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AMPQUA405

Oversee compliance with Australian Standards for meat processing

Training support materials

Australian Meat Industry Training Package

Certificate III & IV in Meat Safety

## Elements and Performance Criteria

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| **Elements** | **Performance Criteria** |
| Elements describe the essential outcomes. | Performance criteria describe the performance needed to demonstrate achievement of the element. |
| 1. Identify major regulatory requirements relevant to meat processing premises supplying the domestic market | 1.1 Identify relevant legislation and its application to meat processing premises1.2 Identify relevant Australian Standards for meat processing1.3 Identify the agency responsible for the enforcement of meat processing legislation1.4 Identify the process for registration of a domestic meat processing premises1.5 Identify the registration process for meat inspectors |
| 2. Identify and describe requirements of the Australian Standard | 2.1 Identify the nature of approved arrangements and prerequisite programs2.2 Identify the meat inspection requirements of relevant Australian Standard2.3 Identify the disposition requirements of relevant Australian Standard2.4 Identify the requirements for reporting exotic or notifiable diseases |
| 3. Identify government review and audit processes | 3.1 Identify relevant government agencies regulating the meat industry at state level3.2 Identify the review and audit processes used by agencies to ensure compliance with the Australian Standard |
| 4. Oversee compliance with relevant Australian Standard | 4.1 Participate in internal verification activities for compliance4.2 Prepare for external review or audit against relevant Australian Standard4.3 Manage external review or audit of compliance4.4 Close out corrective action requests from external or internal audits4.5 Provide feedback to staff about review outcomes |

##  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:

* the legislation and regulations relevant to meat processing in their jurisdiction
* the key requirements of the relevant Australian Standards
* Commonwealth guidelines for Approved Arrangement – Meat
* requirements of Hazard Analysis and Critical Control Points (HACCP) programs
* livestock identification and traceability processes and procedures
* how to prepare for an internal or external audit
* meat industry data collection systems and reporting requirements
* how to close out corrective action requests from external or internal audits
* reporting requirements for emergency and notifiable diseases
* animal welfare standards and requirements of state/territory regulators.

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Training support materials for AMPQUA405 Oversee compliance with Australian Standards for meat processing

Regulatory requirements

What are the main types of meat processing premises in Australia?

There are a number of different types of meat processing premises in Australia. They vary according to the type of animal being processed and the type of process being undertaken.

Abattoirs and further processing premises

Abattoirs process livestock and this can involve a range of activities including:

* slaughter
* carcase dressing
* offal recovery
* boning
* slicing
* packing
* meat chilling and freezing.
* rendering.

The animals processed include: cattle, buffalo, sheep, goats, pigs, horses and deer. These establishments are covered by the Australian Standard AS4696:2023 Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption.

Game processing premises

These process animals that have been shot in the field. The animals processed include: kangaroos, wallabies, wild boar, wild goats, wild deer and possums. These establishments are covered by the AS4464: 2007 Australian Standard for the Hygienic Production of Game Meat for Human Consumption

Poultry processing premises

The birds processed include: chickens, ducks, geese and farmed game birds such as: quail, pheasants and guinea fowl. AS4465: 2005 Australian Standard for the construction of premises and hygienic production of poultry meat for human consumption. There is also a Victorian Standard “ Code of Accepted Farming Practice for the Welfare of Poultry” which covers slaughter and is also applicable in NSW and Victoria

Farmed game premises

These are specialised premises that process farmed game, which includes: emus, ostriches, emus and deer. The Standard covering the processing of ratites is the Australian Standard for the hygienic production of ratite (emu/ostrich) meat for human consumption AS 5010:2001.

Pet food premises

These process animals for pet food. The main animals processed in this manner are field shot horses, donkeys, camels, cattle and kangaroos. Domesticated animals to be used as pet food such as horses and cattle are usually processed through knackeries while animals such as kangaroos are field shot and then processed through pet food wild animal processing premises. This is covered by the Australian Standard Australian Standard for the Manufacturing and Marketing of Pet Food (AS5812:2017)

Casings premises

These process animal intestines into casing for sausage manufacture. This is covered by Australian Standard for the Hygienic Production of Natural Casings for Human Consumption (AS 5011:2001). This Standard contains the minimum requirements for the preparation and processing of natural casings derived from the intestines of sheep, pigs, goats and cattle.

What are the licensing requirements for meat premises supplying the domestic market?

In order to supply meat to the domestic market all meat processing premises must be licensed with the relevant State/Territory authorities. In order to be licensed all processing plants have to meet the relevant Australian Standard.

Most authorities have different classes of license depending on the type of animal/ meat being processed. The usual categories of license are:

* abattoir for red meat and pork
* further processing (boning)
* smallgoods manufacture
* retail (butchers)
* game/rabbit
* poultry
* casings
* crocodile
* pet food.

All red meat consumed in Australia is slaughtered at abattoirs and is then either sent directly to wholesalers, retail outlets or to boning rooms and small goods premises for further processing.

Which authorities regulate meat processing in Australia?

Between sixty and seventy percent of meat produced in Australia is exported and this is all produced in export-registered establishments under the control of the Commonwealth Department of Agriculture. The export registered abattoirs are also able to supply the Australian domestic market as well. The Department of Agriculture regulates export operations in all States and Territories. Apart from export certification Department of Agriculture supplies both a meat inspection service (including veterinarians and meat inspectors) and a regulatory oversight by Area Technical Managers.

