Generic RMP Model

for the Slaughter and Dressing of Pigs

Prelims

Amendment 0

September 2009

Table of Contents

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Website

A copy of this document can be found at http://www.nzfsa.govt.nz/animalproducts.index.htm

1 Generic RMP for Slaughter, Dressing, Cooling and Boning of Pigs

1.1 Operator, business and RMP identification

The name and address of the business operator must be documented in the RMP. The unique business identifier and the RMP identifier should also be included in this section of the RMP to assist in the traceability of documents.

Form 1: Operator, business and RMP identification

Information required	Details
Business identifier	*e.g. ME81, PET123*
RMP no.	*e.g. 01, 02*
Name of the operator	*Legal name of the business operator (i.e. the owner of the business)*
Address of the operator	*Business address of the operator (e.g. postal address of head office)*
Electronic address of the operator	*Email address of the operator*
Name of the business(es) covered by the RMP	*The registered company name, if different from the operator*
Physical address of the premises	*Location of the premises, if different from the operator's address*

1.2 Management authorities and responsibilities

The operator must document details of the person who is responsible for the day-to-day management of the RMP. It is recommended that a deputy be designated who can take over from the day-to-day manager, when necessary.

Form 2: Management authorities and responsibilities

Authority/Responsibility	Details
Day-to-day manager	*Give name or, preferably, give position or designation*
Deputy for day-to-day manager	*Give name or, preferably, give position or designation*

1.3 Scope of the RMP

The operator must clearly define the coverage and application of the RMP.

Form 3: Scope of the RMP

Elements	Description/Details
Physical boundaries	Physical boundaries indicated on site plan given in Appendix xx. *Attach an accurate site plan. Ensure that amenities and external areas that may be a source of hazards and other risk factors are considered when establishing the physical boundaries. The site plan should also show any areas within the boundaries that are excluded from the RMP.*
Risk factors covered by the RMP	Risk factors associated with: • Human health (for products intended for human consumption) • Animal health (for products intended for animal consumption) • Wholesomeness • False or misleading labelling
Animal material being processed	Live pigs
Products [1, 2]	• Carcasses (skin-on, head-on) • Pork cuts and trimmings • Red offal for human consumption • Animal material for petfood (e.g. pig ears) • Animal material for rendering

Elements	Description/Details
Process [1]	From receipt of the live animals to loadout of carcasses and packed products. Principal processing categories: • Slaughter and dressing • Boning/cutting • Refrigeration
Exclusions	*Identify those materials, products or activities excluded from the RMP, and the alternative regulatory regime they are under.* [3]

1. The products and processes covered by this generic RMP are examples only based on a typical New Zealand pig processing operation. The operator must ensure that their RMP accurately reflects their own products and processes.

   The hazard analysis shown in this generic RMP only covers the processing of carcasses, cuts, and red offal to provide examples of how hazard analysis can be done. The operator must ensure that their RMP includes a hazard analysis for all products or product groups, and processes covered by their RMP.

2. Products should be listed either individually or as product groups with similar characteristics, processes and intended purpose. The list should be as specific as necessary for proper identification of hazards and their controls, but at the same time should allow flexibility in terms of other products of the same group that can be processed without the need for a significant amendment.

3. If any animal material, animal product, or food which is processed within the physical boundaries of the RMP is excluded from the scope of the RMP, the operator must identify the material or product, the alternative regulatory regime that they are under (e.g. Food Act), and explain how the interfaces between regimes are managed. The operator must also document authorities and responsibilities, and the management of interfaces in relation to any activity undertaken by another person within the physical boundaries of the RMP.

1.4 Product description

The operator must describe the animal products covered by the RMP, either individually; or as product groups with similar characteristics, processes and intended purpose. The product description must include the intended use and consumer, and any regulatory limit or operator-defined limit relevant to the product. Other product information such as company specifications for packaging, labelling, storage requirements and shelf life may also be included in the product description.

At present, no regulatory limit has been defined for any raw red meat, including pig meat.

