Modification history

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

| AMPREN30X90 | Render edible products |
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| Application | This unit of competency describes the skills and knowledge required to operate rendering equipment and produce an edible product,  including preparation, loading raw material, operation, monitoring and shut down of the rendering processes.  The unit applies to individuals who work under broad direction in an industrial rendering plant and are responsible for operating and monitoring a rendering 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 for operation of rendering process | 1.1 Check work order, operational status of services and availability of consumables  1.2 Identify safety hazards, assess risks and control or report risks according to working according to Hazard Analysis and Critical Control Point (HACCP) techniques and workplace procedures  1.3 Select and fit personal protective equipment (PPE) and contamination control equipment  1.4 Undertake preoperational checks of plant and equipment according to workplace procedures and/or manufacturer requirements  1.5 Clean and sanitise tools and equipment according to contamination control  1.6 Undertake workplace procedures for safe movement of workers and visitors in and around rendering plant and equipment  1.7 Identify emergency stops and isolation controls in work area |
| 2. Receive and check raw materials | 2.1 Receive raw materials from approved suppliers and/or internal sources  2.2. Control transfer of raw materials into bulk bins and/or the processing equipment according to workplace procedures  2.3 Check raw material for compliance with raw material specification and regulatory requirements  2.4 Report defects in raw materials promptly and take corrective action for out-of-specification raw material |
| 3. Operate and monitor rendering process | 3.1 Start up and monitor rendering plant and equipment according to product requirements  3.2 Monitor and adjust rendering temperature and duration to achieve required finished product specifications  3.3 Ensure effective discharge of product and adjust outflow according to workplace procedures  3.4 Take and test samples to ensure compliance with product specifications according to workplace Quality Assurance (QA) program  3.5 Identify sources of potential product contamination and take preventative measures  3.6 Identify and rectify processing faults according to workplace procedures  3.7 Maintain cleanliness of work area in accordance with hygiene and safety requirements |
| 4. Package and label finished product | 4.1 Inspect rendered products to confirm all product specification are met in readiness for packaging  4.2 Package rendered products using approved materials and label according to client, QA program, traceability, regulatory and export requirements  4.3 Transfer products to approved storage areas according to workplace procedures  4.4 Isolate samples of bagged product for future testing according to QA program  4.5 Despatch packaged products according to workplace procedures |
| 5. Shut down rendering process | 5.1 Perform rendering process shutdown according to workplace procedures  5.2 Clean plant, equipment and work areas according to QA program, regulatory and hygiene requirements  5.3 Identify and report maintenance requirements according to workplace  5.4 Maintain workplace records in appropriate format  5.5 Conduct handover of rendering process for edible product to another team member when required |

| 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 rendering equipment for edible products |
| Writing | * Complete records using industry terminology * Signs work orders |
| Oral Communication | * Use open and closed questions to clarify information * Use active listening, including paraphrasing |
| Numeracy | * Estimate and measure volume, temperature, moisture, percentage and steam flow and blood flow * Interpret mathematical symbols blood process equipment gauge * Understands levels of contamination |

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| Unit Mapping Information | | | |
| Code and title current version | Code and title previous version | Comments | Equivalence status |
| AMPA30X90 Render edible products | AMPA3090 Render edible products | Application changed Unit sector added  New elements 4 and 5 added  Performance criteria added, revised, reordered, or merged for clarity  Foundation skills added Performance Evidence, Knowledge Evidence and Assessment Conditions updated | Not equivalent |
| AMPA30X90 Render edible products | AMPA3089 Produce rendered products hygienically | Redesigned unit that includes content from AMPA3090 Render edible products 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 AMPREN30X90 Render edible products |
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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 set up, operated, monitored and shut two separate industrial rendering processes to convert raw materials into edible products according to specific work orders. The processes must include two of the following:   * beef * pork * poultry * lamb   For each process, the individual must have:   * confirmed work order including product quantity and quality requirements * confirmed status of services and availability of consumables * identified hazards, assessed and controlled risk using Hazard Analysis and Critical Control Point (HACCP) techniques and workplace health and safety requirements * selected and correctly fitted appropriate personal protective equipment (PPE) required for rendering processes * conducted pre operational check of plant and equipment * identified emergency stops and isolation controls in work area * checked raw materials for compliance * reported defects in raw materials promptly and take corrective action for out-of-specification raw material * set up and calibrated rendering equipment, including temperature and duration * controlled transfer of raw materials into bulk bins specifications, according to workplace and regulatory requirements * monitored and adjusted rendering process including: * quality of raw materials * flow of raw materials * rendering time * temperature * moisture content * product texture * observed temperature and pressure gauges and adjusted equipment to meet product and safety requirement * collected and tested at least three product samples to ensure rendered to specifications * confirmed the finished product meets specifications * identified and taken corrective action for two of the following: * over-rendering * under-rendering * spills * cross contamination * applied liquid discharge management * monitored environmental emissions according to workplace and environmental regulatory requirements, including: * odour control * noise * gases * liquids * heat * completed packaging, labelling and load out according to workplace procedures * performed plant shutdown according to workplace procedures for edible product rendering * cleaned rendering plant and equipment according to hygienic requirements and QA program * identified and reported maintenance requirements according to workplace procedures * completed process handover to another team member using verbal and written communication using accurate industry terminology applied relevant regulatory and workplace requirements * communicated verbally with a supervisor and at least one of the following: * maintenance team member * quality assurance team member * packaging team member * completed production records 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:   * purpose and steps related to rendering process * features and functions of rendering machinery and equipment * features, benefits, limitations, and correct fit of PPE for rendering edible products process * key features of workplace health and safety requirements of operating a rendering edible products process * features and functions of emergency stops, isolation controls and ancillary controls in work area * key features of HACCP techniques related to rendering edible products processes * workplace procedures for safe movement of workers and visitors in and around rendering plant and equipment * location and purpose of guards, rails and sensors * feedback instrumentation * raw materials quality requirements, including: * temperature * particle size * rendered product requirements, including: * bacteria types and quantity * moisture content * structure, including friability, density   • key features of quality assurance aspects of rendered product, including:   * colour and density of cooked products * end-point temperature * correct level of moisture content * correct texture of product * implications on product quality and productivity of incorrect load in rendered equipment * AS5008 Hygienic rendering of animal products * Australian Renderers Association's Code of practice for hygienic rendering of animal products * environmental regulatory requirements that apply to rendering edible product process * manufacturer and workplace instructions for safe operation * operating capacities, efficiencies and applications * services required, including compressed air, electricity and water * workplace cleaning and maintenance requirements for rendering edible product plant and equipment * regulatory requirements for the rendering of the edible product * operating and maintenance procedures for the rendering equipment * relevant work procedures for the operation of the rendering equipment * relevant product and client specifications * sampling, monitoring and documentation procedures relevant to the process and end products * possible sources of contamination of the product and the relevant preventative measures. |

| 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 rendering plant * resources, equipment and materials: * rendering equipment, machines, plant * features, benefits, limitations, and correct fit of PPE for rendering process * specifications: * two rendering edible product work orders stipulated in the performance evidence * workplace procedures for rendering edible product process and operation of plant and equipment as stipulated in the performance evidence * workplace procedures for worker safety and contamination control * use of specific workplace documents such as workplace procedures and QA system * manufacturer’s operating instructions for specific equipment and machinery.   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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