Since the early nineties the regulation of the domestic meat industry in each State and Territory has been conducted by State Authorities. The regulations and regulatory methods vary somewhat between the States. However, processing establishments must all meet the relevant Australian Standards, which are called up by legislation in each State.

In Victoria PrimeSafe-Victoria regulates meat hygiene. PrimeSafe has a board and only a small number of employees. It keeps a register of qualified meat inspectors who may be employed by meat companies to perform inspection functions. It contracts a private audit company SGS and other audit companies to audit operations of meat companies to ensure they meet the Australian standard.

The South Australian Meat Hygiene Unit is part of the Department of Primary Industries and Resources (PIRSA). It has an advisory committee representing the industry instead of a board. It approves meat hygiene programmes for meat processors and conducts audits on their operations.

In New South Wales the Meat Branch of the NSW Food Authority, (previously known as Safefood Production NSW) is responsible for meat hygiene regulation. The organisation incorporates all aspects of food safety in all food products under the one umbrella. It conducts audits on meat operations.

In Queensland, SafeFood Qld incorporates all aspects of food safety in all food products including meat under the one umbrella. It is the largest state meat hygiene agency employing a number of meat hygiene officers who police the regulations throughout the State; although meat hygiene auditing is now open to third parties.

In Western Australia meat hygiene is controlled by the Department of Health with input from the Western Australian Meat Industry Authority. It supplies a meat inspection service to all registered domestic abattoirs in the State and audits meat operations. Meat Inspectors may also be Shire employees and more recently company employees.

In Tasmania the Department of Primary Industries, Parks, Water and Environment regulates the meat industry. There is a small meat hygiene unit that audits the performance of the domestic slaughterhouses and abattoirs in that State to ensure they meet operational and construction standards.

In the Northern Territory the Department of Primary Industries and Fisheries (DPIF) regulates the meat industry. There are no export abattoirs currently operating in the NT, however there are a number of community slaughterhouses servicing the aboriginal communities scattered throughout the Territory. The DPIF also regulate a large pet food industry based on the culling of feral horses, donkeys and camels. It also audits all meat operations.

All the State and Territory Meat Hygiene Authorities base their legislation on the Australian Standards in particular the AS4696:2023 *Australian Standard for the hygienic production and transportation of meat and meat products for human consumption.*

In Queensland, Victoria and NSW the same State Authority that controls the processing sector also controls the meat retail sector while in most other States and Territories the retail sector is controlled by other State Authorities or by local councils.

 Which Australian Standards apply to meat processing?

There are a number of Australian Standards that apply to meat processing. In addition meat that is further processed by cooking, drying or fermentation must also meet the requirements of the Food Standards Code.

The Australian Standards

The Australian Standard that applies to meat processing depends on the type of processing that is occurring. The various Standards and how they apply are listed below:

AS4696:2023 *Australian Standard for the hygienic production and transportation of meat and meat products for human consumption*

This applies to abattoirs and further processing premises that slaughter and process animals after ante-mortem and post-mortem inspection. It sets out among other things the Post Mortem Inspection techniques and dispositions for the conditions found in the major meat species.

AS4696: 2023 was formally amended and implemented in 2003. However, for export plants even after standard was formally modified exporting companies will still have to comply with importing country requirements. This means that the Department will have to present an equivalence argument to the regulators in the various markets where the provisions of Schedule 2 and 3 are not the same as the importing country requirement.

The Australian Standard that applies to pet food processing is the AS4841:2006 *Australian Standard for the Hygienic Production of Pet Meat PISC Report 88 Amended 2009*

Note: Pet food is also known as animal food as it may be used to feed animals other than pets e.g. zoo animals.

*The Australian Standard for the Hygienic Production of Game Meat for Human Consumption*

This applies to wild game animals shot in the field and processed at wild game processing premises.

*The Australian Standard for the Hygienic Production of Rabbit Meat for Human Consumption*

This applies to rabbits and hares, both those shot in the field and raised commercially.

*The Australian Standard for the Hygienic Production of Ratite (Emu and Ostrich) Meat for Human Consumption*

This applies to farmed emus and ostriches processed at specialist abattoirs with full ante- mortem and post-mortem inspection.

*The Australian Standard for the Construction of Premises and Hygienic Production of Poultry Meat for Human Consumption*

This applies to all poultry processing including further processing such as boning and packing.

*The Australian Standard for the Hygienic Production of Crocodile Meat for Human Consumption*

This applies to all farmed crocodile processing including further processing such as boning and packing.

*Australian Standard for the Hygienic Production of Natural Casings for Human Consumption*

This applies only to casing manufacture from animal intestines, not artificial casings.

*The Australian Standard for the Hygienic Rendering of Animal Products*

This standard applies to rendering of meat by-products from slaughtering and processing for the production inedible tallow and meat meal.

