



Australian Government

Department of Education, Employment and Workplace Relations

AHCMKH403A Design and install on-farm milk cooling and storage

Release: 1

AHCMKH403A Design and install on-farm milk cooling and storage

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers design and installation of on-farm milk cooling and storage systems and defines the standard required to: identify milk cooling and storage requirements; recognise and rectify operational faults in milk cooling and storage equipment; perform tests on cooling towers; install and maintain milk cooling and storage equipment.
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Application of the Unit

Application of the unit	This unit applies to milking machinery technicians.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
1. Determine cooling and storage system requirements	1.1. Available water supply is identified and analysed in line with cooling requirements for quality and quantity. 1.2. Components of the on-farm dairy milk cooling and storage requirements are identified to meet standard industry guidelines and herd and dairy factory needs. 1.3. Design considerations, including the siting of components, are identified and recorded. 1.4. Occupational Health and Safety (OHS) hazards are identified and risks assessed in line with workplace OHS and industry standards and reported to the supervisor.
2. Identify milk pre-cooling requirements	2.1. Maximum peak flow of milk delivery is measured and recorded. 2.2. Cooling water temperatures and quality are checked against design specifications. 2.3. Available milk cooling equipment is compared to design requirements and suitable equipment selected. 2.4. Relevant legislation including OHS and human health requirements is identified and compliance targets established. 2.5. Water cooling system requirements are identified in line with installed equipment and available resources.
3. Identify milk storage requirements	3.1. Farm milk production together with projected production increases is estimated in line with the available farm management plan. 3.2. Milk entry temperature and other critical design considerations are established in consultation with the shed manager and available data. 3.3. Vat selection is made meet shed production requirements and bulk milk collection routines.
4. Install milk cooling and storage equipment	4.1. Plate cooler and other components of the pre-cooling system are installed in line with established system design and industry standards. 4.2. Vat and refrigeration equipment are installed to meet design specifications. 4.3. Commissioning tests are completed as required to ensure that the operation of all elements of the cooling and storage equipment complies with performance targets and milk supply quality standards.
5. Operate and maintain	5.1. Routine maintenance program requirements are

ELEMENT	PERFORMANCE CRITERIA
milk cooling&storage equipment	completed in line with manufacturers' recommendations. 5.2.Repair and service requirements including operational faults are identified as a structured part of maintenance routines.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- identify hazards and assess risks
- recognise and rectify operational faults in milk cooling and storage equipment
- perform tests on cooling towers
- install and commission equipment
- complete routine maintenance
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- the components of on-farm milk pre-cooling, cooling and storage systems
- how milk is cooled on farm
- the effect of cooling on milk quality
- available milk cooling and storage equipment
- the requirements of factory based milk quality assurance programs
- industry recognised milking equipment minimum standards
- relevant OHS and environmental legislation, codes of practice and enterprise procedures relating to milk cooling and storage
- applicable human health standards requirements.

Evidence Guide

EVIDENCE GUIDE

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

Overview of assessment

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

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify milk cooling and storage requirements
- recognise and rectify operational faults in milk cooling and storage equipment
- perform tests on cooling towers
- install and maintain milk cooling and storage equipment.

Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole.

Milking machinery equipment may include:

- farm milk cooling and storage system components covering:
 - cooling water storage and circulation systems
 - tanks
 - pumps
 - plate coolers
 - refrigerated vats.

Unit Sector(s)

Unit sector	Milk harvesting
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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