Modification history

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

| AMPREN30x85 | Operate and monitor low temperature wet rendering process |
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| 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.  The unit applies to individuals who work in an industrial meat rendering plant under broad direction and are responsible for operating and monitoring a low temperature wet rendering process. It includes safety compliance using 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. |
| Prerequisite Unit | Nil |
| Unit Sector | Rendering (REN) |

| Elements | Performance Criteria |
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| Elements describe the essential outcomes. | Performance criteria describe the performance needed to demonstrate achievement of the element. |
| 1. Perform start up | 1.1 Confirm product specification and set cooker parameters  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 Hazard Analysis and Critical Control Point (HACCP) principles  1.4 Select and fit personal protective equipment (PPE) and contamination control clothing  1.5 Undertake preoperational checks of plant 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 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 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 to 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 of production run activities  5.2 Advise of any issues if required  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. | |
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| Skill | Description |
| Reading | * Interpret operating manuals for batch cooking equipment |
| Writing | * Complete records using industry terminology |
| Oral Communication | * Use open and closed questions to clarify information |
| Numeracy | * Estimate and measure volume, time, temperature, and pressure |

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| Unit Mapping Information | | | |
| Code and title current version | Code and title previous version | Comments | Equivalence status |
| AMPREN308X5 Operate and monitor a low temperature wet rendering process | AMPA3085 Operate wet rendering process | New unit code and title  New Unit Sector  Updated qualification description  Updated Elements and Performance Criteria  Added Foundation Skills  Revised Performance Evidence and Knowledge Evidence | Not equivalent |

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

| TITLE | Assessment requirements for AMPREN30X85 Operate and monitor 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 wet rendering processes, including:   * identified at least three food safety hazards and controlled risk using 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 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 * identified production problems and out-of-specification product and taken corrective action * provided a verbal briefing to handover process to team member. | |

| Knowledge Evidence |
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| 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 Hazard Analysis and Critical Control Point (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 cooked product, including: * colour and density of cooked 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 * Environmental Protection Authority (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 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 batch cooking plant and equipment. |

| Assessment Conditions |
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| Assessment of the skills in this unit of competency must take place under the following conditions:   * physical conditions: * skills must be demonstrated in a registered, operating meat rendering plant * resources, equipment and materials: * industrial meat rendering plant 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 * reporting and recording forms * specifications: * two dry rendering work orders stipulated in the performance evidence * workplace procedures for a dry rendering process and operation of plant 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 that rendering plant.   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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