**The emphasis of this unit is on *The Australian Standard for the hygienic production and transportation of meat and meat products for human consumption* as it is the standard that covers most meat processing in Australia.**

It is important to note that all these standards are written in outcome terms. In many areas they are not prescriptive and in those cases reference should be made to either ISO standards e.g. for water and lighting or to guidelines issued by regulators or industry bodies. Some examples of these guidelines include:

* The Construction and Equipment Guidelines for Export Meat (Department of Agriculture)
* Industry National Animal Welfare Standards for Livestock Processing Establishments Preparing Meat for Human Consumption 2nd Addition(AMIC)
* Meat Hygiene Assessment 2nd Edition 2002 (Department of Agriculture)
* Guidelines for alternate procedures (Meat Standards Committee)
* Ritual Slaughter guidelines (Meat Standards Committee)
* Safe manufacture of smallgoods (Meat Standards Committee).

What are the three tiers of meat inspection standards?

There is only one standard of construction and operation for meat processing in Australia and it is based on the relevant Australian Standards.

But there are three tiers of meat inspection standard in Australia, based on the level and type of meat inspection system in place.

The main differences are that tier 1 premises have no on plant veterinary supervision of meat inspection and company employed meat inspectors conduct meat inspection at these premises in most States or Territories.

**The First tier -** This tier is based on the AS4696:2023 *Australian Standard for the hygienic production and transportation of meat and meat products for human consumption.*

This is the basic standard for all meat processing in Australia and underpins the production of meat for domestic consumption.

All meat processors in Australia must meet this Standard and be licensed by a relevant state/territory authority.

How are plants registered for export?

If the premises wish to export they must be registered with the Commonwealth authority, which is the Department of Agriculture Fisheries and Forestry. All premises meeting the requirements of the Australian Standard whether export registered or registered with domestic authorities may export to markets accepting this standard. But the main export markets for meat e.g. China, US, EU and Japan, do not accept this standard alone and place other importing country requirements. .

**Tier 1** domestic premises wishing to export must also be registered with Department of Agriculture in order to obtain export certification. A special category of registration was created under theExport Control (Meat and Meat Products) Orders to cater for this. The premises remain under the control of the state regulator, with verification audits by Department of Agriculture to ensure that the premises and the audit regimes are in compliance.

**The Second Tier-** Meat premises operating at this level comply with the additional requirements to the above, set by the Commonwealth to fully meet the requirements of the Export Control Act. This includes a fulltime veterinary presence and Department of Agriculture employed meat inspector or company employed inspectors. This allows export to a further range of markets. The export markets for these premises are also fairly limited because most of the high value market countries have specific importing country requirements which tend to mirror those of the EU or US for eligibility.

Specific markets under this category include Singapore, Malaysia and Japan.

**The Third Tier-** Abattoirs operating at this level meet the specific requirements set by overseas countries for meat to be exported to their markets. In particular the European Union and United States markets and those countries that set those markets standards for themselves as well. This includes China, South Korea, Poland, Mexico and Canada.

This is by far the most common listing for export-registered premises. This requires a full-time Department of Agriculture veterinarian on site at the export-registered establishment. Many premises are listed for the EU or US or both as it allows greatest flexibility for marketing.

What is AEMIS?

“The Commonwealth Government, in consultation with the Australian meat processing industry, has established a service delivery model that will provide trading partners certainty regarding meat inspection and food safety verification compliance – this is known as the Australian Export Meat Inspection System (AEMIS).

AEMIS is underpinned by an objective measure of meat hygiene called the Product Hygiene Index (PHI). The PHI is made up of a number of Key Performance Indicators that cover the macro and microscopic standards of meat.

AEMIS provides meat processors with the ability to engage qualified people called Australian Government Authorised Officers (AAOs) to undertake meat inspection tasks, giving businesses greater flexibility in how these staff are deployed when not undertaking meat inspection work.

AEMIS was established as part of the Australian Government’s Export Certification Reform Package. It was developed by the Australian Government and Australian Meat Industry Council (AMIC) through the Joint AMIC / Departmental Ministerial Taskforce.” (Department of Agriculture and water Resources website).

It should be noted that the US requires a government employed inspector to be employed at the end of the chain undertaking carcase inspection and the EU has prohibited the use of company employed inspectors but has permitted inspectors from a contracted third party.

How is the meat from these different categories of processing premises identified?

Abattoirs (tier 1) under the control of State or Territory authorities, when producing meat for the domestic market, are required to stamp their meat with the relevant stamp issued by that controlling authority (state regulator). This stamp generally includes a State or Territory logo and the number issued to the premises by the State or Territory authority.

When producing for an export market the company must apply an *Australia Approved* (AA) stamp to the meat. This stamp includes the export registration number issued to the company by Department of Agriculture.

Product diverted from the export market must have the AA stamp defaced with the word ‘domestic’.

Export registered premises (tier 2 and 3)

These premises, when producing carcass meat for all markets, must apply an *Australia Inspected* (AI) stamp to the meat. This stamp includes the export registration number of the processing plant.

If carton product is diverted to the domestic market, the AI stamp must be over-stamped with the word ‘domestic’.

In addition the EU requires all products to be stamped with an ‘E in a circle’ Stamp, to differentiate it from other market products.

Game meat processing premises

Most wild game premises are export registered. There are also a number of farmed game premises that produce product largely for the domestic market.

Meat from export registered game premises is identified by the *Australia Approved* stamp and the EU pentagonal stamp when exporting to that market.

Poultry processing premises

Most poultry processing premises are domestic only. Poultry is not individually stamped but the originating premises must be identified on the outer container.

