



Ministry of
Agriculture

**PROVINCIAL ABATTOIRS
CODE OF PRACTICE**

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Food Safety and Inspection Branch

Ministry of Agriculture

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CHAPTER 1.0: DOCUMENT PURPOSE

OVERVIEW

This document sets out the requirements for an abattoir, or slaughter establishment (Establishment) to operate with a Class A or B slaughter establishment licence under the BC Meat Inspection Program (BCMIP).

This Code of Practice is intended as a reference source for BCMIP staff and Establishment operators. It is not intended to stand alone, but rather to be used in conjunction with relevant legislation. The expectation is that the operator will use this guide appropriately during the planning, development, construction and use of licenced Establishments. It should also be used to guide existing and continuing Establishments.

The information in this document is based on legislation and is supported by BCMIP policy and current industry best practices. Future changes to legal requirements, BCMIP requirements and industry best practices will be captured in this document through approved amendments.

DOCUMENT AUTHORITY

The Ministry of Agriculture has the statutory authority to issue licences and govern Class A and B Establishments. Provincial legislation governing the BCMIP includes:

1. the *Food Safety Act*; and
2. the Meat Inspection Regulation

OTHER LEGISLATION GOVERNING SLAUGHTER ESTABLISHMENTS

Establishments must comply with requirements set by other federal, provincial, regional, municipal or local area legislation. The Establishment operator is responsible for being aware of these bodies and their legislated requirements, for example:

1. *Public Health Act*, Food Premises Regulation, provides for the Food Premises Operating Permit which is required to do further processing of meat products in a Class A Establishment.
2. *Environmental Management Act* and Waste Discharge Regulation, Code of Practice for the Slaughter and Poultry Processing Industries (Slaughter Code), regulates discharges to the environment from slaughter and poultry processing industries.
3. *Meat Inspection Act* and Regulations (Canada).
4. *Food and Drug Act* and Regulations (Canada).
5. *Health of Animals Act* and Regulations (Canada).
6. *Agriculture Land Commission Act* (British Columbia).

OPERATOR OBLIGATIONS IN RESPECT TO THIS DOCUMENT

1. Requirements in this document promote the production of meat products that are fit for human consumption, reduce the risk of product contamination, and ensure the ongoing maintenance and sanitation of Establishments. Operators must use this document as a guideline and follow and meet these requirements, as well as those outlined in other BCMIP policies and all applicable legislation.

Operators must also develop and follow a *Food Safety Plan* that outlines the procedures and controls for ensuring food safety and maintaining the operations of the Establishment. If an Establishment cannot

meet the requirements outlined in this document, the operator's *Food Safety Plan* must show how alternative methods will be used to meet the intent and purpose of the requirement in this document.

CHAPTER 2.0: ESTABLISHMENT DESIGN AND CONSTRUCTION

INTRODUCTION

This chapter sets out the requirements for the design and construction, or renovation, of an Establishment as required by the BCMIP, in accordance with the *Food Safety Act* and Meat Inspection Regulation (BC).

Establishment design and construction materials used can greatly:

- increase the production of food safe meat products;
- reduce cross-contamination of meat products;
- promote the separation of edible and inedible meat products;
- reduce the occurrence and growth of contaminants, such as pathogenic (disease causing) bacteria; and
- increase the sanitation and ease of maintenance of structures and equipment.

Establishment operators also must know and comply with the construction requirements (permits, processes and materials) of all other applicable governing authorities.

Any construction done before obtaining BCMIP approval may result in considerable delay, expense and inconvenience for the applicant. The BCMIP may also refuse to issue a licence.

For reference, the Canadian Food Inspection Agency (CFIA) website has a database of recommended or acceptable construction materials and finishes called the **Listing of Acceptable Construction Materials, Packaging Material and Non-Food Chemical Products**.

ESTABLISHMENT DESIGN REQUIREMENTS

OVERVIEW

Drawings of the Establishment’s design and layout, showing the process flow of product and personnel, must be included in the *Slaughter Establishment Plan* as required to make an application for license or to renovate an Establishment.

Three principles that must be included in the design of a slaughter Establishment are the:

1. One-way (uni-directional) flow of operations, product and personnel, from live animal holding areas through to shipping of finished products.
2. Separation of personnel that work in different parts of the Establishment (i.e., assign personnel to work in a specific area only).
3. Separation of incompatible areas (such as edible and inedible product areas) through all stages of production, storage and shipment.

These design principles result in the movement of meat products and staff through progressively cleaner areas of the Establishment without backtracking. This reduces the potential for cross-contamination of meat products and enhances food safety.

NOTE: At the planning and design stage, the applicant should consider the impact of any future expansion to the Establishment, in efforts to ensure the continued uni-directional flow and separation of activities.

GENERAL DESIGN AND LAYOUT

1. There must be a sufficient number of rooms and/or areas to ensure the separation of incompatible activities.
2. Offices and retail outlets that are part of the Establishment must only be accessed by a hallway separating them from the kill floor or production area.
3. Living quarters must be completely separate from the rest of the Establishment.

Acceptable Outcome for kill floor access:

- ↳ Outside entrances and/or exits should be located so that there is no direct access onto the kill floor or into processing areas. External openings should enter into a hallway or other intermediate area.
-

4. Animal receiving areas must be completely separate from the receiving or shipping areas for material or finished meat products.

Acceptable Outcome for animal receiving area location:

- ↳ General receiving areas, for items such as packaging materials, and
-

laundry should be at a different location than the animal receiving area.

5. Animal holding areas must not open directly into areas where food or packaging materials are handled or stored.

ONE-WAY DIRECTIONAL FLOW OF OPERATIONS

1. The Establishment layout must provide for the one-way directional flow of animals from arrival through slaughter, dressing, chilling to shipping of finished products.

Acceptable Outcomes for flow of operations:

- 👉 Animals should be unloaded at one end of the building and the finished products loaded out at the other end.
 - 👉 There should be no parallel production activities or crossing paths in the production line.
 - 👉 There should be no structural “shortcuts” (additional doors or openings) into areas that are outside of the one-way flow pattern.
-

SEPARATION OF PERSONNEL

1. The Establishment design must provide for the separation of personnel that work in different areas

Acceptable Outcomes for separation of personnel:

- 👉 Personnel working in more than one area should work in cleaner areas and then move to dirtier areas.
 - 👉 Foot baths, changing outer clothing and/or sufficient hand wash stations help reduce the potential for product contamination.
-

SEPARATION OF INCOMPATIBLE OPERATIONS

1. The design of the Establishment must provide for the separation of incompatible areas (edible and inedible product areas) through all stages of production, storage and shipment.
 - There must be a sufficient number of appropriately fitted rooms to ensure the separation of activities.
 - The flow of inedible materials must move away from edible products and directly to the inedible products storage area.

ESTABLISHMENT “SITE” DEVELOPMENT REQUIREMENTS

OVERVIEW

An applicant or operator must meet the BCMIP’s and other authorities’ site development requirements to ensure that the infrastructure supporting an Establishment can withstand the demands of the activity being performed.

Initial site development considerations include land use and zoning requirements, road access, water supply, and waste disposal systems. The water source and waste disposal methods are particularly important when municipal systems are not available.

An applicant or existing operator must be aware of and ensure that all other governing bodies’ requirements for site development can be met.

LAND USE

1. The proposed site must be zoned for use as an Establishment.
2. Written proof of zoning must be provided from the respective municipality.
3. The proposed use of the land as an Establishment, and any of its resulting operational activities, must be in compliance with *Agriculture Land Commission Act* requirements.
4. Written proof of compliance from the Agriculture Land Commission is required .

WATER SUPPLY

1. There must be “potable” water (suitable for human consumption – as defined by Health Canada’s ‘*Guidelines for Canadian Drinking Water Quality*’), sufficient in quantity and pressure for the operational requirement of an Establishment. See **Topic 2.5: Water Supply, Use And Storage** for detailed water requirements.
2. The water supply may be from a municipal source, a private well or other private source.
3. Proof of water quality potability for all sources is required prior to initial startup and must be verified on an ongoing basis.

SEWAGE DISPOSAL

1. Human waste effluent must be discharged into a completely separate drainage system from other waste disposal lines to a point outside the Establishment.
2. Proof of approved sewage systems is required from either a registered engineer or municipality.
3. Direct connection into a municipal system for Establishment effluent (wastewater) is preferred.
 - Private means of effluent disposal must meet provincial and local requirements.

WASTE DISCHARGE

1. Proposed methods for land filling, incineration, composting and or discharge of liquid, solid or semi-solid wastes must meet the requirements of the **Code of Practice for the Slaughter and Poultry Processing Industries** (Code) under the Environmental Waste Discharge Regulation of the *Environmental Management Act* (BC).
2. Proof of registration with the Ministry of Environment, or proof of an existing waste discharge permit, is required to BCMIP.
3. Waste discharge and disposal plans are required to BCMIP.

WASTE DISPOSAL OF CONDEMNED AND INEDIBLE PRODUCTS

1. Condemned and inedible products must be collected and removed from the Establishment through a method approved by BCMIP.
2. Proof of local area approval for the removal and disposal of condemned and inedible products is required from the municipality, waste carrier or ministry of environment.

ROADWAYS AND PARKWAYS

1. Roadways must be properly graded, dust-proofed and support adequate drainage.
2. Landscaping, roadways and parking lots must be graded so that all surface water from rain or snow melt flows away from the building and any local water sources.

Acceptable Outcomes for roadways and parkways:

- 👉 Pave roadways and parking lots.
 - 👉 Compact and treat non-paved roads and parking lots with dust approved suppressing agents.
 - 👉 Maintain a 1 m wide gravel, asphalt, or concrete, perimeter around the building to eliminate the growth of vegetation immediately against the building.
-

PEST CONTROL AND ENVIRONMENTAL CONTAMINANTS

1. The slaughter Establishment site must be located away from conditions that might interfere with the sanitary operation of the Establishment.
2. Establishment buildings must be located an appropriate distance from barnyards, stables, waste disposal facilities and offensive environments.
3. Outside areas next to buildings must be kept free of weeds and debris.

GENERAL CONSTRUCTION AND BUILDING MATERIAL REQUIREMENTS

OVERVIEW

Materials used to build a new, or renovate an existing, Establishment must be able to withstand the demands of the activity being performed in each specific area.

There are four general principles that guide construction and the use of materials:

1. Masonry and steel are the most durable and sound construction material.
2. Combinations of steel, concrete or masonry, metal or metal-clad doors and door jambs, and heavy metal screening of all openings, provide good pest control and promote hygienic handling of meat products.
3. Materials that are hard, smooth and impervious to moisture promote easy cleaning and sanitization.
4. Materials must be free of any noxious or toxic substances.

The CFIA website has a database of recommended or acceptable construction materials and finishes. The database is called the **Reference Listing of Acceptable Construction Materials, Packaging Material and Non-Food Chemical Products**.

All construction materials and building methods must also meet the building codes of other applicable governing authorities.

FLOORS

1. Floors must be made of slip-resistant, hard and impervious materials and be free of pitting, indentations, cracks, crevices and ledges.

Acceptable Outcomes for floors:

- 👉 Dense acid-resistant, non-dusting and waterproof concrete.
 - 👉 Non-slip industrial flooring finish.
 - 👉 Some synthetic materials.
-

2. Floors must be sloped to drains to remove all fluid waste and prevent pooling.

Acceptable Outcome for floor slope to drain:

- 👉 Floors should be graded at 1-2 cm per meter to the drains.
-

3. Freezer floors must be insulated to prevent frost penetration into the underlying soil.

DRAINS

1. **Drains and Inlets** must be constructed of materials approved by all relevant building codes.
-

2. **Floor and Hub Drains:** The number, size and location of drains and drain inlets should be determined by the demand to constantly remove fluid wastes, and to prevent water from flooding the surrounding area or pooling around the drain inlet.
- The number of drain inlets and their size should increase in areas of high water usage.
 - Floor and hub drains must be sloped, deep-seal trapped, equipped with rodent screens and be vented to the outside of the Establishment.
 - Where several drainage lines discharge into a common trunk line, the trunk line must be proportionately larger to efficiently handle the discharged fluids.

Acceptable Outcomes for floor and hub drains:

- 👉 One drain inlet, 30 cm x 30 cm or equivalent, should be provided for every 40 m² of floor space.
 - Smaller drain inlets can be used in areas such as coolers or processing areas where water is not used for cleaning.
- 👉 Drain lines should be at least 10 cm in diameter.
- 👉 Floor and hub drains should have drain cover apertures with a minimum size of 4 cm², particularly in areas where Specified Risk Material (SRM) is removed’.
- 👉 Floor drains are not recommended in freezers or areas used for dry goods storage.

NOTE: In existing Establishments where there is inadequate floor slope or poor drainage, the Establishment’s *Food Safety Plan* must provide operational controls to prevent pooling and standing water.