Form 4: Product descriptions and intended purpose

Product name	Product description	Intended use of product[1] produced under the RMP	Intended consumer and use of final product[2]	
			Consumer	Use
Carcasses (skin-on), cuts, and trimmings for human consumption	• Passed ante- and post-mortem examination • Chilled or frozen as per regulatory and company specifications • Packed and labelled as per regulatory and company specification Refer to Doc. xx for specifications.	Further processing into manufactured products, retail products, food service items	General public	Cooked

Product name	Product description	Intended use of product[1] produced under the RMP	Intended consumer and use of final product[2]	
			Consumer	Use
Red offal for human consumption (e.g. livers, hearts)	• Passed post-mortem examination • Chilled or frozen as per company specification • Packed and labelled as per regulatory and company specification Refer to Doc. xx for specifications.	Further processing into manufactured products, retail products, food service items	General public	Cooked
Products for petfood (e.g. pig ears)	• Passed as fit for animal consumption • Packed and labelled as per regulatory and company specification Refer to Doc. xx for specifications.	Further processing into petfood	Pets (e.g. dogs)	Ready-to-eat (e.g. dried pig ears)
Animal material for rendering (e.g. lungs, bones, guts, defect trimmings, dead stock and condemned material)	• Labelled as per regulatory and company specifications Refer Doc. xx for specifications.	Rendering	Animals	Ingredient in petfood & animal feed
			Industrial use	Fertiliser

1. "Product" as used in this column refers to the product in the form that it is dispatched from the premises.

2. "Final product" refers to the form of the product as it would be sold to or consumed by the consumer (i.e. after further processing by another company). In some cases, the operator may not know how the "final product" will be used after further processing but, as a minimum, they must be able to establish whether it is intended for human or animal consumption.