Ratite processing premises

These are all export registered, and product is identified by an *Australia Approved* stamp.

Product diverted from the export market must have the AA stamp defaced with the word ‘domestic’.

What is the process for registration as a domestic meat processing plant?

The first step in the process is to contact the relevant state meat or food hygiene authority with a copy of the plans for the proposed premises. It is vital to do this prior to any structural work commencing on the premises, as it is easier to change a few lines on a plan than remove concrete.

An officer from the relevant Authority will then inspect the proposed site for suitability.

Other regulatory bodies will also need to be consulted including local councils and environmental authorities to ensure their requirements are being met.

The construction must be according to the construction requirements of the relevant Australian Standard.

When plans have been approved by all relevant Authorities, construction can commence.

Before registration or licensing the relevant controlling meat or food authority will expect that a QA manual will have been written detailing how operations are to be controlled to achieve the food safety requirements of the relevant standard.

To achieve this, the manual would undergo a desk audit by the controlling authority. When the manual and the construction have both been approved, registration or licence would be granted. Once it has been approved by the controlling Authority it is called the *Approved Arrangement*. More details on this subject are provided further on in this learning guide.

In some States or Territories this may be a provisional licence subject to satisfactory audit. In other states e.g. Victoria once the premises and manual is approved a licence is issued.

Generally, compliance audits would be conducted on a weekly or monthly basis until such a stage is reached that the controlling authority considers the newly registered premises to operating to a satisfactory standard.

The number of audits would then be reduced to a normal level, which varies from state to state, but is usually about 1-4 a year depending on the state and the establishment’s prior performance at audit.

For full details on abattoir design and construction see unit AMPA407 *Maintain abattoir design and construction standards.*

The ownership and control of abattoirs is limited to those that are deemed “fit and proper persons” by the regulatory authority. In practice this means that they do not owe the government money and have no recent criminal record.

What is the process for registration as a meat inspector at domestic abattoirs?

The meat company and not the meat authority employ meat inspectors employed at domestic abattoirs (except in WA). But in order to work as a meat inspector most States or Territory Meat or Food Hygiene Authorities expect meat inspectors to be registered with them.

The minimum requirement for registration is a Certificate III in Meat Safety in all States except in NSW where a Certificate IV in Meat Safety is required for the supervising meat inspector and SA in where a Certificate IV in Meat Safety is required (the Certificate IV is required within 12 months of appointment). However this may change and applicants are advised to get information on registration directly from the relevant regulator.

Once a person has a certificate, an application should be made for registration with the relevant authority.

The process for registration varies a little from state to state. Only when registered as a meat inspector with the relevant state or territory authority should a person commence work as a meat inspector.

Meat inspectors registering to be Department of Agriculture Authorised Officer under the Australian Export Meat Inspection System (AEMIS) must hold the Certificate III in Meat Inspection as a minimum but again a Certificate IV in Meat Safety is required within 12 months of appointment as an AAO. Candidates for an AAO position must also undertake a formal induction course and an assessment of post mortem inspection competency by Department of Agriculture.

What are the requirements of the Australian Standard?

Note: In this unit ‘Australian Standard’ generally refers to AS4696:2023 *Australian Standard for the hygienic production and transportation of meat and meat products for human consumption*. For game, poultry and other animals the term refers to the relevant standard.

There are a number of important elements to the Australian Standard:

* The whole chain of meat production from the farmgate to the retailer has been included in the one standard. It does not include game meat, ratites, crocodiles or chicken processing, but it does include cattle, buffalo, camels and alpacas, deer, sheep, pigs and horses.
* The Standard is largely written in a manner that sets out principles and outcomes rather than prescriptive rules. This approach allows processors to be innovative and flexible in their production methods. Although minimal set requirements particularly relating to temperature controls during handling and processing have been included and must be met.
* The alignment with the ISO 9000 standard has been abandoned although many principles and practices of the ISO 9000 system remain.
* To enable the controlling authorities to successfully audit that outcomes set out in the standards are being met, detailed requirements for record keeping have been included.
* To ensure the successful trace back of product following a food safety incident, strict requirements have been included in relation to product identification.
* The term ‘Approved Arrangement’ is included in the Standard to describe the operating manual(s) for the plant. In effect this means that the relevant authority must approve all relevant operations on a plant. These approved arrangements should incorporate descriptions of employed practices and procedures including
* good manufacturing processes
* good management practices
* process controls based on HAACP .
* establishments must have their QA programmes aligned to the standard and approved by the relevant controlling authority.
* the Standard has been closely aligned with the Food Standards Code.
* post mortem inspection techniques are set out in Schedule 2 while the dispositions to be made are set out in Schedule 3.

Since the Standard is written in outcome terms a series of guidelines have been developed to assist the industry in interpreting and applying the new standard and to also assist in meeting export requirements under the Export Control (Meat and Meat Products) Rules 2021.

 Typical guidelines used by auditors to assess compliance are as follows:

* The Construction and Equipment Guidelines for Export Meat
* Industry Animal Welfare Standard for Livestock Processing Establishments Preparing Meat for Human Consumption (AMIC Ed. 3)
* Guidelines for alternate procedures
* Ritual Slaughter guidelines
* Safe manufacture of smallgoods
* Approved Arrangement guidelines.