3. **Bleeding Area Drainage:** Bleeding areas must be steeply graded to the blood and wash-up drains.

Acceptable Outcomes for bleeding area drainage:

- 👉 The slope should be no less than 17 cm per meter to the inlet.
- 👉 The blood drain line should be a minimum of 15 cm in diameter or more to prevent blockage due to clotting.

4. **Trench, Valley, Gutter or Channel Drains:** These types of drains are permitted, if constructed as an integral part of the floor using acceptable material (metal or vitreous tile) and covered with removable sectional grated covers.

- The surface of the drain must be fully visible.
- Permanent structures or equipment must not be placed over trench drains at any point along their course.
- Trench drain must not run through a wall unless the trench wall opening is equivalent in size to a pedestrian door.

Acceptable Outcomes for trench drains:

- 👉 The internal corners must be coved to a minimum radius of 6 mm (1/4 inch).
 - 👉 The depth of the trench should not exceed its width.
 - 👉 The width of the trench drain opening, at floor level, should be equal to or greater than its width at the bottom along its entire course.
 - 👉 Removable grated covers should not be any longer than 120 cm.
-

5. **Direct Drainage:** Water discharged from equipment must drain directly, to prevent flooding of adjacent areas.
 - Refrigeration coils, ice machines and attached storage bins require back flow prevention mechanisms to prevent the back flow of air from the drain into equipment.
6. **Overhead Drain Lines** must be avoided in critical areas such as storage bins and cutting tables where meat products are unprotected.
7. **Human Waste Drainage:** There must be complete separation of human waste effluent from all other waste effluent.
 - Drainage from toilets, urinals and hand wash sinks in washrooms must be completely separate from other sewage lines to a point outside of the Establishment.
 - Drainage from areas such as boiler rooms, mechanical rooms, workshops or battery rooms, may drain into the human effluent system.

NOTE: An adequate number of back flow valves must be in place to prevent contamination. As these valves require regular cleaning and maintenance to work properly, the Establishment's *Food Safety Plan* must include written controls and mitigation procedures in the event of back flow valve failure.

NOTE: In new Establishments or in Establishments undergoing renovations, the sewage system design should completely separate the live animal receiving, animal holding, inedible product handling areas and evisceration lines for effluent discharge from other effluent drainage lines. This will eliminate the risk of contaminating edible meat product handling and storage areas.

CATCH BASINS

1. Catch basins, grease traps, inceptors and other means of separating organic matter from effluent must be located in the inedible section of the plant or outside the building.
2. Basins must be constructed to facilitate ease of maintenance and sanitization.

WALLS

1. Walls must be made of smooth, hard and impervious materials and be free of pitting, indentations, cracks, crevices and ledges.

Acceptable Outcomes for walls are:

-
- ☞ Prefabricated panels.
 - ☞ Smooth steel.
 - ☞ Fibre reinforced panel (FRP) coverings.
 - ☞ Trowelled cement, plaster, or cement blocks sealed with epoxy coating to provide a smooth surface.
-

2. Walls must be protected at the base by **curbs or bumpers** made of hard impervious material that are smooth, level, free of cracks, chipping and other surface defects.

Acceptable Outcomes for curbs or bumpers are:

- ☞ To be sloped at a 45° angle.
 - ☞ To protrude from the wall surface at a minimum of 5 cm.
 - ☞ Have a minimum height suitable to prevent damage and therefore facilitate effective sanitation.
-

3. Corners and junctions of walls and floors must be **coved** in the kill floor, coolers, condemned and processing areas, and other areas subject to frequent cleaning and moisture.

Acceptable Outcomes for coving is to have:

- ☞ A water tight seal covering all junctions.
 - ☞ Mortar joints that are smooth and flush.
-

4. Walls, curbs, corners and junctions must be finished with a white or light coloured surface to promote light reflection.

CEILINGS

1. Ceilings must be level, hard and consist of impervious materials and be free from pitting, indentations, cracks, crevices and ledges.
2. Ceilings of interlocking, rust-resistant metal sheeting, such as heavy gauge, heavy duty, galvanized steel, anodized aluminium or stainless steel are permitted.
 - Sheeting must be fastened to the metal infrastructure by adhesives found in CFIA reference list of acceptable materials.
 - When galvanized metal is used, the zinc coating must be at least ASTM A525M grade G-90.
3. Ceilings must be built with closed joist construction.
 - Open joist construction is permitted only in evisceration areas and in carcass coolers.

Acceptable Outcomes for open joist construction of ceilings is that joists should be:

- ☞ Treated to prevent rusting and corrosion.
-

-
- 👉 Spaced 90 cm or more on centre.
 - 👉 Constructed to not collect dust and be accessible for cleaning and sanitization.
-

4. Corners and junctions of walls to ceilings must be coved in the kill floor, coolers, condemned area, processing areas, and other areas subject to frequent cleaning and moisture.

Acceptable Outcomes for corners and junctions of walls to ceilings:

- 👉 A water tight seal is in place on all junctions.
 - 👉 Mortar joints should be smooth and flush.
-

5. Ceiling heights vary, depending on the purpose and use of the room. Required heights include:
 - General rooms and areas must have a minimum ceiling height of 3.3 m.
 - Livestock receiving, slaughtering and dressing rooms must have a minimum ceiling height of 4.8 m.
6. Ceilings that support overhead rail systems must be high enough to accommodate the minimum rail height needed to keep carcasses from contacting the floor (see the Recommended Best Practices for Rail Heights on the next page).
7. Ceilings must be high enough to allow for cleaning and inspection of processing equipment.
8. Ceiling surfaces must be white or light coloured to promote light reflection and ease of cleaning.
9. When plastic or metal panels are used as internal finishes in processing areas, they must be affixed (laminated) to the underlying structure(s) over their entire area.

Acceptable Outcomes for attaching panels in processing areas:

- 👉 Adhesives must be from the recommended CFIA materials (see the reference in the topic overview).
 - 👉 The use of rivets, screws or nails for attaching panels to the substructure is discouraged.
-

STAIRS

1. Stairs in production areas must be constructed of slip-resistant impervious material.
2. Catwalks (or mezzanines) above processing areas must be made of solid masonry or metal construction with raised edges.

RAILS AND SUPPORTING STRUCTURES

1. All rails on the kill floor and in coolers must be located high enough from the floor and far enough away from walls and other structures to ensure that no parts of a carcass touch the floor, walls or other structures.
2. All rails and supporting systems must be constructed of durable corrosion-resistant material.

Acceptable Outcomes for rails and supporting structures:

- ☞ All rails and supporting systems should be coated and lubricated with CFIA recommended substances (see the reference in the topic overview).
 - ☞ All supporting beams on rails and supporting systems must be free of crevices and ridges.
-

SPECIFICATIONS FOR RAIL HEIGHTS					
SPECIES*	BLEEDING	DRESSING	COOLER		
	Minimum distance from top of rail to floor	Minimum distance from top of rail to floor	Minimum distance from top of rail to floor	Maximum distance from top of rail to shackle contact point on carcass	Minimum spacing distance from walls or pillars
Cattle	3.7 m	3.1 m	3.1 m	30 cm	60 cm
Calves	3.7 m	2.4 m**	2.4 m	30 cm	60 cm
Sheep & Goats	2.4 m	2.0 m*	2.0 m	30 cm	60 cm
Hog Head on	2.6 m*	3.1 m	2.7 m	30 cm	60 cm
Hog Head off		3.1 m	2.4 m	30 cm	60 cm
Horses	4.3 m	3.4 m	3.4 m	38 cm	60 cm

*For any species not listed, the rail must be of adequate height to ensure carcasses do not touch the floor

**When a stand or platform is placed underneath a hanging carcass, the top of the stand or platform is considered to be the “floor”

DOORWAYS AND DOORS

1. Doorways must be of sufficient height and width for product, equipment and personnel to move through freely.
2. Doors and door frames must be constructed of rust-resistant metal or other suitably durable material.
3. Door jams must be made of, or clad with, rust-resistant material.
 - The junction between the wall and door jamb must be completely sealed with a flexible sealing caulking compound.

4. Exterior and interior doors must be self-closing.

Acceptable Outcomes for doorways and doors:

- 👉 Doorways should be a minimum of 1.5 m wide.
 - 👉 Exterior shipping and receiving doors should be equipped with bumper door seals or other equivalent device.
 - 👉 All exterior doors should be above ground level with a lip or curb to prevent rodent entry.
 - 👉 Screens should be used on exterior doorways to prevent insect and rodent entry.
 - 👉 Air curtains, ducts or other similar devices are encouraged over the outside doorways of all shipping and receiving areas.
-

WINDOWS AND SCREENS

1. Windows in production areas must be made of shatterproof material or be adequately protected (covered with a plastic coating or other material).
 - Windows must be non-opening.
 - Frames must be tight-fitting and made of a rust-resistant material.

Acceptable Outcomes for windows:

- 👉 Window sills should slope internally at a 45° angle.
 - 👉 The window's bottom sill should be at least 1 m from the floor.
-

2. Exterior windows in non-production areas may open.
 - Openings must have tight fitting screens.
 - Mesh openings must be small enough to prohibit the entry of insects or debris.

LIGHTING

1. The electrical service for lighting must meet national, provincial and local building code standards.
2. All rooms and areas of the Establishment must be adequately lighted by natural light, artificial light or both.
 - General areas, such as dressing, processing, packaging, labelling and storage (dry, refrigeration, or freezer), must have a minimum illumination intensity not less than 220 Lux¹.
 - An illumination intensity of at least 540 Lux is required in any specialized area, post mortem inspection areas and returned product examination areas.

¹ Level of illumination or Lux. The Lux is the international unit of illumination. One Lux is the amount of illumination received by a surface at a distance of 1 m from a light source whose intensity is taken as a unit.

Acceptable Outcomes for specific illumination intensity:

- ☞ A minimum of 400 Lux in the inspector's office.
 - ☞ A minimum of 500 Lux in pens for ante mortem inspection areas or where suspect animals are inspected.
-

3. Light intensity must be monitored regularly.
 - Readings must be taken at the working level.
4. The source and direction of light, either natural or artificial, must not alter the normal appearance or meat products, either through glare or colour distortion.
5. Safety light bulbs and fixtures made of unbreakable material must be used in all production areas.
 - Protective light covers must be solid and fully enclose any breakable light fixtures.
 - The use of wire, or metal cages for a light cover is not acceptable.

USE OF PAINT

1. Generally the use of paint is not permitted in processing areas, such as on walls, floors, ceilings doors, equipment or containers. However products and applications may be considered on a case-by-case basis.
2. The use of paint is permitted in non-production areas, such as lunchrooms and office areas.
3. The use of lime based white washes is only permitted on livestock pens and chutes.
4. Paints containing fungicide, pesticide or other poisonous ingredients must be approved by the BCMIP.

NOTE: Paint may be permitted in production areas in existing Establishment, if it is the only practical solution for rust-prevention of structural component, and/or for providing a smooth cleanable surface for walls and ceilings.

USE OF WOOD OR DRY-WALL

1. The use of wood, dry-wall, plasterboard, or porous acoustic-type boards is permitted in non-processing areas only.

SHELVING AND RACKS FOR STORAGE

1. Shelves, racks and other containers in product processing, handling and storage areas must be made of materials that are smooth, corrosion-resistant and able to withstand repeated cleaning and sanitation.
2. Only non-toxic materials must be used to construct storage equipment.
3. The lowest level of any storage equipment, shelf, rack or other container must be at least 10 cm off of the floor.

ESTABLISHMENT VENTILATION REQUIREMENTS

OVERVIEW

The safety of meat and meat products can be impacted by the Establishment's ventilation system. Controlling the air flow and the rate of air exchange are two critical components to consider when building an Establishment.

Ventilation systems must create a positive airflow from cleaner to dirtier areas. The greatest number of micro-organisms (such as bacteria, moulds, and fungi) exists where live animals are handled and inedible products are stored. Therefore, air must flow in the opposite direction of the product flow (i.e., processing to kill floor) to reduce the spread of air borne contaminants.

Ventilation systems must provide for sufficient exchange (volume and circulation) of air to all parts of the Establishment. This will keep air fresh and control undesirable conditions, such as steam, excess moisture (condensation), odours, dust, dirt or variations in temperature.

VENTILATION SYSTEMS IN GENERAL

1. Each processing area must have a dedicated ventilation system with a slightly positive flow to an adjacent area that is not as clean.

Acceptable Outcomes for ventilation systems:

Sufficient volume of air is defined as the amount of air required to prevent condensation from forming on the ceiling, walls or equipment. Recommended rates of air exchange are:

- 👉 Refrigerated rooms: 5 changes of air per hour.
 - 👉 Kill floor: from 4 to 15 changes of air per hour depending on the type of slaughter process and the number of animals being handled.
 - 👉 Scalding operations require an adequate rate of air exchange to prevent steam and condensation and may require a heated air supply.
-

2. All refrigerated rooms must not allow a buildup of excessive moisture.
3. High-temperature edible and inedible rendering equipment, driers and evaporators must be equipped with condensers.