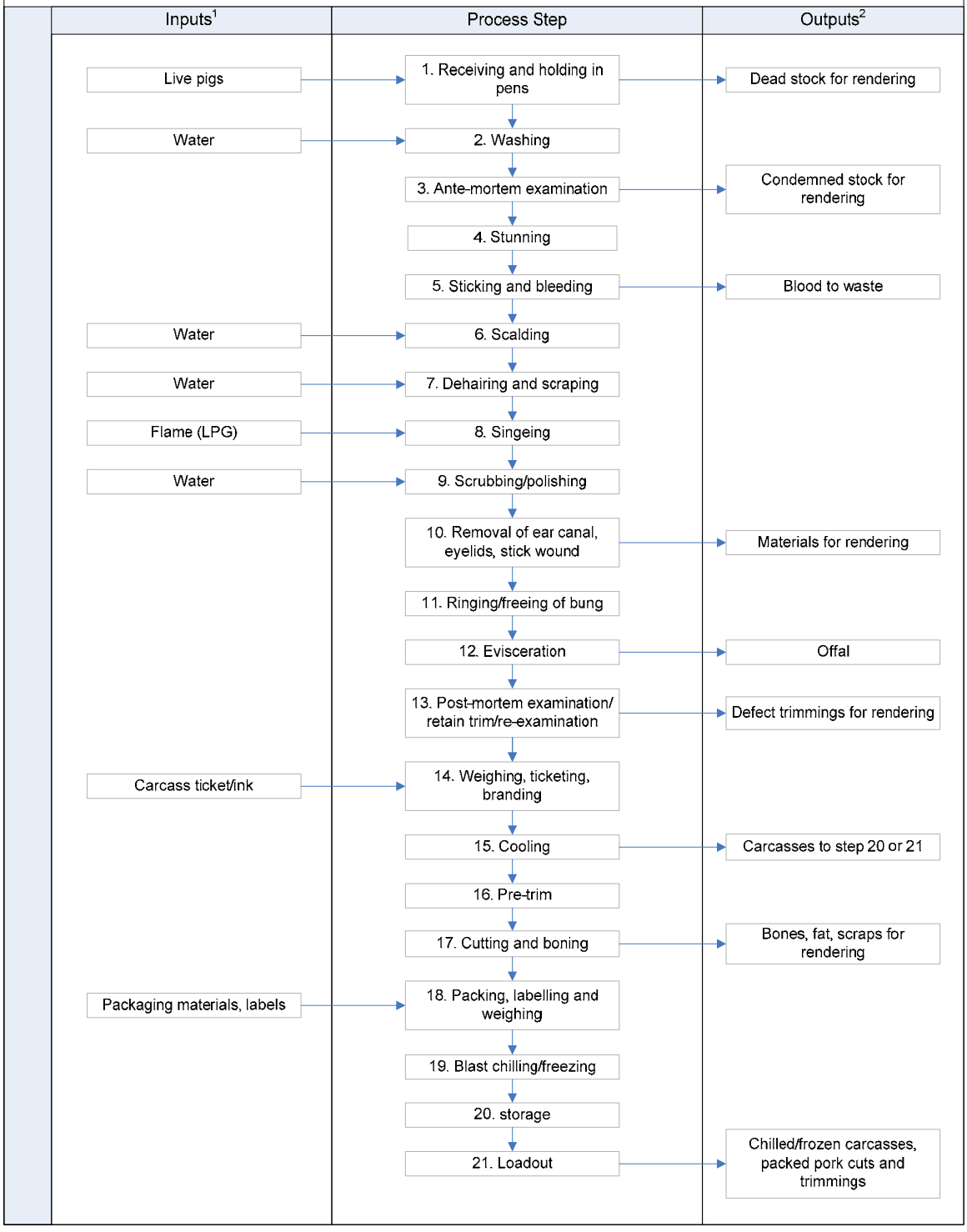
1.5 Process description

The processes covered in the RMP must be accurately described using flow diagram(s). There is no prescribed format for the diagram but the process flow should set out all steps sequentially, and show relevant inputs and outputs. The process flow(s) must show the full extent of the process for all products covered by the RMP.

Forms 5A and 5B give examples of simple process flow diagrams which show the key steps for the slaughter and dressing of pigs (i.e. porkers), and the processing of red offal for human consumption. The actual process(es) should be described in the RMP, including any variations in the process for the different classes of pigs (e.g. baconer, porker, chopper).

Form 5A:

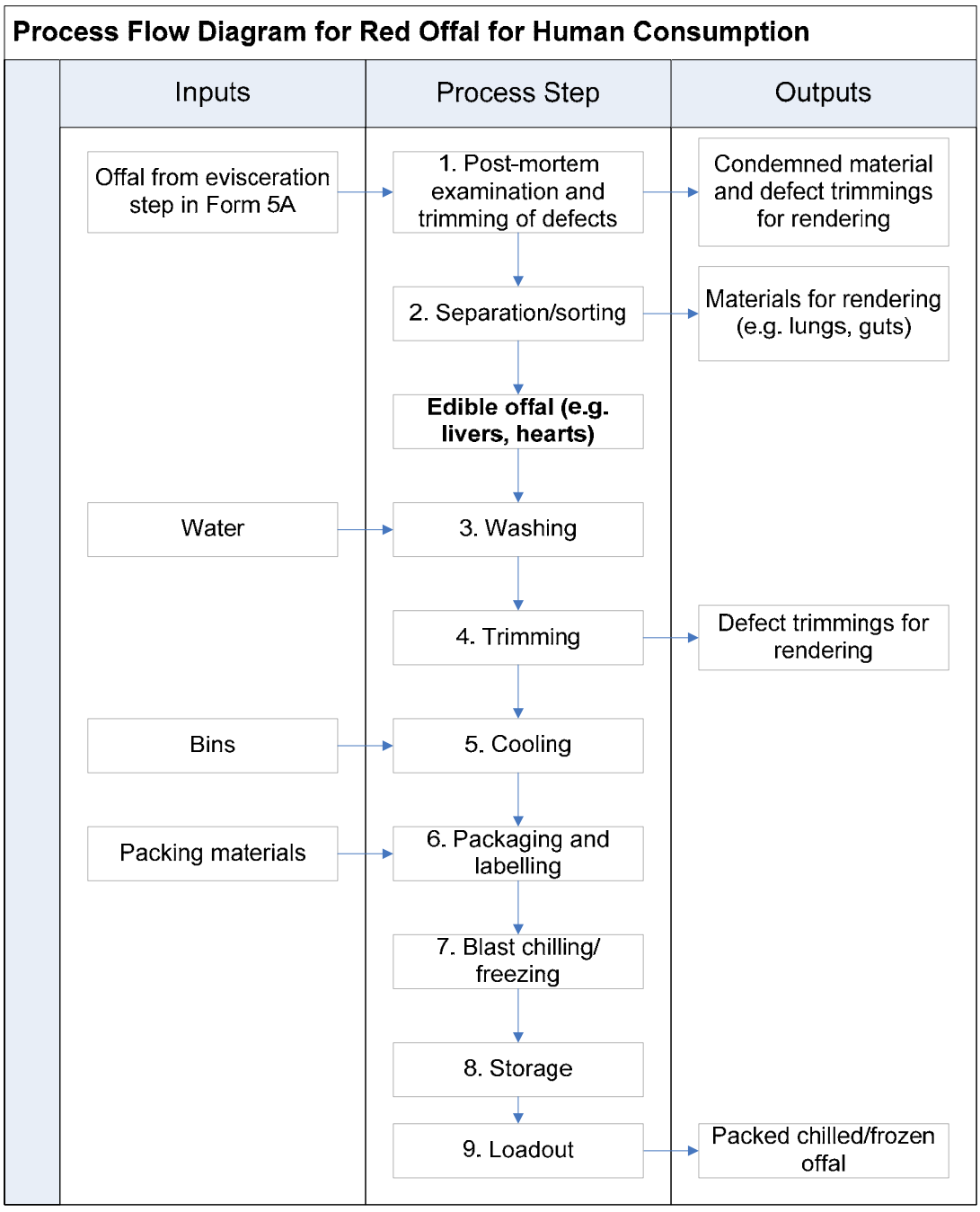
Process Flow Diagram for Slaughter, Dressing, Cooling and Boning