The Standard is divided into 8 parts and 3 schedules. It is further broken up into 25 consecutive elements addressing all aspects of meat production from the farm to delivery to the retailer.

What is an Approved Arrangement?

The definition of an ‘Approved Arrangement’ in the Australian Standard is

*“When used in relation to a provision of this standard applying to a meat business or meat transport business means the arrangement for the business that is approved by the controlling authority”*

The basis of all Approved Arrangements is a QA system based on HACCP. The QA system may be based on ISO 9000 system requirements, but it must at least meet all requirements of the relevant Australian Standard.

The Quality System/Approved Arrangement provides a framework to ensure that the wholesomeness and integrity of meat and meat products are maintained during their preparation for both the export and domestic markets.

The Approved Arrangement for an export plant would for instance:

* be outcome based
* address the relevant requirements of legislation and the relevant Australian Standard
* address any necessary importing country requirements
* use a risk-based approach (HACCP)
* be auditable against, and is capable of being related back to, the requirements of the Australian Standard
* be capable of being understood by the users of the system
* be subject to formal internal review to maintain currency.

The Approved Arrangement must demonstrate a commitment by the company to:

* food safety principles through the application of HACCP, Good Manufacturing Practices (GMP) and Good Hygienic Practice (GHP) to ensure that food safety outcomes are met; and
* truth in labelling through application of product identification, segregation, and traceability practices to ensure that product is accurately described and maintains its identification.

This must be achieved through all phases of production, from the receival of raw product (including animals) until delivery of the finished product by the following means:

* using good hygienic practices throughout and temperature control where applicable
* planning and analysing production processes to identify and control hazards using a HACCP plan developed in accordance with Codex Alimentarius Commission 1996: Annex 1 to Appendix II ALINORM 97/13
* monitoring and verifying the ongoing effectiveness of the procedures required for the production of wholesome products at defined intervals
* taking corrective and preventive action if monitoring or verification activities identify deficiencies, and
* keeping records including monitoring, verification, corrective and preventive actions.

What are pre-requisite programmes?

An effective HACCP plan is based upon a foundation of pre-requisite programmes (in the form of Standard Operating Procedures). These provide the basic environment and operating conditions necessary for the production of safe wholesome meat and food products.

These procedures incorporate ‘Good Hygiene Practice’ and ‘Best Practices’ within their framework. This should be the foundation for the basic requirements for food or meat hygiene.

In addition the process of hazard analysis should identify specific Critical Control Points to control identified hazards.

Further details of this process can be found in the unit AMPX420 *Participate in ongoing development and implementation of HACCP and QA system.*

What are the meat inspection requirements of the Australian Standard?

The basic requirement for meat inspection under the Australian Standard is that all animals and their carcases must undergo both an ante-mortem and a post-mortem inspection by a meat safety inspector.

The AS4696:2023 *Australian Standard for the hygienic production and transportation of meat and meat products for human consumption* details the basic ante-mortem and post-mortem inspection requirements for all animals slaughtered at abattoirs both domestic and export.

In this standard, ante mortem and post mortem inspection must be carried out by a meat safety inspector or on plant veterinary officer (OPV), who is an individual that:

1. *Is given approval by the controlling authority to inspect animals, meat and meat products and to apply dispositions*
2. *Holds qualifications that are approved by the controlling authority as being qualifications required for the purpose of the inspection of animals, meat and meat products, the making of dispositions and the control of hygiene*

The dispositions for diseases detected during both ante-mortem and post mortem inspection are described in Schedule 3 of the *Australian Standard for Hygienic Production and Transportation of Meat and Meat Products for Human Consumption.*

Ante-mortem inspection

After ante-mortem inspection, one of the following dispositions will be made about each animal. The animal will be:

* passed as fit for routine processing
* withheld from processing pending treatment for or recovery from an abnormal condition. These animals may be resubmitted for another ante-mortem inspection at a time specified by an inspector. Note: on export abattoirs suspect animals must be held for veterinary inspection
* subjected to immediate emergency slaughter to prevent deterioration of an abnormal condition, provided the condition would allow all or part to be passed for human consumption and processing would not jeopardise the hygienic production of meat
* processed under restrictions which prevent unacceptable contamination of the processing floor and which permit more detailed post-mortem inspection (suspects)
* rejected as unfit for processing and destroyed by humane means and then disposed of in an approved manner.

The AS4696:2023 *Australian Standard for the hygienic production and transportation of meat and meat products for human consumption* also requires the following actions to be taken after ante-mortem inspection:

* a record of ante-mortem inspection of animals rejected for human consumption or passed as suspect or emergency slaughter must be maintained
* animals that are deemed to be affected by diseases or conditions should be segregated from healthy animals while awaiting slaughter
* groups of stock that exhibit signs of symptoms of stress must be rested before slaughter
* animals that are known to have been treated with, or exposed to a drug, chemical or biological substance, shall not be slaughtered unless any withholding period recommended on the product label has lapsed
* animals that are condemned must be humanely slaughtered
* dead animals are removed quickly for disposal.

Further details on ante-mortem inspection may be found in inspection units of competency from AMP30322- Certificate III in Meat Safety Inspection.