AIR INTAKES

1. Air intakes must be located in areas that are free of odour, dust, smoke, or other contaminants.
2. Air intakes must be equipped with screens or filters to prevent entry of pests or dust.

Acceptable Outcomes for air intakes:

- 👉 Air intakes should be located in a shaded area on the cleanest side of the
-

Establishment.

- 👉 Air intakes should be a minimum of 60 cm off the ground.
 - 👉 Air intakes that are 1 m or less off the ground, or any other horizontal surface, should have a ¼ inch (0.63 cm) rodent screen.
 - 👉 Air intakes that are more than 1 m off the ground, or any other horizontal surface, should have a ½ inch (1.27 cm) bird screen.
 - 👉 Air intakes should be positioned to prevent the entry of rain and snow.
-

EXHAUST OR DISCHARGE VENTS

1. Air discharge vents must be designed so that discharges do not affect the air quality in other areas of the Establishment.

Acceptable Outcomes for exhaust or discharge vents:

- 👉 High volume exhaust fans should be equipped with automatic closing back draft dampers and be properly screened.
 - 👉 Low velocity, or passive, exhaust vents, that are not equipped with back draft dampers, require screening of sufficiently small mesh to prevent the entrance of insects.
 - 👉 Discharge vents should be positioned to prevent entry of rain and snow.
-

2. Air discharge vents must be designed and located to ensure that pests cannot enter the Establishment.

Acceptable Outcomes for discharge vents:

- 👉 Discharge vents that are 1 m or less of the ground, or any other horizontal surface, should have a ¼ inch (0.63 cm) rodent screen.
 - 👉 Discharge vents that are more than 1 m off the ground, or any other horizontal surface, should have a ½ inch (1.27 cm) bird screen.
-

3. Exhaust vents must be located in the sticking, scalding, and washing areas.
4. All equipment that produces heat, steam, vapour (such as scald tanks), smoke or odour must vent directly to the outside.
5. Washrooms must be equipped with exhaust fans.

FILTERS

1. Filters must be put on air intakes for rooms where meat and meat products are handled or stored (with the exception of the kill floor). Filters are used to remove environmental contaminants such as dust particles from the air.

Acceptable Outcome for filters:

-
- 👉 Air intake filters rated as 30% effective for particles of 2 microns should be used.
-

2. Air compressors attached to air powered hand tools, that are used for the agitation of meat products submerged in a liquid, and for packaging of products must have air intake and outlet filters.

Acceptable Outcomes for filters on compressors:

- 👉 Air intake filters should have a 98% efficiency at 10 microns.
 - 👉 Air outlets should be equipped with activated charcoal filters that are capable of removing traces of vaporized oil and have no less than 99.7% efficiency at 0.3 microns.
 - 👉 A 0.02 micron particulate filter and an activated charcoal filter capable of removing trace particles of vaporized oil from air injected to facilitate skinning and boning should be used.
-

DUCTS

1. Ducts and diffusers must be of an adequate size and located to ensure functional air flow patterns.
2. Ducts must be rust-resistant and impervious to moisture.
3. Diffusers must ensure that fresh air enters the room without the development of condensation on ceilings, walls or equipment.

WATER SUPPLY, USE AND STORAGE REQUIREMENTS

OVERVIEW

The Establishment must have potable water that is adequate in temperature, quantity and pressure to meet its operational needs.

- “Potable” (as defined by Health Canada) means that the water (including ice and steam) is suitable for human consumption.
- “Adequate temperature” means that water is hot enough to ensure effective sanitation.
- “Adequate quantity and pressure” means that the water flow can meet the cleaning requirements for all activities, without the water (and contaminants) becoming airborne in the form of aerosols.

The operator must test the water supply on a regular basis and have proof (certification) of water potability from the designated provincial authority. Water from a public water source is usually acceptable. Private wells must be adequately controlled and protected to prevent contamination.

WATER SUPPLY AND USE IN GENERAL

1. The quantity of potable water coming into the Establishment must be sufficient to meet the maximum demand of all operations that are taking place at the same time.
2. Water pressure must be sufficient to meet the needs of the Establishment during all phases of operation.
 - A pressure washer may be used to boost the water pressure for cleaning operations.

Acceptable Outcome for use of a pressure washer:

- When a pressure washer is used to apply cleaners and sanitizers, the pressure level should not create aerosols.
-

3. Heating equipment must heat water to temperatures appropriate for the activity for which it is being used.
4. An adequate number of hose connections must be provided throughout the Establishment.
5. Potable water lines must be protected from contamination.

WATER FROM PRIVATE WATER SOURCES

1. When the Establishment’s water comes from a private well, the well head must be adequately protected so contamination does not occur.
2. Water storage tanks must be constructed of smooth, impervious and easily cleaned and sanitized materials that do not pose any risk of contamination to any stored water.

3. Water storage tanks must be located in an area (inside or separate from the Establishment) that allows for inspection, regular cleaning and sanitizing of both the inside and outside of the tank.

WATER TREATMENT

1. Where water treatment systems (such as chlorination and ozone treatment) are used, the Establishment must have standard operating procedures (SOP) to ensure the treated water is and remains potable.
2. A metering device must be installed for adding water treatment agents in the correct concentration relative to the water flow rate.
 - The metering device must have a warning device to indicate malfunctions.
3. A reliable test kit with adequate supplies must be available for in-house monitoring.

USE OF NON-POTABLE WATER

1. Non-potable water must only be used for fire prevention or condensers used to heat boilers or in refrigeration systems.
2. There must not be any connection between the non-potable water system and potable water system.
3. Non-potable lines must be clearly and distinctly identified.
4. Non-potable water must not be used where edible products are processed, handled or stored.

ICE EQUIPMENT AND STORAGE

1. Ice used in an Establishment must be produced from potable water only.
2. Ice machines and storage equipment must be made of corrosion-resistant materials that are easily maintained, cleaned and sanitized.
3. Ice must be stored and protected from contamination.
4. Ice machines and storage equipment must be located in the packaging or processing area.

Acceptable Outcomes for ice equipment:

- 👉 Ice machines or storage equipment should not be placed on the kill floor, in coolers, in rooms or areas exposed to another source of water, or in dry storage or chemical storage areas.
-

HAND WASH STATIONS

1. Hand wash stations must be in sufficient number to maintain sanitary conditions and be readily accessible to all slaughter and processing areas.
2. Hand wash stations must operate in a hands free manner such as foot, knee or sensor operated.
3. All stations must have hot and cold running water, with adequate pressure to allow for thorough cleansing.

Acceptable Outcome for hand wash stations:

- ☞ To melt fat and dissolve other solids a water temperature range of 46° C (115° F) to 52° C (125° F) is required.
-

4. Each basin must be connected directly to a floor drain.
 - This requirement does not apply to hand wash stations on the kill floor.
5. Each station must be equipped with:
 - an accessible soap dispenser of good capacity;
 - individual single use towel dispenser
 - roller and multi-use towel systems are prohibited; and
 - garbage can.
6. Chemical hand dips, where provided, must be adjacent to a hand washing station.

SANITIZERS

1. Hot water or chemical sanitizers may be used. Chemical sanitizers must be used as per the manufacturer's instructions and the operator must have a written SOP for use.
2. Knife and saw sanitizers must be made of rust-resistant metal.
3. Water sanitizers must have flowing potable water of adequate pressure for thorough cleansing.
4. The temperature of hot water sanitizers must be maintained at no less than 82° C (180° F).
5. Sanitizers must have overflows and the basin must be connected directly to a floor drain.
 - This requirement does not apply to water sanitizers on the kill floor.
6. Sanitizers must be located on the kill floor and in areas where carcasses are dressed and parts of carcasses or other meat products are processed.
7. In poultry Establishments, sanitizers are required at the trimming, neck cutting and giblet salvage stations.

EQUIPMENT CONSTRUCTION AND INSTALLATION REQUIREMENTS

OVERVIEW

Equipment must be designed, constructed and installed to minimize the chance of contamination of meat, meat products, packaging, or the Establishment itself. Equipment must be of a simple design so that:

- there are no parts or areas that easily trap soil or organic matter;
- all parts are readily accessible for cleaning;
- it is capable of withstanding repeated washing and sanitation; and
- contamination does not occur due to the leakage of lubricants, metal filings, or other substances.

All equipment must be assembled, installed, calibrated and maintained according to manufacturer guidelines (manuals).

GENERAL EQUIPMENT CONSTRUCTION

1. All equipment must be capable of performing as intended.
2. All equipment must be constructed of corrosion-resistant material, free of noxious elements, and be capable of withstanding repeated cleaning.

Acceptable Outcomes for meat processing equipment materials:

- ☞ Stainless steel (300 or 18/18 series is recommended because of its superior corrosion resistance).
 - ☞ New materials containing plastics, resins, fibreglass and latex. These materials must receive BCMIP approval prior to installation and use.
-

3. Materials that are not acceptable for equipment that has contact with edible meat products include:
 - copper;
 - cadmium;
 - lead;
 - corroded metals;
 - equipment with painted surfaces;
 - containers or equipment made of enamel ware or porcelain used for handling and processing meat products; and
 - wood, dry-wall, plasterboard, or porous acoustic-type boards on any exposed surface that is not appropriately sealed.
4. Meat contact surfaces of equipment must be constructed with materials that are:

- smooth;
 - non-corrosive;
 - rust-resistant;
 - non-toxic;
 - non-absorbent; and
 - durable enough to withstand repeated cycles of cleaning and sanitizing.
5. Equipment and service (air, water and electricity) connections and lines must be positioned away from walls and ceilings or be completely sealed to the walls or floor.
 6. Equipment must be positioned where it will not be contaminated by proximity to another processing area.

Acceptable Outcomes for equipment placement:

- ☞ The order and placement of equipment from one process step to the next should support a one-way flow of product and personnel.
- ☞ Equipment placement should avoid backtracking or cross-over of personnel and product.

-
7. Equipment must not cover or impede cleaning or inspection of drains and drain inlets.
 8. All welded equipment including tables and bins must have continuous smooth and even welded joints.

Acceptable Outcome for welds on equipment:

- ☞ Junctions and corners should be covered with a minimum radius of 6 mm.

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9. Equipment must be easily disassembled.

Acceptable Outcome for disassembly:

- ☞ Quick opening devices that require simple or no tools should be used to facilitate dismantling.

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10. Pumps, piping and other conduits must be easily demountable and easily cleaned by means of dairy or sanitary-type fittings.
 11. The use of long chutes is discouraged, but if used, they must be demountable.
 - Chutes leading from edible to inedible product areas must be hooded and vented.
 12. Where stuffers or grinders are used, metal detectors must be used.
 13. Portable equipment used for collecting, holding and transferring condemned and other inedible material must be made of industrial grade nontoxic plastic or rust-resistant metal, water-tight, covered, and distinctly and uniformly marked for identification.

14. Retractable drop cords may be used to power portable equipment provided they are properly connected to the power source, suspended from the ceiling and kept in a sanitary condition.
 - Electric cords must not be strung across the floor.
15. Water hose racks or reels must be positioned near where they are used.
 - The use of long water hoses is discouraged.
16. On all equipment that requires calibration, checks must be performed following installation and at regular intervals thereafter.
17. The Establishment's *Food Safety Plan* must include a schedule for, or identified frequency of, calibration checks and the protocols needed for the proper maintenance, cleaning and sanitation of all equipment (**See Chapter 4: Food Safety Plan**).
18. Manufacturer manuals for commercially built equipment or supplier/operator developed manuals for rebuilt or custom-built equipment must be kept readily accessible in the Establishment.

INSTALLATION OF NEW EQUIPMENT

1. If an operator adds new equipment that will have a significant impact on the patterns of movement or operational processes, the BCMIP Regional Supervisor assesses the impact and determines the requirements with which the Establishment must comply. The operator may be required to submit:
 - conceptual drawings of proposed changes (to scale) and a written statement of detailed and comprehensive specifications; and
 - an amended *Food Safety Plan* documenting new controls and procedures or changes to existing controls and procedures.
2. The operator must install the equipment as per the manufacturer or supplier specifications.
 - The BCMIP Regional Supervisor may conduct a site visit.
 - The operator may be required to successfully perform a supervised test kill.

DETAILED ESTABLISHMENT DESIGN AND EQUIPMENT REQUIREMENTS

OVERVIEW

The slaughter process creates a high risk for contamination. Therefore, the design and construction of the Establishment must support the control and maintenance of processes and procedures by ensuring that:

1. all rooms and areas provide adequate space for all phases of the operation;
2. where animals of more than one species are processed at the same time and on the same floor, the Establishment layout provides for the adequate separation of species and segregation of activities; and
3. all equipment is approved, has sufficient capacity for the demand, and is located in the appropriate area.