1. Only those inputs that become part of the final product have been identified in this generic RMP. The operator may wish to include processing aids that come into contact with their product.

2. All outputs for human or animal consumption must be identified in the process flow.

Form 5B:



1.6 Good Operating Practice (supporting systems)

The operator must document Good Operating Practices (GOP) in relevant supporting systems (also known as prerequisite programmes, good hygienic practices) before applying HACCP principles to the process. These supporting systems must comply with all relevant regulatory requirements, particularly the Animal Product Regulations 2000 and the current versions of the Animal Products (Specifications for Products Intended for Human Consumption) Notice, and the Animal Products (Specifications for Products Intended for Animal Consumption) Notice. Information in the documented supporting systems should include: authorities and responsibilities, procedures (including control, monitoring, corrective action and operator verification), and recording requirements.

Part 2 of the Meat Code of Practice provides guidance on supporting systems relevant to the scope of this generic RMP. Supporting systems must cover the activities and procedures listed below:

- Design, construction and maintenance of buildings, facilities and equipment;
- Potable water;
- Sanitation and cleaning of processing areas, facilities and equipment;
- Personnel hygiene;
- Training of personnel;
- Control of chemicals;
- Pest control;
- Waste management;
- Repairs and maintenance of equipment;
- Refrigeration management;
- Food contact materials (specifications, handling and storage);
- Reception of animals (e.g. presentation status, condition of stock, supplier declarations);
- Ante- and post-mortem examination procedures (when these activities are done by the operator).

- Hygienic processing procedures (e.g. hygienic techniques and procedures for dressing, cutting, boning, collection of animal material; cleaning and sterilisation of equipment, dropped meat);
- Handling and disposition of detained and non-conforming products;
- Calibration of equipment and measuring devices;
- Sampling and testing procedures;
- National Microbiological Database (NMD) procedures;
- Product identification and traceability;
- Inventory control;
- Recall of products;
- Document control (including procedures for amendments);
- Verification and notifications procedures.

1.7 Hazard analysis and CCP determination

1.7.1 Identification of hazards from inputs

The operator must identify any hazards associated with each input considering any supplier agreements and raw material specifications.