Post-mortem inspection

The main aims of post-mortem inspection are:

* to identify diseased and unwholesome meat, to prevent it from being sold for human and animal consumption
* to identify and break the cycle of many diseases, preventing transmission between humans and animals, and animals to animals
* to assist with the trace-back of diseases to the property of origin
* to assess whether hygiene and good manufacturing practices are being followed during slaughter and dressing
* to maintain the wholesomeness of the product.

Schedule 2 of the *Australian Standard for the hygienic production and transportation of meat and meat products for human consumption* details the basic post-mortem inspection procedures that must be applied to all animals slaughtered at abattoirs in Australia, both export and domestic.

Further details on post-mortem inspection can be found in the unit materials for performing ante and post-mortem inspection for each individual species being processed.

Schedule 3 of the *Australian Standard for the hygienic production and transportation of meat and meat products for human consumption* details the Ante-Mortem and Post-Mortem dispositions. The Schedule details for animals, carcases and carcase parts for general findings, diseases and conditions according to topography.

What should be done if an emergency disease is suspected?

There should be an Emergency Animal Disease Preparedness (EADP) plan on every abattoir in Australia. Check the plan at your workplace.

This plan should be based on the meat-processing manual of AUSVETPLAN.

AUSVETPLAN is the master plan for dealing with exotic disease. It has been designed by experts from state and commonwealth departments responsible for animal health in Australia.

The EADP plan on the abattoir should contain the following:

* action measures detailed as job cards for all responsible key personnel
* a map showing perimeter fences, drainage, yards, adjoining properties, suitable areas for burial and ponds and waste water disposal
* an up-to-date list of notifiable diseases
* phone numbers both home and at work of key personnel e.g. on-plan vet, senior meat inspector, plant manager, engineer, stockman
* location and condition of a supply of soda ash and decontamination equipment
* instructions on how disinfectants and chemicals on site may be used for disinfecting people, equipment and vehicles, etc.
* where there are reasonable grounds to suspect an exotic or notifiable disease has been found, the qualified person, i.e. a veterinarian or meat inspector, must implement the control procedures detailed in the plan until the state or territory animal health authority advises otherwise, or takes control of the situation.

Control measures to be implemented

The first step when an exotic or notifiable disease is suspected is to immediately notify the state or territory animal health authority, e.g. the state department of agriculture.

The District Veterinary Officer, Regional Veterinary Officer or Chief Veterinary Officer in that state will take control of the situation. The national hotline number for emergency animal diseases is 1800 675 888.

Once the authority has been notified they will tell you what to do. The following is the standard procedure to gain control of a suspected exotic or notifiable disease at an abattoir.

Slaughtering/dressing

All slaughtering and dressing procedures may cease depending on the advice from the state veterinarian. It is sometimes preferable to keep slaughtering to keep people occupied otherwise they will want to go home and may spread the disease. All carcases and parts that might have been affected or contaminated must be secured and isolated in secure storage areas and kept separate from all unaffected carcases and parts.

There may be times when the relevant authority may not be available or able to reach the establishment within two hours. If this is the case, in consultation with the authority, the veterinarian or inspector in charge can permit the dressing of unaffected carcases, provided their identity can be maintained and all parts of the carcases can be isolated in a secure area. The veterinarian or inspector in charge may also allow the slaughtering of carcases that might have been affected, provided the carcases and parts can be also held in a secure location and readily identified.

Access and movement

The abattoir manager must control the access to and movement within the abattoir. This includes preventing the movement of animals, vehicles, people, working animals and meat products onto or off the abattoir. Animals must be prevented from being moved around the abattoir. Access to all affected animals must also be prevented and strictly controlled.

Any animal, meat product, vehicle or person that may have left the abattoir since the suspected animals came into the abattoir must be identified and their location known.

Inspection

Carcases that have been slaughtered, but not had a post-mortem inspection, must be inspected immediately. An ante-mortem inspection must also be carried out on all other animals awaiting slaughter on the abattoir.

Isolation and traceback

The veterinarian or inspector must then identify all affected animals, carcases and carcase parts. These must be isolated and secured to prevent them from being interfered with. The origin of the animals must then be determined.

All animals that are suspected of having the exotic or notifiable disease, or any that may have been in contact with these animals, must be isolated and secured.

Decontamination

The identification of any personnel who may have been exposed to the affected animal is essential. These personnel must be kept within their workplace so that their decontamination can take place. All possibly contaminated equipment must be identified and disinfected.

Water usage

The abattoir manager must minimise and control the water use in the abattoir. Waste water from all areas in the abattoir must be contained.

All these control measures must be in place until the state or territory authority takes control of the suspected situation or advises that control measures may cease.

These are only guidelines and will vary according to the disease. The Chief Veterinary Officer in each state or territory has the final say on what and how control measures are to be implemented.

What should be done if a notifiable, but not emergency, disease is suspected?

The action to be taken will depend on the nature of the disease, but it does not require the extreme action detailed for exotic diseases. Generally samples should be taken, the property of origin of the animal(s) determined. Then you should notify the state or territory animal health authority, e.g. the state department of agriculture for further advice on what to do.

In most cases a state department official will follow up your advice with a farm visit to the property of origin to advise on disease control e.g. hydatid control.

Reviewing and auditing meat operations

How is compliance with regulatory requirements assured on domestic meat premises?