This topic is presented in three sections:

- A. Red Meat Establishment Design, Equipment Construction Requirements.
- B. Poultry Establishment Design and Equipment Requirements.
- C. Design and Equipment Requirements for Other Rooms and Areas.

RED MEAT ESTABLISHMENT DESIGN, EQUIPMENT AND CONSTRUCTION REQUIREMENTS

RECEIVING AND HOLDING AREAS

1. The design of animal receiving and holding areas must consider the welfare of animals and be constructed to prevent injury to animals.
2. Unloading docks, ramps, alleyways and holding pens must be constructed in a way that prevents injury to animals.

Acceptable Outcomes for receiving and holding areas:

- ☞ Unloading dock area should be level, with no gap between the transport vehicle and the unloading dock.
 - ☞ Access ramps and chutes should have solid sides and be slightly curved.
 - Ramp slope should not exceed an angle of 25°. If this is not possible, ‘stepped’ ramps and chutes should be provided to prevent slipping.
 - The sides of ramps or chutes should be high enough to prevent the escape or injury to animals.
 - ☞ Gates should be provided to prevent animals from reversing direction.
 - Rust-resistant metal pipe partitions and gates are preferred; dressed lumber is the minimum acceptable.
-

👉 Protuberances, such as nails and bolts, should be avoided in all areas.

3. All livestock receiving areas must drain for proper sanitary maintenance.
4. Holding pens must be constructed to provide adequate protection from adverse weather conditions, based on the need of the animal species being held and the requirement to perform an ante mortem inspection.
5. The size and number of holding pens must meet the demands of the Establishment's production activity.

Acceptable Outcomes for holding pens:

- 👉 The capacity of the holding pen should accommodate the number of animals to be slaughtered during one half slaughter shift.
 - 👉 Animals prefer to stand or lie alongside a perimeter of a pen. A long narrow rectangular holding pen design provides a large perimeter.
-

- Species specific pens must be provided when different species are on site at the same time.
 - Separate suspect pens must be provided, with adequate animal restraint devices.
6. The floors of pens should be easily cleaned and drained and afford good footing for the animal.
 7. All holding pens must have receptacles to provide drinking water for animals, and if animals are kept for more than 24 hours facilities for feeding must also be provided.

Acceptable Outcome for animal drinking water:

- 👉 Water heaters should be supplied in holding pens to prevent the drinking water from freezing under extremely cold temperatures.
-

8. All holding pens must have ventilation systems.
9. Receptacles must be provided to hold manure.
 - Manure receptacles and disposal methods must be in compliance with local waste disposal requirements.
10. Pens, alleyways and chutes must have adequate water, hose and hose connections for clean-up.
11. Pens, alleyways and chutes floors must be impervious, properly drained and scored to provide good footing for animals.

Acceptable Outcome for drains:

- 👉 Individual inlets or valley-type drains along the alleyway or equivalent should provide adequate drainage.
-

12. All areas must have adequate artificial or natural light.
 - General areas, pens, alleyways and chutes must have a lighting intensity of 220 Lux.

- Ante mortem inspection area and suspect pens must have a lighting intensity of at least 540 Lux.

Acceptable Outcomes for lighting:

- ☞ Animals are attracted to light. Increased illumination in alleyways to the stunning box may facilitate the forward movement of animals.
 - ☞ Shadows or visual changes can distract animals. Lighting should not cast shadows and floor drains should be located away from animal pathways.
-

13. The ante mortem inspection area must be large enough to allow for the easy observation of an animal and its movement.

Acceptable Outcomes for ante mortem inspection area:

- ☞ An unobstructed emergency escape route for the inspector is desirable.
 - ☞ Gates should be provided to prevent animals from reversing direction.
 - Rust-resistant metal pipe partitions and gates are preferred; dressed lumber is the minimum acceptable.
-

PRE-SLAUGHTER HOLDING PENS

1. Pre-slaughter holding pens must be constructed with:
 - acceptable masonry and metal construction;
 - adequate drainage and be able to sustain daily washing; and
 - adequate lighting and ventilation.
2. The pre-slaughter holding pens must be completely separate from the stunning and bleeding areas to prevent dust and odours from entering these areas.

STUNNING AND BLEEDING AREAS

1. The stunning box must be made of acceptable materials that are corrosion and rust-resistant and easy to clean and sanitize.
2. The restraint mechanisms must be capable of confining one animal at a time without discomfort and without excessive movement of the animal, forward, backward or sideways.
3. The stunning box and area must be constructed to provide good footing for the animal.
4. The stunning box must be able to handle the species and size of animal being slaughtered.

Acceptable Outcomes for stunning box:

- ☞ The stunning box and restraints should be adjustable to accommodate various sizes and species of animals.
 - ☞ The stunning box should be designed to keep animals calm as they enter and up until they are stunned. Adequate lighting may stimulate the
-

forward movement of animals.

- 👉 The stunning box floor should slope so that the stunned animal is easily ejected.
-

NOTE: A suitable area must be provided for the inspector to safely observe the stunning of animals when a rifle is used.

5. **Bleeding Area:** Bleeding areas must be adequately graded to the blood and wash-up drains.

Acceptable Outcomes for bleeding area:

- 👉 The blood drain should be 15 cm or more in diameter to prevent blockage due to clotting.
 - 👉 The slope should be no less than 17 cm per meter to the discharge point.
-

- The bleeding rail for hogs must be of sufficient length to completely bleed the hogs prior to being put into the scalding tank.
6. **Dry Landing Area:** An area must be provided in front of the stunning box to receive the stunned animals.
- The landing area must drain away from the rest of the slaughter room.
 - The floors must be curbed and steeply graded to the blood and wash-up drain.
7. Hand washing and equipment washing/sanitization facilities must be located in stunning and bleeding areas.

HOG SCALDING AND HAIR REMOVAL EQUIPMENT

1. Scalding and hair removal equipment must be physically separate from the rest of the dressing area.
2. Scalding and hair removal equipment must be made of smooth, corrosion-resistant material that is free of any noxious elements, particularly the parts of the equipment that contact the carcass.
3. Scalding tanks must be of sufficient capacity to match the maximum kill rate of the operations.
4. Overflow outlets must be of sufficient size to prevent clogging and must discharge directly into, or close by, floor drains.
5. Scalding equipment or area must be vented.
6. The pre-evisceration carcass shower located after hair removal must have direct drainage.

CARCASS DRESSING AREA

1. All equipment must be constructed of smooth, corrosion-resistant materials.
2. All rails on the kill floor must be located high enough from the floor and far enough away from walls and other structures to ensure that no parts of a carcass touch the floor, walls or other structures.

FOR RAIL HEIGHTS		
SPECIES*	BLEEDING	DRESSING
	Minimum distance from top of rail to floor	Minimum distance from top of rail to floor
Cattle	3.7 m	3.1 m
Calves	3.7 m	2.4 m*
Sheep & Goats	2.4 m	2.0 m*
Hogs	2.6 m**	3.1 m
Horses	4.3 m	3.4 m

*For any species not listed, the rail must be of adequate height to ensure carcasses do not touch the floor

**When a stand or platform is placed underneath the hanging carcass, the top of the stand or platform is considered to be the “floor”

3. A held rail must be provided for all carcasses requiring inspection or further trimming.

Acceptable Outcome for held rail:

- ☞ A switch off rail, which leads directly to the inedible room, should be used for the movement of condemned carcasses.
-

4. Carcasses must be adequately spaced to facilitate sanitary dressing.

Acceptable Outcomes for carcass spacing:

- ☞ Cattle carcasses should be spaced using rail stops of at least 1.5 m on center.
 - ☞ Adequate mechanical or operational measures should prevent the splashing and cross-contamination by carcass movement for both moving-type and gravity-flow dressing or bleeding rails.
-

5. The layout and construction of equipment must prevent skinned portions of carcasses from being contaminated.

Acceptable Outcomes for prevention of contamination:

- ☞ Stationary or elevating type platforms should be constructed and located away from the dressing rail to avoid common contact of skinned portions of carcasses.
 - ☞ A rust-resistant protective guard should be provided to prevent carcass contact with footwear.
-

6. The slaughter floor must be designed and equipped to provide for the sanitary separation and harvesting of edible offal and meat products.
 - Facilities must be provided for processing stomachs from cattle, sheep, goats and hogs, as well as, intestines for the production of casing.
7. The slaughter floor must be designed and equipped to provide for the sanitary removal of inedible offal and its disposal into designated or marked area or bins.
8. The slaughter floor must have a sufficient number of properly located carcass washing stations, including:
 - a station right after the evisceration area; and
 - a station following final trimming and prior to entry into the cooler.

Acceptable Outcome for washing stations:

- 👉 Wash hoses should be hung from hooks to avoid placing hoses on unsanitary surfaces.
-

9. Suitable facilities and floor space must be provided for the preparation of carcasses and portions including:
 - removing and washing cattle heads for inspection;
 - if heads need to be transferred to another area for boning, properly constructed hanging racks, trucks or overhead rails must be provided for transfer; and
 - adequate washing and sanitizing equipment for keeping the viscera inspection stand or viscera truck clean and sanitized in between carcasses.

Acceptable Outcome for inspection station:

- 👉 A pan-type stationary inspection table with a minimum of two pans and equipped with a hot water knife sanitizer is adequate.
-

10. Prior to the final carcass washing station, a check-trim station, equipped with an adequate platform must be provided to facilitate the check trimming of the total carcass.
11. There must be sufficient and well-located hot and cold water outlets for cleaning purposes, as well as, sanitizing units, hand washing facilities and carcass rinses.

POST MORTEM INSPECTION STATION

1. The layout of the post mortem inspection station must provide easy, unobstructed, and safe access for the inspector to perform their duties.
 2. The post mortem inspection station must be constructed of material that is impervious, smooth, and rust-resistant.
 3. The station must be designed and maintained to ensure proper cleaning and sanitizing.
 4. The design, construction, and installation of the inspection station must prevent contact between heads, between viscera and between carcasses.
-

5. Depending on the speed of the slaughter activities and available space on the kill floor, the space dedicated for the inspection station may be shared with Establishment employees.

Acceptable Outcomes for inspection station:

- 👉 The recommended minimum unobstructed size of post mortem inspection station should be 244 cm (length) by 122 cm (depth).
-

6. The post mortem inspection station must be equipped with:
 - hand washing facilities;
 - sanitizers to clean hands and tools, with a continuous flow of portable water that is maintained at a temperature of not less than 82° C;
 - minimal lighting of 540 Lux that is free of glare, shadows or colour distortion;
 - adequate ventilation;
 - head racks, tables and trays sufficient in number and type to hold and maintain the identity of viscera and other parts until the post mortem examination and disposition is made;
 - a cooler rail or designated section of a rail, or rack for carcasses that need to be held for further examination or test results:
 - The designated held rail, rack or section, must be at least 1 m away from rails or racks used for approved carcasses; and
 - a satisfactory means of handling condemned materials.

COOLERS

1. Conveniently located refrigerated rooms must be available for the prompt chilling of dressed carcasses, meat parts and edible meat products.
2. Cooler rooms must be designed, constructed and equipped so that cooling performance requirements are met.
3. Equipment designed to promote rapid and thorough chilling must be used when handling edible offal.
4. The cooler layout must provide a segregated area in a cooler for chilling and storing held carcasses and parts.

Acceptable Outcome for coolers:

- 👉 A sufficient length of side rail for held carcasses and parts should be provided. If required, this should be equipped with a lockable device.
-

COOLER RAIL HEIGHTS			
SPECIES	Minimum distance from top of rail to floor	Maximum distance from top of rail to shackle contact point on carcass	Minimum spacing distance from walls or pillars
Cattle	3.1 m	30 cm	60 cm
Calves	2.4 m	30 cm	60 cm
Sheep & Goats	2.0 m	30 cm	60 cm
Hog-Head-on	2.7 m	30 cm	60 cm
Hog-Head-off	2.4 m	30 cm	60 cm
Horses	3.4 m	38 cm	60 cm

FREEZERS

1. Freezer walls must be constructed of smooth, level, hard and impervious material.
2. Floors must be slip-resistant, hard, impervious and be adequately insulated.
3. Meat products must be properly spaced so there is adequate air circulation.

Acceptable Outcome for freezers:

- 👉 Floor and wall racks should be provided for proper air circulation.
-

HIDE ROOMS

1. Trimming, fleshing and grading of hides must be done in separate rooms designed for this purpose or in the hide-curing room.
2. Hide rooms or storage areas must be located in the inedible section or other suitably constructed area of the Establishment.
3. Hide rooms must be properly ventilated with air flow moving away from the rest of the Establishment.
4. Receiving platforms, fleshing tables and shaking forms must be of suitable metal construction.
5. Shipment must be by direct access to the inedible loading dock or to an area designed solely for this purpose and separate from edible areas. Hides must not pass through other storage areas.
6. Salt bins and facilities for curing hides must be in or next to the hide room.
7. All chutes and escalators leading to or from this area must be designed to prevent the escape of odour.

