Modification history

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

| AMPREN30X87 | Operate a tallow refining process |
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| Application | This unit of competency describes the skills and knowledge required to operate a tallow refining process, including preparation, cooking, separation, extraction, and shut down.  The unit applies to individuals who work under broad direction in an industrial rendering plant and are responsible for operating a tallow refining process. It includes safety compliance using HACCP techniques, process and product quality requirements, and solving problems that arise with the process.  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 are known to 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.Prepare to refine tallow | 1.1 Confirm finished tallow product specifications  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 equipment  1.5 Undertake preoperational checks of plant and equipment according to workplace procedures and/or manufacturer requirements  1.6 Clean and sanitise tools and equipment according to contamination control requirements |
| 2. Extract tallow from cooked product | 2.1 Set up, start up and operate presses according to product requirements and workplace procedures  2.2 Monitor feed rate of cooked product and pressing operation to safely maximise production  2.3 Monitor product in press to ensure finished quality specifications are met and adjust equipment as required |
| 3. Test tallow and unload refining equipment | 3.1 Take samples and test to ensure refined tallow product meets specifications  3.2 Identify causes of product faults and rectify according to workplace requirements  3.3 Contain spillages according to workplace and environmental requirements  3.4 Reuse or discard faulty products according to workplace and environmental requirements  3.5 Transfer finished refined tallow product from equipment according to workplace quality and safety requirements |
| 4. Shut down tallow refining process | 4.1 Clean tallow refining equipment and report maintenance requirements  4.2 Shut the refining process down safely according to operating procedures  4.3 Identify and report maintenance requirements according to workplace procedures  4.4 Maintain workplace records in appropriate format |

| 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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| Reading | * Interpret operating manuals for tallow processing plant |
| Writing | * Complete records using industry terminology |
| Oral Communication | * Use open and closed questions to clarify information |
| Numeracy | * Estimate and measure time, temperature, volume and pressure |

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| Unit Mapping Information | | | | | |
| Code and title current version | Code and title previous version | | Comments | | Equivalence status |
| AMPREN30X87 Operate a tallow refining process | AMPA3087 Operate a tallow processing plant | | Title changed Application updated  Unit sector added  Previous elements 3 merged with element 2  New element 4 added  Performance criteria added, revised, reordered, or merged for clarity  Foundation skills updated  Performance Evidence, Knowledge Evidence and Assessment Conditions updated | | Not equivalent |
| AMPREN30X87 Operate a tallow refining process | AMPA3089 Produce rendered products hygienically | Redesigned unit that includes content from AMPA3087 Operate a tallow processing plant and AMPA3089 Produce rendered products hygienically | | 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 AMPREN30X87 Operate a tallow refining 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 the individual has set up, operated, monitored and shut down two separate industrial tallow refining processes to produce tallow from different rendered meat raw materials. One process must be for refined liquid tallow production and one process must be for solid refined tallow.  For each process, there must be evidence that the individual has:   * 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 for worker safety and contamination control * operated tallow separation and filtration equipment, including at least two of the following: * press or decanter * screening * settling tanks * monitored temperature and made adjustments according to work instructions and product specifications * monitored emissions and recorded according to workplace and regulatory requirements * 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 * complete tallow refining process including: * safe shut down of equipment * completed production records, including product and equipment issues, according to workplace requirements | |

| 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:   * basic principles of tallow refinement of liquid and solid tallow * key features of HACCP principles related to tallow refinement * workplace procedures for safe movement of workers and visitors in and around tallow refining plant and equipment * features, benefits, limitations, and correct fit of PPE for refining tallow * quality requirements of cooked materials that are used to produce refined tallow, including: * temperature * particle size * product requirements, including: * free fatty acid levels * colour * AS5008 Hygienic rendering of animal products * Australian Renderers Association's Code of practice for hygienic rendering of animal products, including cleaning and sanitation of tallow refining equipment * codes and standards that apply including EPA requirements * features and functions of tallow processing and refining 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 * shut down * workplace recording and reporting requirements for tallow refinement. |

| Assessment Conditions |
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| Assessment of the skills in this unit of competency must take place under the following conditions:   * physical conditions * in a registered, operating meat rendering plant * resources, equipment, and materials: * industrial tallow refining 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 * specifications: * workplace procedures for refining tallow and operation of plant and equipment stipulated in the performance evidence * workplace procedures for worker safety and contamination control * reporting and recording formats * 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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