Compliance with regulatory requirements is assured by two levels of audits:

* internal audits conducted by the company
* external (compliance) audits conducted by the relevant controlling authority.

The Australian Standard details the following requirements to be in place on a registered meat processing plant:

*3.6 A system is in place at the premises to verify whether the matters specified in this Standard that apply to the operations are met by the proprietor and the results of the verification is documented.*

*3.7 If a matter specified in this Standard is not being met:*

*(a) action is taken to address the fact the matter specified is not being met; and*

*(b) action is taken to ensure that the failure to meet the matter specified does not recur; and*

*(c) the effectiveness of the action referred to in paragraphs (a) and (b) is assessed.*

*3.8 The effectiveness of the action taken under clause 3.6 and clause 3.7 is reviewed regularly and further action is taken if necessary and the results of this review are documented.*

*3.9 Internal audits and management reviews are conducted of steps taken under clauses 3.6 to 3.8 and of management’s delivery of the meat businesses’ policy objectives and the results of these reviews, the decisions to take action as a result of the reviews and the action taken are documented.*

*3.10 For a meat business employing less than three people clauses 3.8 and 3.9 are satisfied if the business conducts a management review.*

Internal audits

These are audits conducted by the company as part of the process of verification to prove that they are meeting regulatory and food safety standards.

Certifying bodies, regulators and quality system standards require companies to conduct internal audits of the entire system at least once every year. Internal audits should be conducted during the year according to the internal audit schedule. This is to make sure that the company is continually complying with the documented system.

It is the company’s audit coordinator’s responsibility to either arrange for the internal audit to be done or to do the internal audit.

The auditor’s responsibilities involve reviewing the quality documents relating to the system to be audited. The auditor must make sure that controlled copies of the system procedures and work instructions are correct.

Record keeping is a key element of any quality system. An auditor may have to review the quality system manual for the system being audited to identify the records required and to ensure they are complete and up to date.

What regulatory audits are conducted on domestic meat processing premises?

Regulatory audits are conducted on meat processing premises by State/Territory Food/ Meat Authorities.

These are external compliance audits.

Some authorities conduct their own audits; others contract the function out to private companies.

Audits are generally conducted by certified auditors, with qualifications issued by a certification authority such as the Registration Authority Board Quality Services Australasia (RABQSA).

Audits are conducted on a risk basis with the number of minimum of audits per year set by the controlling authority. The number of audits can increase if critical non-conformities are detected and the regulatory authority decides that food safety may be at risk.

These external audits are compliance audits, conducted to assess compliance with regulatory requirements.

A compliance audit is a process by which a competent, independent auditor gathers measurable, verifiable information, to establish and report on the level of adherence to the required criteria or regulations.

In the meat industry the main regulatory requirements are:

* the Food Standards Code
* AS4696:2023 *Australian Standard for the hygienic production and transportation of meat and meat products for human consumption*
* the Export Control (Meat and Meat Products) Orders.

In compliance audits the auditor’s role is to gather evidence that the company’s operations and activities are carried out **as documented** in the company’s quality manual and meet the required outcomes as detailed in legislation and standards.

External compliance audits are also useful in that they prove (verify) that the activities are meeting stated requirements.

How should a meat company prepare for an external audit?

The most effective method for ensuring the area, process or system is ready for an external audit is to conduct an internal audit.

It is the audit coordinator’s responsibility to either arrange for the internal audit to be done or to do the internal audit.

To prepare adequately for an external audit and to help target internal audits, the audit coordinator may have to liaise with the external auditor to clarify the scope of the external audit. To this end the audit coordinator must be fully aware of the following:

* which part of the organisation is to be audited – department, section, unit etc
* what criteria they are going to be audited against – quality manual, designated procedures or work instructions, and so on.

The internal auditor’s responsibilities involve reviewing the quality documents relating to the system to be audited. The auditor must make sure that controlled copies of the system procedures and work instructions relevant to the scope of the audit are correct.

Record keeping is a key element of any quality system. An auditor may have to review the quality system manual for the system being audited to identify the records required and to ensure they are complete and up-to-date.

The documentation required for both internal and external audits are the same and include:

* contracts, specifications, standards, codes or agreements
* copy of QA manual, procedures manual and relevant legislation
* inspection and monitoring reports
* non-conformity reports, any necessary corrective actions and follow up plans issued during internal audits conducted since the last external audit.
* product performance records, warranty claims and customer complaints.

All the documents covered by the scope of the audit should be readily available to avoid external auditors having to wait for documents to be found. Since most external audits are paid for by the company being audited, this saves both time and money.

The three main methods used to obtain objective evidence that the system is in compliance are:

* reviewing objective evidence including inspection records, tally sheets, monitoring forms, product codes, signed documents, reports, etc.
* watching the worker perform the task specifically identified in the audit, and if necessary, asking them to repeat the task
* interviewing the worker using open and closed questions to follow audit trails and to clarify information.

Before the internal audit is completed you must ensure that any corrective action that has been identified during the audit has been addressed prior to the expected external audit.

If an internal audit is part of the preparation for an external audit, it is important that any deficiencies in the quality system identified during your internal audit is reported to the external auditors. The internal audit system can be used to demonstrate that the system is capable of identifying and correcting any non-conformances. The report to the external auditors must cover:

* the scope of the internal audit
* details of any non-conformances
* corrective actions
* planned follow-up actions.

