative and hygiene measures, use of explosion relief and fire suppression systems, and arranging training for employees.

The unit applies to individuals who manage and supervise in grain-related enterprises, including flour and stockfeed mills and grain storage facilities who have responsibility for the development and detailed implementation of dust control and dust explosion prevention strategies.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Grain processing (GRA)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Monitor dust explosion risk factors	1.1 Establish and monitor procedures for detecting potential explosive atmosphere 1.2 Set procedures for reporting visible dust leaks

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Confirm and enforce no smoking policy 1.4 Establish and monitor reporting regime for potential ignition sources 1.5 Establish and supervise manual and automatic temperature, smoke and moisture monitoring for all grain, flour, feed and other by-product storage 1.6 Establish and confirm regulation of systems to minimise fungal and insect infestation caused by temperature increases
2. Establish dust control procedures	2.1 Install and monitor dust aspiration or suction ventilation systems according to systems' specifications 2.2 Establish dust-checking procedures for all confined spaces 2.3 Establish monitoring procedures for dust collector performance and output 2.4 Establish procedures for resealing all dust leaks 2.5 Undertake random and periodical checks on performance of dust control procedures 2.6 Assess and approve any variation in cleaning and hygiene procedures 2.7 Minimise storage of combustible materials in mill 2.8 Establish minimum dust levels required for mandatory use of personal protective equipment 2.9 Establish procedures for monitoring and control of environmental dust release
3. Integrate equipment use, monitoring and maintenance with dust control procedures	3.1 Develop regular cleaning schedule for all surfaces in contact with graining or flour according to workplace requirements 3.2 Establish and confirm mill equipment condition monitoring schedule with maintenance department 3.3 Establish regular lubrication schedules for bearings, pulleys, shafts and other moving and friction surfaces 3.4 Promote use of anti-static materials where possible 3.5 Establish approval, tagging and monitoring procedures for use of all portable tools and equipment in mill
4. Establish fire and dust explosion suppression	4.1 Review adequacy of current dust control and dust explosion relief equipment and arrange for any required maintenance

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
systems	4.2 Arrange for any required additional dust control/dust explosion relief equipment in existing protected areas 4.3 Investigate potential for use of fire and explosion suppression systems in areas not currently protected 4.4 Locate and establish inspection regime for all explosion relief panels 4.5 Set test and maintenance procedures for all existing fire and explosion suppression systems
5. Supervise dust and fire control training	5.1 Identify fire and dust wardens for mill areas 5.2 Establish emergency procedures according to site and workplace safety requirements 5.3 Identify dust and fire control content for use in induction training 5.4 Identify training needs of existing employees 5.5 Establish dust and fire control training arrangements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	- Interpret automatic and manual monitoring techniques for dust control against enterprise needs - Interpret manuals, diagrams, drawings and other technical information
Writing	- Schedule housekeeping, training, and maintenance procedures to achieve objectives while minimising impact on production - Establish training records - Compile reports to disseminate information about equipment and milling performance to a range of audiences
Numeracy	Set an allocation for dust and fire control training in the training budget
Navigate the world of	Monitor adherence to legal and regulatory standards and responsibilities for self and others

Skill	Description
work	Consider own role in terms of contribution to broader goals of the work environment, and adapt and renegotiate role and responsibilities when this has the potential to increase effectiveness
Interact with others	- Appoint internal trainers and external training providers - Use appropriate language and communication skills to facilitate discussions - Clarify the purpose and possible actions to be taken as a result of work-related communications
Get the work done	- Analyse areas and equipment in grain enterprises for dust and fire risk - Identify current innovative practice and organisational trends - Use a computer, keyboard and software to collect and file research data - Source, collect and organise a range of data about performance against targets

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPGRA4004 Establish and supervise dust control procedures in a grain processing enterprise	FDFGR4004A Establish and supervise dust control procedures in a grain processing enterprise	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPGRA4004 Establish and supervise dust control procedures in a grain processing enterprise

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Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least one occasion, the individual has:

- analysed work areas and equipment in grain enterprises for dust and fire risk
- scheduled housekeeping, training and maintenance procedures to achieve objectives while minimising impact on production, including:
 - scheduling maintenance for dust suppression systems and equipment, and explosion relief panels
 - bin and silo inspections and cleaning
 - testing and maintenance of fire and explosion suppression systems
- controlled potential ignition sources
- assessed adequacy of dust control and dust explosion relief equipment
- determined maintenance requirements
- assessed automatic and manual monitoring techniques against enterprise needs
- established procedures for reporting non-conformances
- established emergency procedures
- identified training needs of employees, including induction training.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- technologies and techniques for controlling grain dust in grain milling, handling and storage facilities, including:
 - pneumatic dust collection
 - housekeeping
 - enclosing of equipment
 - use of liquid additives

- misting and fogging (where permitted)
- advantages and disadvantages of mechanical and pneumatic product conveying
- types of bin/silo and exhaust designs and implications for dust generation and control
- requirements for a grain dust explosion to occur, including typical sources in a grain enterprise:
 - oxygen
 - ignition
 - fuel
 - contained space
- effects of fungal and pest infestation on grain and flour temperature
- minimum explosive concentrations (MEC) for grain dust in the milling or storage operation that will vary according to the type of grain and particle size
- location of bin explosion relief panels
- explosion suppression systems
- confined space procedures and regulations.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - personal protective equipment relevant to flour milling operations
 - grain storage facilities
 - sampling schedules and test procedures and equipment
 - cleaning procedures, materials and equipment
- specifications:
 - work procedures, including advice on safe work practices, food safety, quality and environmental requirements
 - documentation and recording requirements and procedures.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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