POULTRY ESTABLISHMENT DESIGN AND EQUIPMENT REQUIREMENTS

RECEIVING AND HOLDING AREAS

1. The design of poultry receiving and holding areas must consider the welfare of animals and be constructed to prevent injury to animals.
2. Poultry holding areas must be designed to accommodate the unloading of poultry and the storage of crates or transport containers.
3. Holding pens must be constructed to provide adequate protection from adverse weather conditions, based on the need of the animal species being held and the requirement to perform an ante mortem inspection.
4. The size and number of holding pens must be able meet the demands of the Establishment's production activity.
 - Species specific pens must be provided where mixing of species occurs at the same time.
 - Separate suspect pens must be provided.
5. Holding pens must be properly ventilated.
6. All areas must have adequate artificial or natural light.
 - General areas and pens must have a lighting intensity of 220 Lux.
 - Ante mortem inspection stations and suspect pens must have a lighting intensity of at least 540 Lux.
7. Holding areas must have facilities for cleaning and disinfecting crates and transport containers.
8. Holding area must have adequate space to allow for the inspector to easily observe the animals at ante mortem inspection.

STUNNING AND BLEEDING AREAS

1. The facility design and equipment must provide for the humane stunning of all classes of birds slaughtered in the Establishment.
2. The bleeding area must be designed and constructed to ensure adequate bleeding time for death to occur due to blood loss.
3. Blood must be contained in the bleeding area.

SCALDING AND PLUCKING EQUIPMENT

1. Scalding and plucking equipment must be physically separate from all other processing activities including those that occur before scalding.
2. Scalding and plucking equipment must be made of smooth, corrosion-resistant material that is free of any noxious elements.
3. Scalding tanks must be of sufficient capacity to match the maximum kill rate of the operations.

4. Scalding tanks must be equipped with an adequate overflow system.
5. Tanks must be equipped with a thermometer.
6. Overflow outlets must be of sufficient size to prevent clogging and must discharge directly into, or close by, floor drains.
7. Scalding equipment must be vented.
8. If wax dips are used, scalding tanks must have metal troughs for wax recovery.
9. Plucking equipment must be adjustable in order to handle birds of different sizes.

Acceptable Outcome for plucking equipment:

- 👉 Special rooms or facilities separate from the dressing area should be provided for collecting and holding feathers.
-

TRANSFER FACILITIES

1. Transfer facilities from the slaughtering to evisceration area, where required, must be designed, constructed and installed to meet specific operational requirements and be capable of being cleaned during operation.

Acceptable Outcomes for transfer facilities:

- 👉 Contact surfaces should be visibly clean and free of traces of fat, blood, feathers and fecal material.
 - 👉 As a general principle, the transfer facility design must keep carcasses from accumulating in piles.
-

CARCASS DRESSING AREAS

1. The design and construction of the evisceration area must enable all product contact surfaces to be maintained in a visibly clean state to prevent contamination.
2. The evisceration line and equipment must provide adequate segregation if multiple species are dressed at the same time.
3. If automated evisceration equipment is used for poultry, it must be equipped with a continuous rinsing system to remove any build-up of organic material.
4. **The evisceration of poultry by table-top method has been proven to be a significant cause of contamination of finished product and a potential serious food safety concern. Any new construction or renovation of a poultry evisceration area will require the installation of a suspension system in which the poultry carcass hangs, without contacting a solid surface.**
 - Shackles will be located at a proper height.

Acceptable Outcome for shackles:

- 👉 A shackle height (bottom of shackle) of 1.5 m (4.92 feet) is preferable.
-

5. The evisceration area must be equipped to facilitate the removal of inedible portions, such as offal, heads, feet or oil glands.
6. If goose necks are used instead of hand washing facilities, they must be either capable of providing a continuous flow of warm water or be remote controlled.
7. **Giblet Salvage Stations:** If giblets are salvaged, a giblet station must be constructed of durable, non-corrosive and easily cleanable material.
 - The giblet station must:
 - be properly located and be easily accessible;
 - have marked containers for giblet storage; and
 - have equipment to chill and ice giblets immediately after harvesting and preparation has been completed.
8. **Carcass Washing Stations:** There must be a carcass washing station with direct drainage located immediately after the plucking machine.
 - When feet are removed prior to inspection, an additional washing station must be located following the hock-cutting (foot removal) operation and transfer point.
 - Water pressure at both stations must be sufficient to completely remove any visible foreign material from the surface of the poultry carcass, including the feet and any exposed surfaces.

Acceptable Outcome for carcass wash stations:

 - ☞ Wash hoses should be hung from hooks to avoid placing hoses on unsanitary surfaces.

 - In addition to the final outside washer, an inside carcass washer is required to remove blood and loose organic material within the cavity and promote drainage at the neck prior to chilling.

POULTRY SALVAGING STATIONS

If a poultry salvage station is provided, carcasses or portions of carcasses that have become contaminated or have localized pathological diseases may be salvaged.

1. The salvage station must be properly located separately from the production line and where the inspector can move quickly between the post mortem inspection area and the salvaging area.
2. The salvage station must be equipped with a rack or rail system that has the capacity or shackle spacing to prevent carcass contact with other carcasses or surfaces.
3. The salvaging station must have:
 - a directly drained carcass wash cabinet with a three-sided splash shield;
 - a water sanitizer for utensils, kept at a minimum temperature of 82° C;
 - hand wash facilities;
 - marked containers for edible and inedible meat products; and

- hot and cold water and hose connections for cleaning.

POST MORTEM INSPECTION STATION

1. The layout of the post mortem inspection station must provide easy, unobstructed and safe access for the inspector to perform their duties.
2. The post mortem inspection station must be constructed of material that is impervious, smooth and rust-resistant.
3. The post mortem inspection station must be designed and maintained to ensure proper cleaning and sanitizing.
4. The post mortem inspection station must be equipped with:
 - hand washing facilities;
 - sanitizer(s) to clean hands and tools, with a continuous flow of potable water that is kept at a temperature of not less than 82° C;
 - lighting of at least 540 Lux that is free of glare, shadows or colour distortion;
 - adequate ventilation; and
 - an evisceration line that is level for the entire length of the inspection station;

a mechanism to allow the inspector stop and re-start the evisceration line directly or indirectly; and a designated cooler rail or section of a rail or rack to keep carcasses held for further examination or test results .

Acceptable Outcome for post mortem inspection station:

- 👉 The designated rail, rack or section should be at least 1 m away from rails, or racks used for approved carcasses.
-

POULTRY CHILLING EQUIPMENT

1. **Chill Tanks:** Water immersion chill tanks must be constructed of corrosion-resistant material and be easy to clean and sanitize.
 - Chill tanks must have sufficient capacity and volume of water for the size of bird chilled.
 - Large chill tanks (used in medium and high-volume poultry operations) must be equipped with an overflow mechanism that:
 - provides enough water to remove large pieces of extraneous material; and
 - provides a continuous supply of fresh cold water.
 - The floor drain must be located near the waste water overflow outlet.
 - The temperature must be controlled and maintained at 2° C or less through the use of ice or refrigeration.
 - A temperature recording device must be available to take and monitor water temperature.
2. **Air Chilling:** Air chilled poultry coolers must be temperature controlled and kept at 2° C.

- Coolers must be ventilated using fans that are properly positioned to ensure that sufficient heat transfer occurs to ensure effective air chilling.

Acceptable Outcome for air chilling:

- ☞ All poultry carcasses and products must be continuously chilled until an internal temperature of 4°C or less is achieved and maintained.
-

DESIGN AND EQUIPMENT REQUIREMENTS FOR OTHER ROOMS AND AREAS

STORAGE ROOMS

1. Storage rooms must be designed to be cleaned and maintained in a sanitary condition at all times.
2. Wall and floor racks and shelves are necessary to protect against dust, moisture and other undesirable conditions.

Acceptable Outcomes for storage rooms:

- ☞ When storing supplies on permanent racks, the design must provide a minimum clearance space to allow for cleaning.
 - ☞ Sanitation supplies, spare equipment and any packaging materials should be kept in a location adjacent to the area in which they are used.
-

EMPLOYEE WASHROOMS

1. Washrooms must be completely separate from any processing area and must be entered through an intermediary hallway or vestibule.
2. Doors must be solid, self-closing and completely fill the door opening when closed.
 - An exception to solid doors is the allowance of a louvered section in the lower panel for ventilation purposes.
3. Washrooms must be constructed of smooth, hard, impervious materials.

Acceptable Outcomes for washrooms:

- ☞ Construction materials may include glazed tile, steel, and trowel applied cement plaster.
 - ☞ All flooring materials should continue to a height of 120 cm up the walls.
 - ☞ Wall and floor junctions should be coved.
-

4. Washrooms must be properly vented with an exhaust fan.
 - Ventilation requirements must meet local building codes.
5. Floors must be properly drained.
6. Washrooms must have hand washing facilities with hot and cold running water and:

- an accessible soap dispenser of sufficient capacity;
- an individual single use towel dispenser; and
- a garbage can.

Acceptable Outcome for shower facilities:

- 👉 Shower facilities should be provided, either in the washroom or adjacent locker room.
-

EMPLOYEE LOCKER ROOMS AND LUNCH ROOMS

1. Locker and lunch rooms must be designed to meet employee needs, based on number and gender.
2. Locker rooms and washrooms may be adjoining, but must be separated by full walls and doors.

Acceptable Outcomes for locker and lunch rooms:

- 👉 Walls and ceilings should be constructed of hardboard or gypsum board, smooth finished plywood or fibreglass-reinforced panels.
 - 👉 Locker rooms should have floor drains.
 - 👉 Lockers for clothing of personnel should have a floor clearance of not less than 3.5 cm.
 - 👉 If clothing racks are used instead of lockers, they should have overhead hat racks and suspended boot racks, constructed of corrosion-resistant material and provide a floor clearance of not less than 3.5 cm.
-

INSPECTOR FACILITIES

1. The Establishment must provide a private office for BCMIP staff

Acceptable Outcomes for inspector facilities:

- 👉 The inspector's office should be located in the same general area as company offices and not in the operational area of the Establishment, but within close proximity to the operational area.
 - 👉 The minimum office space should be 10 m² for one inspector with an additional 1.4 m² for each additional inspector.
 - 👉 There should be a minimum of 400 Lux lighting.
 - 👉 There should be natural or artificial ventilation to provide at least five changes of air per hour.
-

2. There must be conveniently located, clean washroom and dressing room facilities available for inspectors.
3. The office must contain a locked cabinet and other furniture and equipment that an inspector needs to carry out their duties.

Acceptable Outcomes for office furnishings include:

- ☞ a desk and chairs;
 - ☞ supply cupboards or drawers for stationery;
 - ☞ a lockable metal box, adequate for the storage of legend stamps;
 - ☞ at least one 4-section lockable metal filing cabinet, 45.7 cm wide;
 - ☞ a cupboard for clean laundry; and
 - ☞ metal lockers or clothes racks for inspectors' street clothes.
-

4. The inspector's office, change area or washroom must be located to minimize any food safety hazards that may occur from repeated trips into and out of these areas. The inspector should not have to go outside of the Establishment to gain entry to the office or the washroom.

CHAPTER 3.0: FOOD SAFETY PLAN

INTRODUCTION

Every Establishment must develop, maintain, and follow a written *Food Safety Plan* that sets out the procedures and controls required to reduce the risk of contamination or spoilage of carcasses and to support the production of food that is safe for human consumption. The objective of the *Food Safety Plan* is to prevent food safety hazards by following complete, up-to-date, and well communicated, standardized procedures.

The design, format and complexity of the procedures will depend on the needs of the Establishment. However, the Establishment's *Food Safety Plan* must include the following two parts:

- A. **Standard Operating Procedures (SOPs)** are detailed procedural statements that set out step-by-step instructions for how an activity is to be done, and how and when to respond to a critical issue.
- B. **Sanitation and Maintenance Program** provides written procedures and schedules for sanitation and maintenance activities, designed to ensure meat products are continuously produced under hygienic conditions.

Throughout this document, reference is made to the written *Food Safety Plan*. This chapter sets out the general structure and instructions for developing the *Food Safety Plan*.

