



Australian Government

AMPREN303 Operate and monitor a low temperature wet rendering process

Release: 1

AMPREN303 Operate and monitor a low temperature wet rendering process

Modification History

Release	Comments
Release 1	This version released with AMP Australian Meat Processing Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to operate and monitor a low temperature wet rendering process, including loading raw material, operation, monitoring and shut down.

This unit applies to individuals who work in an industrial meat rendering plant under broad direction and who are responsible for operating and monitoring a low temperature wet rendering process. It includes safety compliance using Hazard Analysis and Critical Control Point (HACCP) techniques, process and product quality requirements, solving problems that arise and handover of the process to others.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, environmental and meat rendering regulations, legislation and standards that apply to the workplace.

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

Pre-requisite Unit

Nil

Unit Sector

Rendering (REN)

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Perform start up for	1.1 Confirm product specification and set cooker parameters

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
low temperature wet rendering	1.2 Identify hazards, assess and control risks according to workplace health and safety procedures 1.3 Identify food safety hazards, assess and control risks according to HACCP principles 1.4 Select and fit personal protective equipment and contamination control clothing 1.5 Undertake preoperational checks of machinery and equipment according to workplace procedures and/or manufacturer requirement 1.6 Ensure raw material is cut to size prior to feed according to workplace procedures
2. Operate low temperature wet rendering equipment	2.1 Confirm temperature is correct for heating raw material according to product specifications 2.2 Separate solid particles from water and tallow 2.3 Sample and confirm solid materials are dried containing correct water ratio 2.4 Ensure equipment is cleaned and drained at the end of a production run according to workplace procedures
3. Monitor low temperature wet rendering process	3.1 Ensure flow of material is traced throughout operation 3.2 Monitor material and equipment for presence of metal according to workplace requirements 3.3 Check emissions from non-condensable gases and treat according to workplace procedures 3.4 Check equipment for maintenance requirements according to workplace procedures
4. Monitor environmental outputs	4.1 Monitor vapours according to regulatory requirements 4.2 Monitor emissions to scrubber, bio-filter and/or after burner according to regulatory requirements 4.3 Monitor waste water discharge according to workplace procedures 4.4 Action non-compliance according to workplace procedures
5. Handover production run to team member	5.1 Brief team member on production run activities 5.2 Advise team member of any arising issues 5.3 Hand over notes and observations recorded during production run to team member

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 operating manuals for low temperature wet rendering equipment - Read and interpret gauges and scales
Writing	Complete records using industry terminology
Oral Communication	Use open and closed questions to clarify information
Numeracy	Estimate and measure volume (mls, L), time (Hrs, Mins), temperature (degrees Celsius) and pressure (psi)

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AMPREN303 Operate and monitor a low temperature wet rendering process	AMPA3085 Operate wet rendering process	New unit sector Unit code and title updated to better reflect work task Updated Elements and Performance Criteria Added Foundation Skills Revised Performance Evidence and Knowledge Evidence	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5e2e56b7-698f-4822-84bb-25adbb8443a7>

Assessment Requirements for AMPREN303 Operate and monitor a low temperature wet rendering process

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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 the individual has operated and monitored two separate low temperature wet rendering processes, including:

- identified at least three food safety hazards and controlled risk using Hazard Analysis and Critical Control Point (HACCP) principles
- identified at least three safety hazards, assessed and controlled risk using workplace health and safety procedures
- selected and correctly fitted appropriate personal protective equipment (PPE) and clothing required worker safety and contamination control
- checked raw materials, including cut size and colour
- operated machinery according to workplace instructions
- produced a low temperature wet rendered product according to workplace requirements
- monitored a low temperature wet rendering process, including:
 - heating and end point temperature control
 - separation of solids and liquids
 - grinding of coarse meal
 - drying of wet solids
 - optimal performance of machinery
- monitored environmental emissions according to workplace and Environmental Protection Agency (EPA) requirements, including odour control and one of the following:
 - waste water
 - heat recovery
 - noise
- identified production problems and out-of-specification product and taken corrective action
- provided a verbal briefing during handover process to team member.

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:

- principles of a low temperature wet rendering process
- workplace health and safety requirements of low temperature wet rendering process
- purpose, features and correct use of PPE required for low temperature wet rendering process
- purpose, features and correct use of clothing and equipment required for contamination control in low temperature wet rendering process
- hazard identification, risk assessment and control risk using HACCP techniques for low temperature wet rendering process
- operation and monitoring process including:
 - unusual noises in equipment which may indicate malfunction
 - equipment maintenance requirements
- key features of quality assurance aspects of rendered product, including:
 - colour and density of rendered products
 - end-point temperature
 - correct level of moisture content
- quality requirements of finished products including:
 - tallow moisture, insolubles and Free Fatty Acids (FFA)
 - meat meal moisture, fat content, protein, microbiological and physical contamination
- relevant regulatory requirements including:
 - AS5008 Hygienic Rendering of Animal Products
 - Australian Renderers Association's Code of Practice for Hygienic Rendering of Animal Products
- EPA requirements
- implications of noncompliance of operation and monitoring of low temperature wet rendering including:
 - incorrect temperature setting
 - discharge pump and speed of feed to the tank out of balance
 - weir liquid levels incorrectly set
 - solids from press are too wet
- features and functions of low temperature wet rendering machinery and equipment, including:
 - manufacturer and workplace instructions for safe operation
 - control panels and ancillary controls
 - operating capacities, efficiencies and applications
 - location and purpose of guards, rails and sensors
 - feedback instrumentation
 - services required, including compressed air, electricity and water

- workplace cleaning and maintenance requirements for low temperature wet rendering machinery and equipment.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a meat rendering plant or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - industrial meat rendering machinery and equipment required for the tasks specified in the performance evidence
 - raw materials specified in the performance evidence
 - PPE and contamination control equipment clothing required for the tasks specified in the performance evidence
- specifications:
 - two dry rendering work orders stipulated in the performance evidence
 - workplace procedures for a low temperature wet rendering process and operation of machinery and equipment stipulated in the performance evidence
 - workplace procedures for worker safety and contamination control
- relationships:
 - supervisor and others stipulated in the performance evidence
- timeframes:
 - competency must be demonstrated at the normal rate of production for the rendering plant.

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

Links

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