Further details may be found in the Food Safety auditor units.

How should an external audit be managed?

Before the audit, the external auditor or regulator should contact the company’s Quality Assurance manager in writing to advise him or her of the requirement to conduct an audit. This advice should include an intention to conduct an audit as well as:

* the date and time of the audit
* the scope of the audit, e.g. full audit or partial audit, where the area to be audited is identified
* the amount of time the audit is expected to take
* the name of the lead auditor
* the number of people involved in the audit
* audit objectives and the basis for performing the audit
* any special requirements, such as evidence and/or reports of corrective actions taken as a result of previous audits.

If the company to be audited is notified verbally, they must also be notified in writing. If the audit cannot be conducted or is not feasible, the company must explain the reasons.

When the audit is confirmed, the Quality Assurance manager will usually nominate a person to coordinate and assist with the audit. This person is sometimes called the audit coordinator.

QA managers will often assume this role themselves.

The audit coordinator is a person employed by the company who has prime responsibility to organizeboth internal and external audits. This person may also conduct internal audits. This person is also responsible for liaison between external auditors and company personnel.

The audit coordinator’s roles and responsibilities include:

* establishing contact with the auditor
* clarifying the scope and arrangements for the audit with the auditor
* advising management and supervisors of the areas being audited of the time, scope and nature of the audit
* confirming with all parties about the audit
* maintaining effective communications with all parties.

The preliminary arrangements should also include ensuring that the auditor is aware of and conforms to the company’s visitor requirements. These include:

* the issue of personal protective clothing
* personal hygiene requirements e.g. hand washing, boot washing etc
* quarantine regulations if applicable
* evacuation and fire muster points
* smoking restrictions
* WHS requirements
* the introduction of the auditor to people involved in the audit.

The audit co-ordinator’s role is to makes sure that anyone affected or involved in the audit is contacted and his or her responsibilities confirmed. It is better to over-communicate than under-communicate.

The communication needs to be effective, to ensure everyone receives the most up-to-date information about the audit. If the communication is not effective, it can lead to confusion and an inefficient audit with the auditors needing to be at the premises longer than necessary.

Inefficient audits cost the company time and money.

The most effective method for ensuring the area, process or system is ready for an external audit is for the audit coordinator to conduct an internal audit. Internal audits should be conducted during the year according to the internal audit schedule. This is to make sure that the company is continually complying with its documented system.

It is the audit coordinator’s responsibility to either arrange for the internal audit to be done or to do the internal audit.

Your primary role during the actual audit is to ensure that the audit flows smoothly. To achieve this you may have to:

* help clarify any misunderstandings
* help company personnel explain complex issues
* ensure auditors receive the appropriate cooperation
* coordinate the movements of auditors around the site.

Further details may be found in the Food Safety auditor units.

How should corrective actions be implemented?

When an audit is completed non-conformities are documented in Corrective Action Requests (CARs). These are formal requests to rectify non-conformities.

It is not the auditor's responsibility to propose improvements. Auditors should not recommend changes to quality systems; they should merely identify opportunities for improvement through a formalized process.

Where non-conformances are identified e.g. procedures are not being followed, it is the responsibility of management within the organization being audited to improve the system. This includes corrective and preventative action

***Corrective Action*** is action taken to solve the immediate problem or to alleviate the symptoms of the problem.

***Preventative Action*** is action taken to eliminate the cause of the problem and to remove the possibility of a re-occurrence of the problem. Preventative action may take place much later than corrective action as it usually takes time to identify underlying issues and adopt a long-term solution.

Ideally corrective action should be taken as follows:

* regain control (i.e. stop the continued non-conformance)
* isolate and deal with non-conforming product (i.e. bring it back into specification or exclude it from conforming product lines)
* evaluate the cause of non-conformance in an effort to prevent recurrence
* record the non-conformity to assist in trend identification
* document the corrective action and follow up to complete the loop.

Note: Any training that is a result of corrective actions taken should be recorded.

By following this procedure continual improvement of the system will be achieved.

Most State Regulatory Authorities classify non-conformances as follows

Minor non-compliance

A minor non-compliance is a non-compliance that is not likely to compromise food safety or lead to the handling of unsafe or unsuitable food.

A minor non-compliance is an isolated low risk situation and does not compromise achieving control measures of the food safety program i.e. overall the food safety program is still effective in controlling the food safety hazards. When viewed collectively a number of related minor non-compliances may represent a major non-compliance.

Major non-compliance

A major non-compliance is a non-compliance that is likely to compromise food safety or may lead to the handling of unsafe or unsuitable food if no remedial action is taken. When viewed collectively a number of related major non-compliances may represent a critical non-compliance.

Critical non-compliance

A critical non-compliance is a non-compliance where the contravention poses an imminent and serious risk to the safety of food intended for sale.

Most Corrective Action Requests (CARs) will have deadlines for closing the CAR. Most CARs have a deadline of one month or less.

Critical non-conformities where food safety is affected must be addressed immediately. In general, major non-conformities must be addressed within 7 days and minor non-conformities must be addressed by the next audit.

But in any case, a reply to the CAR must be generated within the agreed deadline, even if the corrective action is structural change some time in the future, so long as there is objective evidence, such as contracts etc., which demonstrate that the corrective action will take place.