STANDARD OPERATING PROCEDURE REQUIREMENTS

OVERVIEW

Every licensed slaughter Establishment must document its primary SOPs. Examples of SOPs include: “Animal Receiving and Recording”; “Slaughter, Scalding and Plucking”; and “Handling of Specified Risk Materials”. Each Establishment will decide on the level of procedures and the details required based on its particular needs. However, the following elements must be considered in each SOP:

- **Operational Procedures:** A list of steps or activities that define how an operational procedure is done.
- **Critical Control Point (CCP):** Is a location in the Establishment, or step in the Establishment's procedures, where failure to comply with the *Food Safety Act* or the Meat Inspection Regulation might result in the contamination of carcasses or make carcasses otherwise unfit for human consumption.
- **Critical Limit:** A critical limit is a food safety standard that must be met at a CCP.
- **Corrective Action:** Defines the required action when a critical limit is not met.

Through implementing and maintaining SOPs the Establishment demonstrates that it has set in place critical food safety controls and that these are monitored and maintained on a daily basis.

If an issue occurs due to failure to follow an SOP, or if an SOP is not achieving the desired outcome, the inspector will work with the operator to decide what needs to be done to correct the issue or revise the SOP.

STANDARD OPERATING PROCEDURES (SOPS)

1. The operator must develop, implement and maintain written SOPs.
2. The SOPs must meet the requirements set out in this document, the *Food Safety Act*, the Meat Inspection Regulation and the requirements outlined in other applicable legislation such as *Food and Drugs Act* and Regulations, *Health of Animals Act* and Regulations, Food Premises Regulations and applicable BCMIP policies
 - If an existing Establishment cannot meet any of these requirements, the written SOPs must define how other procedures will be used to meet the intent and purpose of the requirement.
3. The SOPs must give enough instruction so that staff responsible for the activity know what has to be done, what needs to be monitored so that critical limits can be properly evaluated, and that the CCP is fully controlled.
4. The SOPs must be kept up-to-date, reflecting any changes to the Establishment, its operational flow and processes.

Acceptable Outcome for SOPs

The following template elements should be used to describe each Standard Operating Procedure:

SOP #: Title of Procedure and Number	
Date: Date SOP was implemented	Revised: Date SOP was revised
Responsibility	☞ Title or name of the staff person doing the SOP
Frequency	☞ How often the procedure is to be done
Procedures / CCP	☞ A List of detailed steps to complete the procedure ☞ A list of Critical Control Points (CCP) listed below the step that it applies to
CCP Monitoring	☞ Description of how/when/where the CCP will be confirmed ☞ This is only required if a CCP is listed
CCP Limit	☞ Description of the standard that must be met to achieve the CCP ☞ This is only required if a CCP is listed
CCP Corrective Action	☞ A list of steps required if the CCP limit is <u>not</u> achieved ☞ This is only required if a CCP is listed
Records	☞ A list of any records associated with the SOP

SANITATION AND MAINTENANCE PROGRAM REQUIREMENTS

OVERVIEW

When a slaughter Establishment is issued a license, the BCMIP expects that the facility and equipment will be maintained in a sanitary condition. An unsanitary Establishment creates a significant food safety hazard because it contributes directly to the contamination of meat products. Sanitation refers to cleaning and disinfecting before and during operations to prevent and remove unwanted contaminants, such as food residues, bacteria, rust and dust.

The operator (including all Establishment management and staff) and inspector, each have a duty to ensure that the Establishment operates under hygienic and sanitary conditions.

The operator has the responsibility to:

- develop and implement a written Sanitation and Maintenance Program, which outlines schedules and procedures for the on-going cleaning and maintenance of rooms and areas as well as each piece of equipment;
- conduct the pre-operational inspection to confirm that the Establishment and equipment are clean and working properly at the start of slaughter shift (See **Chapter 5: Topic 5.1: Pre-Operational Inspection And On-Going Operational Maintenance** for detailed requirements); and
- conduct on-going housekeeping and maintenance activities throughout the slaughter operations.

The inspector's responsibility is to verify the operator's pre-operational inspection and monitor the sanitation and maintenance of the Establishment and equipment. If an issue or food safety risk arises at any point in the slaughter shift, the inspector should work collaboratively with the operator to decide on what needs to be done to correct the issue or risk.

WRITTEN SANITATION AND MAINTENANCE PROGRAM

1. The operator must develop, implement and maintain a written Sanitation and Maintenance Program that sets out the procedures and schedules for sanitation and maintenance activities.
2. The SOPs must meet the requirements set out in this document, the *Food Safety Act*, the Meat Inspection Regulation and the requirements outlined in other BCMIP policies and applicable legislation.
 - If an existing Establishment cannot meet any of these requirements, the written Sanitation and Maintenance Program must define how other procedures will be used to meet the intent and purpose of the requirement.
3. The written Sanitation and Maintenance Program must include a pre-operational checklist for areas, rooms and equipment that must be clean and sanitary before the start of slaughter. Written sanitation procedures are also required for how to maintain a hygienic standard during operations.

- The written Sanitation and Maintenance Program must give enough instruction so that staff responsible for the activity know what has to be done, when it is to be done and what tools and supplies are needed.

Acceptable Outcome for sanitation and maintenance program:

The following template elements should be used to describe each sanitation or maintenance activity

Sanitation or Maintenance Activity #: Title and number of item or area to be cleaned, sanitized or maintained	
Date: Date procedure was implemented	Revised: Date procedure was revised
Responsibility	Title or name of the staff person doing the activity
Frequency	<ul style="list-style-type: none"> ☞ How often the sanitation or maintenance activity must be done. This could be a schedule of set dates and times
Procedure	<ul style="list-style-type: none"> ☞ A list of steps required to perform the activity
Monitoring	<ul style="list-style-type: none"> ☞ A List of criteria to check that activity is done correctly ☞ Any reports or records ☞ Any testing requirements

- The written Sanitation and Maintenance Program must include information from equipment manuals for the cleaning and maintenance of equipment and any calibration schedules or directions and the manual page number.
- The written Sanitation and Maintenance Program must contain an up-to-date list of all chemicals (such as detergents, sanitizers) used in the Establishment.

Acceptable Outcome for information contained in the chemical use list:

- ☞ Mixing and usage instruction from the manufacturer should be kept with each chemical.
- ☞ The WHMIS (workplace hazardous materials information system) Material Safety Data Sheet or equivalent should be kept with each chemical.
 - WHMIS data sheets provide information on any possible product hazard, safe handling information, and product emergency procedures.

- The written Sanitation and Maintenance Program must contain an up-to-date list of all pesticides used in the Establishment

Acceptable Outcomes for information contained in the pesticide use list:

- ☞ The name of the pesticide.
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- 👉 What the pesticide is used for.
 - 👉 The frequency of use.
 - 👉 Who has responsibility for applying the pesticide.
 - 👉 Where and how the pesticide is stored.
 - 👉 The manufacturers labels and instructions for use.
-

8. The written Sanitation and Maintenance Program must be kept up-to-date to reflect any changes to the Establishment, its operational flow and/or processes.

GENERAL SANITATION AND MAINTENANCE PROCEDURES

The Establishment must include the following requirements in its written Sanitation and Maintenance Program. These requirements provide a minimum standard and do not represent all the possible requirements that are needed to maintain hygienic and sanitary conditions.

1. **General Housekeeping Practices:** Sanitation and maintenance schedules and procedures for routine housekeeping activities, to include:
 - garbage collection and disposal;
 - janitorial services during operations;
 - movement and storage of equipment temporarily not in use; and
 - monitoring of lighting intensity.
2. **Contamination Sources:** Procedures for the handling and monitoring of potential contamination sources, to include:
 - overhead contamination such as peeling paint, rust, condensation and disintegrating insulation materials;
 - metal contaminants from staples, tags, wire brushes or fragments caused by equipment friction or use;
 - non-food chemicals;
 - a. Non-food chemicals must be used in accordance with the manufacturer's directions;
 - b. Non-food chemicals must be stored in clean labelled containers in a designated area that is dry and well ventilated; and
 - other materials, such as residues from packaging products, spilled or misused lubricants, and broken glass from glass products.
3. **Facilities and Equipment:** Procedures and schedules for the cleaning of areas and equipment, especially at the end of a slaughter shift, to include:
 - contact surfaces and equipment, floor drains, walls, ceilings, lighting fixtures, refrigeration units, overheads and any other area or fixture that affects food safety;
 - portable equipment and tools, to be cleaned and sanitized in a designated area;
 - specialized cleaning for particular equipment, such as injectors and grinders; and

- hand held tools and their protective coverings;
 - If individual lockers are used to store personal tools, they must be stored separate from clothing.
- 4. **Sanitizers for Utensils:** The maintenance of sanitizers is a very important component of an sanitation program.
 - Water sanitizers must operate at no less than 82° C with adequate water flow at all times.
 - The surface of tools must be clean of all organic matter before being put into a water sanitizer. Organic matter on the tool will act as a barrier to the removal of micro-organisms.
 - Chemical sanitizers may be used instead of a water sanitizer.
 - Chemical sanitizers must be used as directed on the label, including contact time and rinsing and draining times.

Acceptable Outcomes for Cleaning and Sanitizing:

Walls, equipment, tools, and floors should be cleaned and sanitized after every kill in the following manner:

👉 **Step 1: Debris Removal**

The debris removal step includes sweeping or shovelling, or both to remove bulk soils and debris and disassembling equipment to a proper level to provide accessibility for cleaning and sanitizing.

👉 **Step 2: Pre-Rinse**

The area and equipment surfaces are rinsed until they are visually free of soils, using the lowest effective pressure at the appropriate temperature, to reduce the risk of cross-contamination associated with aerosol migration and overspray.

👉 **Step 3: Soap and Scrub**

There are four parts to the soap and scrub cleaning process:

- 1) Using an approved degreaser type detergent at the right concentration.
- 2) Using mechanical action (daily scrubbing of contact surfaces) to ensure all surfaces of equipment (inside and under) are scrubbed.
- 3) Using appropriate water temperature.
- 4) Ensuring adequate contact time for the cleaning agent to work effectively.

If these steps are consistently carried out, biofilm formation on surfaces is greatly reduced.

👉 **Step 4: Post-Rinse**

The lowest effective pressure and volume of hot water is used during the post-rinse step to avoid risks associated with aerosols and overspray.

👉 **Step 5: Sanitize**

An approved sanitizing agent is sprayed and remains on all food contact surfaces for the manufacturer's recommended time prior to rinsing.

Equipment and supplies should be left to air dry after proper sanitizing.

Once dry, equipment can be covered to prevent surface dust from settling.

5. **Animal Transportation and Holding Pens:** Cleaning and disinfecting procedures and schedules for animal transport vehicles, crates and holding pens

Acceptable Outcomes for animal transport and holding pens:

- 👉 Vehicles and crates should be reasonably free of manure, straw and odour.
 - 👉 Pens should be cleaned on a regular basis.
 - 👉 Pens used to isolate suspect animals should be disinfected after each day's use.
 - 👉 Feed, water and bedding should be maintained to provide proper animal welfare.
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6. **Outside Premises:** Procedures and schedules for the maintenance of the Establishment's outside premises, should include:

- grounds-keeping: grass cutting, weed trimming, road surfacing and drainage maintenance;
- storage and removal of trash; and
- storage or removal of debris and other unused equipment.

WASTE DISPOSAL

The written Sanitation and Maintenance Program must provide procedures and schedules for the removal and storage of waste.

1. **General Waste Disposal:** Marked waste containers must be provided throughout the Establishment and must be removed, cleaned and replaced regularly to prevent overflow or spillage.
 - Waste must not build-up in meat product handling, storage and other working areas.
 - Waste storage rooms or areas must be kept appropriately clean at all times.
2. **Animal Waste:** Material from transport vehicles or containers and from livestock pens must be collected and disposed of in an approved manner, as frequently as necessary, to prevent an increase in flies or vermin and objectionable odours.
3. **Disposal of Condemned and Other Inedible Meat Products:** Inedible and condemned meat products must be kept separate from edible meat products at all times.
 - All containers, equipment and areas used to move or store inedible meat products must be clearly marked, cleaned and sanitized frequently.

- Marked containers or chutes used to move inedible products directly to their designated areas must never move through processing areas used for edible products.
- Any equipment returning to the edible areas must also be cleaned and disinfected prior to entering the edible area.

PEST CONTROL

Pesticides (insecticides and rodenticides) help eradicate and control pests. The operator and inspector must be aware of the potential hazards to both food products and employees of these chemicals.

1. The written Sanitation and Maintenance Program must include effective and safe procedures for pest control:
 - Scheduled inspections of the premise (inside and out) for the presence of pests.
 - Procedures for the safe application of pesticides and pest control devices.
 - Records that include: date a pest issue occurs, type of pest action taken to resolve the issue, pesticide or pest control methods used, monitoring activities and results.
2. Any pesticides used in the Establishment, must be:
 - approved for the intended use; and
 - applied as per the manufacturer's directions.
3. The operator must inform the inspector of all pesticides in use.
4. Only licensed pest control operators or designated trained employees are to prepare and apply insecticides and rodenticides.
5. Rodenticides must only be used in bait stations.
 - Bait stations must have covers and be adequately serviced and supervised.
6. All pesticides must be stored safely in a separate non-edible area of the Establishment.
7. All food products must be safely covered or protected from contamination by pesticides.