Form 6: Hazard identification

Inputs	Description/specification [1]	Biological hazard (B)	Chemical hazard (C)	Physical hazard (P)
Live pigs	Complies with regulatory requirements for animals presented for slaughter. Sourced from commercial pig farms.[2]	Bacterial pathogens associated with faeces, ingesta and dirt from the gastro intestinal tract and the skin, e.g. *Salmonella* spp., *Campylobacter coli / jejuni, Clostridium* spp., *Yersinia enterolitica* *Yersinia enterolitica* from the oral and pharyngeal cavities Bacterial pathogens associated with grossly-detectable abnormalities (i.e. fever, abscesses), e.g. *Salmonella* spp. for fever	Chemical residues , e.g. veterinary medicines, heavy metals	None
Potable water	Potable water	None	None	None
Branding ink	Suitable for use as food contact material	None	None	None
Carcass tickets	Suitable for use as food contact material	None	None	None
Packaging materials	Suitable for use as food contact material	None	None	None

1. Agreed specifications and procedures for inputs must be documented in a supporting system.

2. This hazard identification applies to pigs produced in commercial farms that implement good agricultural practices.

Form 7A: Hazard analysis and CCP determination for carcasses, cuts and trimmings

Process step	**Inputs**	**Hazard reasonably likely to occur on or in the product at this step**	**Justification** [1]	**Q1. Is there a control measure(s) for the hazard at this step?** If yes, identify the control measure and answer Q2 [2]. If no, this step is not a CCP.	**Q2. Is the control measure at this step essential to food safety as defined by a regulatory limit or an operator-defined limit?** If yes, this step is a CCP [3].	**CCP no.**
1. Receiving and holding	Live pig	B – bacterial pathogens - grossly detectable abnormalities	Refer to Form 6	No		
		B – enteric pathogens on the skin and in faecal matter; *Y. enterolitica* in the oral and pharyngeal cavities	Refer to Form 6	No		
		C – chemical residues	Refer to Form 6	Controlled under the national residue programme.[4] Supplier declarations.	No	
2. Washing	Live pig	B – bacterial pathogens - grossly detectable abnormalities	Micro carried over from the previous step.	No		
		B – enteric pathogens; *Y. enterolitica*	Micro carried over from the previous step.	Yes – washing will reduce gross faecal/dirt contamination on the skin.	No	

Process step	**Inputs**	**Hazard reasonably likely to occur on or in the product at this step**	**Justification** [1]	**Q1. Is there a control measure(s) for the hazard at this step?** If yes, identify the control measure and answer Q2 [2]. **Q2. Is the control measure at this step essential to food safety as defined by a regulatory limit or an operator-defined limit?** If yes, this step is a CCP [3]. If no, this step is not a CCP.	**CCP no.**
	Potable water	None			
3. Ante-mortem examination	Live pig	B – bacterial pathogens - grossly detectable abnormalities	Micro carried over from the previous step.	Controlled under the ante-mortem examination system.[5]	No	
		B – enteric pathogens; *Y. enterolitica*	Micro carried over from the previous step.	No		
4. Stunning	Live pig	B – enteric pathogens; *Y. enterolitica*	Micro carried over from the previous step.	No		
5. Sticking and bleeding	Live pig	B – enteric pathogens; *Y. enterolitica*	Micro contamination of the carcass from the skin and sticking knife can occur at this step.	Yes – hygienic sticking technique will minimise contamination.	No	
6. Scalding	Carcass	B – enteric pathogens; *Y. enterolitica*	Scalding reduces the micro load on the skin, but contaminated scald water can enter through the stick wound into the heart and aorta, and the respiratory system.	Yes – adequate time between bleeding and scalding will reduce the potential for scald water entering the respiratory system.	No	
7. Dehairing and scraping	Carcass	B – enteric pathogens; *Y. enterolitica*	Carcasses are recontaminated during dehairing from faecal spillage from the anus and contaminated equipment.	No (Adequate feed withholding period before processing minimises faecal spillage.)		