EMPLOYEE HYGIENE

1. Each employee must follow good employee hygiene practices, to include:
 - Wearing clean clothing and footwear.
 - Practicing good personal hygiene.
 - Taking steps to ensure that carcasses are not contaminated by employees' hair.
 - Smoking only in assigned areas.
 - Washing of hands as often as necessary.

Acceptable Outcomes for employee hygiene:

- No gum chewing on the production floor.
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- 👉 Eating and drinking only in lunch or staff rooms.
 - 👉 No coughing, sneezing or spitting in production areas.
 - 👉 No accessories such as jewellery and outer clothing with buttons.
 - 👉 Protective clothing should be changed frequently.
 - 👉 Gloves should be changed frequently.
 - 👉 Hair nets should be used for head or facial hair.
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2. Clean and sanitary washrooms must be available in sufficient number to meet the needs of staff.
- Washroom cleanliness must be monitored and maintained throughout the shift and cleaned daily.

Acceptable Outcome for employee hygiene:

- 👉 Notices should be posted in visible places, such as lunchrooms, washrooms and change rooms to remind and instruct employees about the importance of frequent hand washing.
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CHAPTER 4.0: SLAUGHTER OPERATIONS, MONITORING AND CONTROL

INTRODUCTION

The requirements in this chapter set out key controls that the operator must meet to ensure the food safety, animal welfare, staff safety, and the ongoing sanitation and maintenance of the Establishment. The Establishment's *Food Safety Plan* must include these controls at a minimum in the detailed operating procedures for the primary stages and activities of the slaughter process (from animal arrival to the end of carcass inspection).

The inspector monitors and verifies the operator's practices to ensure they are in compliance with the Establishment's *Food Safety Plan*, and the requirements set out in this document, the *Food Safety Act*, the Meat Inspection Regulation, requirements outlined in other BCMIP policies, and other applicable legislation.

If the inspector identifies a food safety, animal welfare, staff safety, sanitation or maintenance issue or risk related the slaughter process, they will work with the operator to develop a plan to resolve the issue. The inspector's level of response and control will increase with the significance of the issue or risk.

In situations where a food safety, animal welfare, staff safety, sanitation or maintenance violation is very severe or the directions of the BCMIP are blatantly and repeatedly disregarded, the Executive Director may order the withdrawal of inspection services.

PRE-OPERATIONAL INSPECTION AND ON-GOING OPERATIONAL MAINTENANCE REQUIREMENTS

OVERVIEW

The operator (this includes Establishment management and staff) does a pre-operational inspection (before slaughter begins) based on procedures and standards set out in the Establishment’s *Food Safety Plan*. The pre-operational inspection confirms that all rooms and areas are ready for the start of the slaughter and that all equipment and meat contact surfaces are clean and working properly.

The inspector verifies that the Establishment meets pre-operational, sanitation and maintenance standards and approves the start of the slaughter. The inspector monitors the slaughter operations to ensure that on-going housekeeping and maintenance activities are kept up throughout the slaughter shift.

If a food safety, sanitation or maintenance issue or risk occurs, the inspector will work with the operator to decide on what needs to be done to correct the issue.

OPERATOR’S PRE-OPERATIONAL INSPECTION

1. Before the slaughter begins the operator must confirm that the following areas are clean, sanitary and in good repair:
 - Meat contact surfaces.
 - All equipment
 - All complex equipment must be dis-assembled when inspected

Acceptable Outcome for inspection:

👉 Use a flashlight when inspecting complex equipment.

- Conveyer belts, food product pipelines and saws.
 - Small tools such as knives and hooks, and protective equipment such as gloves and aprons.
2. Areas and equipment must be free of cracks, open seams and any other wear that could pose a food safety risk.
 3. Ceilings, walls, floors, overhead rails and equipment frames (including the undersides) must be clean and free of any debris (dust, peeling paint, rust) that could fall onto meat products.
 4. Hand wash stations must be working and be stocked with soap, disposable towels and garbage cans.
 - Hand sanitizers must be clean and operating properly.
 - The temperature of equipment sanitizers must be 82° C.
 5. The temperatures in production areas and coolers must be checked and the controls must work

properly.

6. Ventilation must be adequate and air flow must move from cleaner to more contaminated areas.
7. Rooms and equipment must be free of condensation caused by faulty ventilation, poor insulation or insufficient air movement.
8. Equipment and facilities that are found dirty or that could create a food safety risk must be re-cleaned or repaired before use.

OPERATOR'S ON-GOING OPERATIONAL OBLIGATIONS

1. The operator must meet the following standards, at a minimum, during slaughter operations:
 - Protein material and fat must not build-up on equipment over the course of a shift.
 - Coolers, chillers and other refrigeration must be kept at required temperatures and monitored.
 - Equipment sanitizers must have a good flow of water that is kept at 82° C.
 - Hand sanitizers, hand wash stations, and washrooms must be working and kept clean.
 - Employees' clothing must be clean (for the task at hand) and work habits and personal hygiene must be appropriately maintained.
 - Inedible products and trash must be removed regularly.
2. Carcass identity must be maintained through the slaughter production.
3. All applicable daily monitoring records must be kept up-to-date and in the assigned location.

PRE-SLAUGHTER ACCOMMODATION AND HANDLING OF ANIMALS REQUIREMENTS

OVERVIEW

Animal welfare and the humane handling of animals while unloading and at pre-slaughter holding are the responsibility of the operator. Animals must be handled so as to minimize discomfort and excitement.

If an animal welfare issue occurs due to inhumane handling of an animal, or as a result of poor conditions within the Establishment, the inspector will work with the operator to decide on what needs to be done to correct the issue or risk.

ANIMAL RECEIVING, HANDLING AND HOLDING

1. Receiving and holding operations must provide for the safe movement and holding of animals by species, animal size, and gender.
2. Holding operations must provide for:
 - different species to be separated;
 - suspect animals to be held in a suspect pen, with adequate animal restraint devices;
 - protection of animals from adverse weather conditions;
 - access to drinking water and feed if animals are held for more than 24 hours; and
 - regular removal of manure.
3. The use of electric prods, canvas slappers and other approved devices must be kept to a minimum to avoid excitement of and injury to animals. Devices must never be applied to the sensitive area around the genitalia and underbelly of an animal.
4. If an animal arrives that is compromised (injured or sick), an assessment of the animal must be done and action taken as quickly as possible to prevent unnecessary suffering
5. Animals that die during transport or while held at the Establishment or that are condemned on ante mortem inspection are only permitted entry into the inedible section of the Establishment and must never be moved into or through the slaughter rooms.

HUMANE TREATMENT, HUMANE TRANSPORT AND EMERGENCY SLAUGHTER

When an animal arrives at the Establishment and inhumane treatment or undue suffering from transport is suspected, the operator does the following:

1. The operator must inform the animal producer or transporter of the regulations relating to animal transportation.
 - The operator must specifically tell the transporter that they cannot leave with the compromised animal.

2. If the inspector is on site, the operator notifies the inspector before any animal is unloaded from the transport vehicle.
 - The inspector does an ante mortem inspection and tells the operator how to handle all animals.
 - The inspector contacts the British Columbia Society for Prevention of Cruelty to Animals (BCSPCA) regarding humane treatment and the CFIA regarding humane transport, as appropriate.
3. If the inspector is not on site, the operator makes a decision as to whether the animal is compromised due to inhumane transport or inhumane treatment, or both.
 - The operator must contact and inform the BCSPCA (humane treatment) and the CFIA (humane transport), as appropriate.
4. If the inspector is not on site and the operator decides that the animal must be slaughtered to prevent additional undue suffering, the Establishment operator may either:
 - a. Euthanize (kill) the animal and dispose of the carcass without approval.
 - b. Do an emergency slaughter and hold the carcass for post mortem inspection. To do this, before the animal is slaughtered the operator must:
 - Hire the services of a veterinary practitioner familiar with the species to perform an ante mortem inspection. The veterinary practitioner must agree that an emergency slaughter is required and the carcass would be suitable to go forward for further inspection.
 - The operator is responsible for the cost of the veterinarian practitioner's services.

NOTE: See the *Establishment Operator and Animal Producer/Agent Emergency Slaughter Guidelines: September 2014* on the Ministry of Agriculture, Meat Inspection website for detailed instructions for emergency slaughter

ANTE MORTEM INSPECTION REQUIREMENTS

OVERVIEW

The ante mortem (before death) inspection is the visual inspection of animals before slaughter. Ante mortem inspection is a regulatory requirement of the BCMIP.

The operator (this includes Establishment management and staff) assesses the general condition of the animals arriving at the Establishment and tells the inspector about any issues or concerns.

The operator must pay particular attention to the humane treatment of animals. The operator must be able to identify and handle an animal that has experienced undue pain and suffering from transport or inhumane treatment prior to arriving at the Establishment.

The inspector does an ante mortem inspection to determine the suitability of an animal for slaughter and to gather information needed for a detailed post mortem (after death) inspection and final carcass disposition.

The inspector will notify the CFIA when an animal arrives at the Establishment without a properly affixed Canadian Cattle Identification Agency (CCIA), Canadian Sheep Identification Program (CSIP) tag(s) or PigTRACE identification, or if the animal is identified as having a foreign animal disease (FAD). A FAD is a disease that is not normally found in Canada.

OPERATOR ANTE MORTEM INSPECTION

1. The operator must make an assessment of each animal or flock as it arrives at the Establishment

Acceptable Outcomes for ante mortem inspection:

- 👉 The operator must fill in the “**Ante Mortem Screening Card**” or the “**Ante Mortem Inspection Report**” to record the identity of the lot or flock, the species of animal, the number of animals screened, and the number identified as suspect.
 - 👉 The operator should discuss the assessment with the inspector, and give the inspector the partly filled-out “**Ante Mortem Screening Card**” or the “**Ante Mortem Inspection Report**”.
-

- The operator must tell the inspector if there is any suspected compromised animal or flock (suspect of a disease or any other change from normal).
- The operator must tell the inspector if they see any cattle, bison, sheep or hogs without CCIA or CSIP tag(s) or PigTRACE identification.

NOTE: The inspector does not stop the slaughter of an unidentified animal

2. The operator must:
 - provide an assigned area of adequate size where the inspector can move freely to do the ante mortem inspection;
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- provide employees to move carcasses or to perform any task needed for the inspector to do the ante mortem inspection; and
 - maintain a record of the identity of all animals.
3. An “**Ante Mortem Screening Card**” or the “**Ante Mortem Inspection Report**” must be filled out and signed by the inspector before any animal is slaughtered.
 - Animals must be slaughtered within 24 hours of the Inspector’s ante mortem inspection.
 - If the slaughter is delayed for more than 24 hours from the time of the ante mortem inspection, then the ante mortem inspection must be done again before the slaughter can occur.
 4. The operator may ask the inspector to fill out the “**Red Meat Certificate of Condemnation**”, or the “**Poultry Certificate of Condemnation**” for any animals or flocks condemned at ante mortem inspection.
 5. All slaughter floors, yards and driveways used to hold animals must be thoroughly cleaned and disinfected.

REQUIREMENTS FOR THE STUNNING OF ANIMALS

OVERVIEW

The operator is responsible for training staff and observing the stunning of animals. Well-trained staff and the skilful use of stunning equipment are critical to the humane slaughter of animals.

The operator chooses an approved stunning method based on the need of their operation. The three primary methods for stunning are:

1. **Electrical Stunning:** This method may be used for all animals. It is most frequently used for stunning hogs, birds and rabbits.
2. **Carbon Dioxide Gas Stunning:** This method is used for stunning hogs and poultry.
3. **Mechanical Stunning:** This method includes a captive bolt pistol or a device that delivers a blow to the animal's skull. Stunning by mechanical means is most often used in slaughtering horses, cattle, calves, sheep and goats.

NOTE: For slaughter without stunning (ritual slaughter or rapid capitulation), contact the Regional Supervisor for information.

If firearms are used for stunning, the Establishment must have a written Firearm Use - Standard Operating Procedure (SOP) that outlines the process for using the firearm and the controls to ensure the safety of people, the humane treatment of the animal being stunned, the safety of other animals around the stunning area and the food safety of resulting meat products.

If an animal welfare or food safety issue or risk occurs due to improper stunning practices, or as a result of poor conditions within the Establishment, the inspector will work with the operator to decide what needs to be done to correct the issue or risk.

STUNNING OF ANIMALS

1. All animals must be stunned prior to slaughter through the use of species approved stunning equipment and devices.
2. Stunning processes must be specific for the size and species of animal being slaughtered.
3. With the exception of birds, no animal is to be hoisted or shackled prior to being stunned.
4. The animal must be discharged from the stunning box to a dry landing area.
5. If an animal regains partial or complete consciousness it must be re-stunned prior to bleeding.