Process step	Inputs	Hazard reasonably likely to occur on or in the product at this step	Justification [1]	Q1. Is there a control measure(s) for the hazard at this step? If yes, identify the control measure and answer Q2 [2].	Q2. Is the control measure at this step essential to food safety as defined by a regulatory limit or an operator-defined limit? If yes, this step is a CCP [3]. If no, this step is not a CCP.	CCP no.
8. Singeing	Carcass	B – enteric pathogens; *Y. enterolitica*	Micro carried over from the previous step.	Yes – effective flaming technique will reduce the micro load on the skin surface.	No	
9. Scrubbing / polishing	Carcass	B – enteric pathogens; *Y. enterolitica*	Scrubbing or polishing redistributes surviving micro. Contamination of the carcass from inadequately cleaned and sanitised machine can occur at this step.	Yes – effective cleaning and maintenance of backscraping or polishing equipment will minimise contamination of carcasses.	No	
10. Removal of ear canal, eyelids, stick wound	Carcass	B – enteric pathogens; *Y. enterolitica*	Micro carried over from the previous step.	No		
11. Ringing / freeing of bung	Carcass	B – enteric pathogens; *Y. enterolitica*	Micro carried over from the previous step.	No		
12. Evisceration	Carcass	B – enteric pathogens; *Y. enterolitica*	Contamination of the carcass can occur as a result of spillage from the anus and/or oesophagus, and when the gut is punctured.	Yes – hygienic techniques during freeing and dropping of the bung (e.g. bagging), and prevention of puncturing the gut will minimise contamination. Adequate feed withdrawal period reduces the incidence of punctured viscera.	No	
13. Post-mortem / retain trim / re-examination	Carcass	B – bacterial pathogens – grossly detectable abnormalities	Micro carried over from the evisceration step.	Controlled under the post-mortem examination system.[5]	No	

Process step	**Inputs**	**Hazard reasonably likely to occur on or in the product at this step**	**Justification** [1]	**Q1. Is there a control measure(s) for the hazard at this step?** If yes, identify the control measure and answer Q2 [2].	**Q2. Is the control measure at this step essential to food safety as defined by a regulatory limit or an operator-defined limit?** If yes, this step is a CCP [3]. If no, this step is not a CCP.	**CCP no.**
		B – enteric pathogens; *Y. enterolitica*	Micro carried over from the previous step.	Yes – identification and hygienic trimming will remove any visible faecal contamination and reduce micro contamination on affected parts of the carcass.	No	
14. Weighing, ticketing, branding	Carcass	B – enteric pathogens; *Y. enterolitica*	Micro carried over from the previous step.	No		
15. Cooling	Carcass	B – enteric pathogens; *Y. enterolitica*	Micro carried over from the previous step. Growth of mesophiles can occur due to ineffective cooling.	Yes – effective cooling will minimise the growth of mesophiles.	No	
16. Pre-trim	Carcass	B – enteric pathogens; *Y. enterolitica*	Micro carried over from the previous step	No		
17. Cutting and boning	Carcass	B – enteric pathogens; *Y. enterolitica*	Micro carried over from the previous step. Poor techniques when removing and handling the head can cause contamination of the carcass with *Y. enterolitica.* Growth of mesophiles can occur due to poor time/temperature control.	Yes – hygienic cutting & boning techniques will minimise contamination, and temperature control will prevent micro growth.	No	
		P – bone in boneless product	Bone pieces can be found in boneless products.	Yes – correct boning techniques will minimise bone in boneless product.	No	
18. Packing, labelling and weighing	Cuts & trimmings	B – enteric pathogens; *Y. enterolitica*	Micro carried over from the previous step.	No		

Process step	Inputs	Hazard reasonably likely to occur on or in the product at this step	Justification [1]	Q1. Is there a control measure(s) for the hazard at this step? If yes, identify the control measure and answer Q2 [2]. If no, this step is not a CCP.	Q2. Is the control measure at this step essential to food safety as defined by a regulatory limit or an operator-defined limit? If yes, this step is a CCP [3]. If no, this step is not a CCP.	CCP no.
19. Blast chilling / freezing	Packed cuts & trimmings	B – enteric pathogens; *Y. enterolitica*	Micro carried over from the previous step. Micro growth can occur due to refrigeration failure.	Yes – effective refrigeration will prevent micro growth.	No	
20. Storage	Packed cuts & trimmings	B – enteric pathogens; *Y. enterolitica*	Micro carried over from the previous step. Micro growth can occur due to refrigeration failure.	Yes – effective refrigeration will prevent micro growth.	No	
21. Loadout	Packed cuts & trimmings	B – enteric pathogens; *Y. enterolitica*	Micro carried over from the previous step. Micro growth can occur due to poor time/temperature control.	Yes – time/temperature control during loadout will prevent micro growth.	No	

1. The justifications given are supported by scientific information provided in the Technical Annex to this Generic RMP.

2. The procedures for the control measures must be documented in the RMP (e.g. in supporting systems or task instructions). The relevant supporting system should be referenced in this table.
3. A CCP is a step at which control can be applied and is essential to prevent or eliminate a food safety hazard or reduce it to an acceptable level. The control measure at the step must be essential to food safety as defined by a regulatory limit or an operator defined food safety limit (i.e. no CCP if there is no defined limit). A critical limit, which is measurable and can be monitored on an ongoing basis, must be established for the CCP. The justifications given are supported by scientific information provided in the Technical Annex to this Generic RMP.
4. The control of chemical residues involves effective farming practices and the monitoring of chemical residues under the National Residue Monitoring and Surveillance programme. Sporadic chemical residues at some level will always occur, but results from the programme indicate that residue levels in pigs are generally in compliance with national requirements. Therefore, they will not be considered further at subsequent steps in this generic RMP.

5. Grossly detectable abnormalities are addressed during ante-mortem and post-mortem examinations, which are currently the responsibility of the regulator. Therefore, they will only be considered at the ante- and post-mortem steps in this generic RMP. However, if ante-mortem and post-mortem examinations are undertaken by the company (i.e. operator's responsibility), then these steps must be considered during hazard analysis.

Form 7B: Hazard analysis and CCP determination for red offal for human consumption

Process step	**Inputs**	**Hazard reasonably likely to occur on or in the product at this step**	**Justification** [1]	**Q1. Is there a control measure(s) for the hazard at this step?** If yes, identify the control measure and answer Q2 [2].	**Q2. Is the control measure at this step essential to food safety as defined by a regulatory limit, or an operator-defined limit?** If yes, this step is a CCP [3]. If no, this step is not a CCP.	**CCP no.**
1. Post-mortem examination of offal and trimming of defects	Red offal	B – bacterial pathogens - grossly detectable abnormalities	Refer to Form 6.	Controlled under the post-mortem examination system.	No	
		B – enteric pathogens	Micro carried over from the evisceration step.	No		
2. Separation / sorting	Red offal	B – enteric pathogens	Micro carried over from the previous step.	No		
3. Washing	Red offal	B – enteric pathogens	Micro carried over from the previous step.	No		
	Potable water	None				
4. Trimming	Red offal	B – enteric pathogens	Micro carried over from the previous step.	No		
5. Cooling	Red offal	B – enteric pathogens	Micro carried over from the previous step. Growth of mesophiles can occur due to ineffective cooling.	Yes – proper temperature control will minimise micro growth.		
6. Packing and labelling	Red offal	B – enteric pathogens	Micro carried over from the previous step.	No		

Process step	Inputs	Hazard reasonably likely to occur on or in the product at this step	Justification [1]	Q1. Is there a control measure(s) for the hazard at this step? If yes, identify the control measure and answer Q2 [2]. If no, this step is not a CCP.	Q2. Is the control measure at this step essential to food safety as defined by a regulatory limit, or an operator-defined limit? If yes, this step is a CCP [3]. If no, this step is not a CCP.	CCP no.
	Packaging material	None				
	Bins (cleaned/ sanitised)	None				
7. Blast chilling / freezing	Packed red offal	B – enteric pathogens	Micro carried over from the previous step. Micro growth can occur due to refrigeration failure.	Yes – effective refrigeration will prevent micro growth.	No	
8. Storage	Packed red offal	B – enteric pathogens	Micro carried over from the previous step. Micro growth can occur due to refrigeration failure.	Yes – effective refrigeration will prevent micro growth.	No	
9. Load out	Packed red offal	B – enteric pathogens	Micro carried over from the previous step. Micro growth can occur due to poor time/temperature control.	Yes – proper time / temperature control during loadout will prevent micro growth.	No	

1. The justifications given are supported by scientific information provided in the Technical Annex to this Generic RMP.

2. The procedures for the control measures must be documented in the RMP (e.g. in supporting systems or task instructions). The relevant supporting system should be referenced in this table.

3. A CCP is a step at which control can be applied and is essential to prevent or eliminate a food safety hazard or reduce it to an acceptable level. The control measure at the step must be essential to food safety as defined by a regulatory limit or an operator defined food safety limit (i.e. no CCP if there is no defined limit). A critical limit, which is measurable and can be monitored on an ongoing basis, must be established for the CCP. The justifications given are supported by scientific information provided in the Technical Annex to this Generic RMP.

1.8 CCP summary

No CCP was identified for the slaughter and dressing of pigs, and cooling and boning of pig meat and co-products. The control of hazards at key steps is expected to be adequately addressed by GOP procedures documented in supporting systems.

1.9 Identification and control of risks to wholesomeness

The RMP must identify the risk factors related to wholesomeness that are reasonably likely to occur for each animal product covered by the RMP. It must also identify the control measures for addressing the risk factors. The control measures must be documented, including procedures for monitoring, corrective action and verification, and records. Only examples for carcasses, cuts and trimmings, and red offal are shown in Form 8.

Form 8: Summary of identified risk factors and controls related to wholesomeness

Risk factor	Source or cause of risk factor	Control measure
Carcasses, cuts and trimmings		
Spoilage	Micro contamination of product during dressing and subsequent handling.	GOP – hygienic dressing, cutting and boning Refer to Supporting Sys. xx.
	Micro growth due to improper time/temperature control.	GOP – time/temperature control, proper refrigeration Refer to Supporting Sys. xx.
Wholesomeness defects (e.g. blood clots, bruises, hair)	Improper handling of live animals and dressing of carcasses.	GOP – handling of stock, hygienic dressing, trimming Refer to Supporting Sys. xx.
Red offal for human consumption		
Spoilage	Micro contamination of product during dressing and subsequent handling.	GOP – hygienic dressing, cutting and boning Refer to Supporting Sys. xx.
	Micro growth due to improper time/temperature control.	GOP – time/temperature control, proper refrigeration Refer to Supporting Sys. xx.
Wholesomeness defects (e.g. hair)	Improper dressing techniques.	GOP – hygienic dressing Refer to Supporting Sys. xx.

1.10 Identification and control of risks from false or misleading labelling

Any information applied to the packaging must be correct and accurate. The RMP must identify the risk factors related to false or misleading labelling which are reasonably likely to occur for each animal product. It must also identify the control measures for addressing the risk factors. The control measures must be documented, including procedures for monitoring, corrective action and verification, and records. An example is shown in Form 9.

Form 9: Summary of identified risk factors and controls related to false or misleading labelling

Risk factor	Source or cause of risk factor	Control measure(s)
All products		
Incorrect details on label or transportation outers, e.g. • Species • claims (e.g. organic) • product description • lot id • storage directions	Incorrect label design.	Procedures for ensuring correct label design.
	Product put in wrong carton or pack.	Procedures for ensuring correct packaging of products.

1.11 Operator verification

The operator must verify the effectiveness of their RMP against their documented procedures and any criteria defining the product's fitness for intended purpose (e.g. regulatory limit, operator-defined limits, GMP requirements, critical limits). The verification procedures must be documented, including responsibilities, corrective action, frequencies, and records. The various verification activities may be summarised as shown in Form 10.

Form 10: Summary of operator verification activities.

Activity	Description	Supporting System
Review of monitoring and corrective action records	All daily monitoring sheets checked to ensure that documented procedures are complied with, limits are adhered to, and appropriate corrective actions are taken	xxx
Microbiological testing of carcasses and trimmings (NMD)	NMD testing for: • *E. coli* • APC • *Salmonella*	xxx
Cusum inspection for defects	Inspection of cuts for defects	xxx
Internal audits	Internal audit involving: • review of records • review of test results • reality checks	xxx
Review of RMP including supporting systems	Review of effectiveness of RMP. Re-assessment of RMP (e.g. identification of new hazards; changes in critical limits, process steps and procedures, inputs)	xxx
Other activities related to the verification of CCPs, regulatory limits, operator-defined limit, and supporting systems		