TOPIC: 4.5

DRESSING OF RED MEAT ANIMALS - REQUIREMENTS

OVERVIEW

Dressing refers to all actions taken from the time the animal is stunned until the carcass and all other edible products are removed from the kill floor for further storage and processing.

A significant challenge for the production of safe meat products is to prevent contamination of edible products with micro-organisms (bacteria, molds, fungi) that are on the surface of the skin and in the intestinal tract of live animals. Therefore, the surfaces of the carcass and edible organs must not come into contact with the surface of the skin, intestinal contents or dirty equipment. This is particularly important during the skinning and evisceration processes.

This topic sets out the red meat carcass dressing requirements that the operator (this includes Establishment management and staff) must meet to ensure that carcasses and their parts are prepared hygienically and are ready for inspection.

If an animal welfare or food safety issue or risk occurs due to improper dressing procedures, or as a result of poor conditions within the Establishment, the inspector will work with the operator to decide what needs to be done to correct the issue or risk.

GENERAL DRESSING REQUIREMENTS AND CONTROLS

1. The identity of the carcass and all its parts must be maintained throughout the dressing process and until the post mortem inspection and disposition are completed.
2. Any contaminated area on the carcass or its parts must be trimmed out. Washing is not sufficient for the removal of visible contamination.
3. Pathological lesions must not be removed (unless permitted by the inspector) until the post mortem inspection is completed.
4. From the bleeding area to the last point of inspection, carcasses must be spaced so that un-skinned carcasses do not come into contact with any other carcass, carcass parts, floors, walls or other structures.

STICKING AND BLEEDING

1. Stunned animals must remain completely unconscious until death from exsanguination (death from blood loss).

Acceptable Outcome for bleeding:

- 👉 Bleeding the animal as soon as possible after stunning makes the best use of post stunning heart action.
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2. The sticking knife must be rinsed and sanitized after use on each animal.

3. Blood harvested for human consumption must be collected without contamination using a closed collection system.
 - The identity of all saved blood must be maintained with the carcass until the post mortem inspection and disposition is completed. Blood will only be approved when the carcass has been passed.

NOTE: The operator can ask the inspector to review **Directive 4.2: Meat Product Harvesting for Human Consumption - Appendix Meat Product Harvesting Overview** from the *BC Meat Inspection Program Manual of Directives*.

UDDER OR PENIS REMOVAL

1. Lactating udders and lymph nodes must be removed without any contamination of the meat products, facilities or equipment.
2. The penis must be removed without contaminating the meat product, facilities or equipment with urine.
3. Any contamination must be immediately trimmed.
4. Contaminated equipment must be washed and sanitized.

OPENING THE BRISKET AND EVISCERATION

1. Clean equipment (saw) must be used to split the brisket or open the abdominal cavity.
2. Visible contamination must be trimmed from the midline before opening the abdominal cavity.
3. If the brisket is opened before complete hide removal, the hide must be carefully pulled away from the midline.
4. The stomach or intestines should not be punctured during evisceration.

Acceptable Outcome for evisceration:

- 👉 To avoid puncturing the stomach or intestine the abdomen should be opened with the point of the knife pointing away from the carcass and the handle inside the abdomen. The hand holding the knife can be used to hold the abdominal organs back as the cut is being made.
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5. The uro-genital organs (bladder, ovaries and uterus) must be removed without puncturing them.
6. If a carcass, or any of its edible parts, is contaminated by stomach contents (ingesta), manure (fecal matter), urine, uterus matter, pus, or any other foreign material, the contaminated area(s) must be immediately trimmed and washed.
7. Viscera must be placed in a clean tote, viscera bin or truck or on a viscera table for inspection.
8. The tote, bin, truck or table must be rinsed and sanitized after each carcass.
9. When a moving top table is used, the eviscerator (gutter) must wear clean rubber boots and an apron that can be identified (preferably white) and are dedicated for the gutting purpose only.

- The evisceration knife, boots and apron must be adequately rinsed and sanitized when contamination occurs.
10. To prevent cross-contamination, the carcass must not come in contact with stationary parts of the viscera table, equipment on the kill floor (such as high bench or retaining bars), or any other carcass prior to final carcass inspection.
 11. The identity of all viscera must be maintained with the carcass until the post mortem inspection and disposition is completed.

SPINAL CORD REMOVAL FROM OTM CATTLE

1. The spinal cord from over thirty month (OTM) cattle carcasses must be completely removed
 - The Establishment's *Food Safety Plan* must have an SOP for the removal and control of Specified Risk Material (SRM) from OTM cattle.
 - The SOP must meet all CFIA requirements for SRM handling, movement and disposal

NOTE: The operator can ask the inspector to review **Directive 5.2: Removal Of Specified Risk Material (SRM) From Cattle - Appendix 1: SRM Removal Standards** from the *BC Meat Inspection Program Manual of Directives*.

TRIMMING AND WASHING

1. The Establishment's *Food Safety Plan* must have an SOP that sets out the critical control points for ensuring carcasses are checked and trimming is complete and consistent before the final wash.
2. Trimming must be done in a designated area of the Establishment.
3. All defects or areas of contamination must be removed before the final carcass wash, such as stick wounds, blood clots, bruised tissue, pathological defects, contamination and dressing defects.
4. The operator must check all carcasses for cleanliness before washing.

Acceptable Outcome for carcass treatment:

- ☞ Carcasses can be treated with an approved antimicrobial agent, such as lactic acid.
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DRESSING CATTLE

1. **Identity Control:** The identity of all removed carcass parts must be maintained with the carcass until the post mortem inspection and disposition is completed. If the part is being harvested for human consumption, it will only be approved when the carcass has been passed.
2. **Feet Removal:** Feet must be removed before the carcass is skinned.

Acceptable Outcome for feet removal:

- ☞ Hind feet are removed by skinning the area above and below the place where the leg is cut and then removed without contacting the hide.
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3. **Horn Removal** must be done in a way so that the carcass is not contaminated.
 - Equipment to remove horns must be easy to clean and sanitize after each carcass.
4. **Hide Removal:** Except for starting cuts, the skin must be cut from inside out and reflected away from the carcass to prevent contamination with hair, dirt and manure.
 - The knife used to begin the skinning operation must be adequately rinsed and sanitized before reuse on another carcass.

Acceptable Outcomes for skinning:

- 👉 Skinning should begin with the hind shanks and proceed downward, reflecting the outer (hair) side away from the carcass.
- 👉 Rolling the hair side off the hide and away from the carcass is a good method of keeping the dirty side from contaminating the carcass.

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- **Bed system for hide removal** may be used, when the head is already removed from the carcass.

Acceptable Outcome for bed system:

- 👉 Neck tissue should not contact the floor, cradle, or outside skin or other surfaces.

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- When the carcass is moved from the skinning bed, the exposed parts must not contact the floor, cradle or other fixed objects.
5. **Bung (Rectum) Dropping:** During hide removal the bung is dropped.
 - A circular cut around the anus (rectal opening) must be made, leaving the anal sphincter (muscle) intact.
 - A clean knife must be used for the next cut, which frees the anus and rectum from the surrounding tissue.
 - The rectum is then tied together with the neck of the bladder and inserted into a plastic bag. The bag is dropped into the pelvic cavity.
 6. **Head Handling:** To prepare the head for inspection the operator must:
 - Remove any remaining pieces of skin and contamination. This must be done before the head is washed.
 - If cheek muscle removal and processing can be carried out in a hygienic manner prior to washing this will be permitted. However washing of the entire head, flushing out the oral (mouth) cavity to remove any remaining ingesta may be required if this prevents contamination during preparation, handling and storage.
 - Drop the tongue and remove the palatine tonsils.
 - Head hooks must be rinsed and sanitized after every use with water at 82° C.

7. **Esophagus Tying In Cattle:** The esophagus must be tied to prevent carcass-viscera contamination with rumen contents.
8. **Splitting the Carcass:** The carcass can be split with a saw or cleaver.
 - Before splitting the carcass, bruises, warbles, grubby tissue or contamination must be trimmed from the back of the carcass.
 - The splitting saw or cleaver must be rinsed and sanitized after splitting:
 - a condemned or held carcass;
 - an OTM carcass and prior to using on a UTM carcass; and
 - if the tool becomes contaminated in the splitting process.

DRESSING SHEEP AND GOATS

1. The requirements for dressing sheep and goats are the same as those used for dressing cattle, with consideration of the following:
2. **Splitting The Carcass:** Splitting the carcass of sheep and goats is not required.
3. **Bung (Rectum) Dropping:** Bung tying of sheep and goats is not required.

Acceptable Outcome for sheep and goats:

- 👉 Esophagus of sheep and goats should be ligatured to prevent regurgitation during evisceration.
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DRESSING HORSES

1. The requirements for dressing horses are the same as those used for dressing cattle, with consideration of the following:
2. **Rodding the esophagus** is not required due to the anatomy of the equine cardiac sphincter.

DRESSING OSTRICHES, RHEAS AND EMUS

1. **Bleeding** must be done by cutting a major vessel.

Acceptable Outcomes for bleeding:

- 👉 For ostriches and rheas it is preferable to sever the major blood vessels (jugular veins and carotids) in the caudal cervical area near the thoracic inlet provided the thoracic cavity is not penetrated.
 - 👉 Emus should be bled by cutting the major vessels near the cranial part of the neck similar to turkeys.
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2. **Feather Removal:** The carcass must be de-feathered after bleeding but prior to skinning.
 - Feathers must be removed in an approved manner, such as dry hand picking or clipping.

- Feathers must be collected in an approved manner and immediately be removed to the inedible area.
3. **Venting:** The vent must be dissected from its attachment, encased in a plastic bag and securely tied to prevent leakage of cloacal contents.
 4. **Neck and Head Removal:** The head, neck and trachea must be presented for inspection.
 5. **Splitting the Carcass:** Splitting the carcass is not required.
 6. **Evisceration:** The heart, lungs and the liver must be removed prior to splitting.
 - The bagged vent is pulled through the vent opening into the abdominal cavity.
 - The liver, heart, lungs, kidneys and spleen are presented for inspection.
 - The intestinal tract must be separate and presented for inspection.

DRESSING HOGS

1. The requirements for dressing hogs are similar to those used for dressing cattle, with consideration of the following:
2. **Sticking and Bleeding:** Requirements are the same as for cattle.
 - The hog must be completely bled before being put in the scald tank.
3. **Scalding:** The water temperature and the length of time a hog remains in the scald tank must ensure that all bristle can be removed in later processes.
 - Extended periods in hot water, or too much time in the scalding tank, can result in carcass cooking, skin breaking or contamination with consequential condemnation of the carcass.
 - Scald water additives must be approved by the BCMIP.
4. **Dehairing, Singeing, Resin-Dipping, Polishing and Shaving** are all done to remove all bristles prior to the carcass being washed and opened.
5. **Washing** removes dirt, bristle and scruff from the carcass before evisceration.
6. **Skin-Off Dressing – Hogs:** The requirements for hide removal are similar to those used for dressing cattle, with consideration of the following:
 - Before the hide is removed, the carcass must be washed and the feet removed without any contamination of the carcass.
7. **Head Dropping or Removal:** The head can either be partially severed from the carcass (dropped) or removed.
 - The mandibular lymph nodes must be presented for inspection.
 - Heads from scalded hogs must be free of all bristle, dirt and scurf.
 - If this cannot be accomplished by scalding, dehairing, singeing and shaving, then the head must be scalped after the pre-evisceration carcass wash.

8. **Splitting the Carcass:** The carcass must be split in the middle of the vertebral column up to the neck area, creating an opening wide enough to view the inside without pulling apart the ventral opening.

DRESSING BBQ (BARBECUE) HOGS

1. The dressing requirements for BBQ hogs are the same as those used for dressing hog, but without splitting the carcass.

DRESSING RABBITS

1. The dressing of rabbits requires consideration of the following:
 - Skinning must be done by hanging the carcass with a hook or by using a poultry shackle for smaller rabbits.
 - The skinner's hands and knives must be rinsed frequently and remain visibly clean.
 - Any remaining pieces of intact pelt or hair must be removed by trimming.
 - The carcass must be air-chilled, not water-chilled.

DRESSING OF POULTRY ANIMALS REQUIREMENTS

OVERVIEW

Dressing refers to all actions taken from the time the animal is stunned until the carcass and all other edible products are removed from the kill floor for further storage and processing.

A significant challenge for the production of safe meat products is to prevent contamination of edible products with micro-organisms (bacteria, molds, fungi) that are on the surface of the skin and in the intestinal tract of live animals. Therefore, the surfaces of the carcass and edible organs must not come into contact with the surface of the feathers, skin, intestinal contents or dirty equipment. This is particularly important during the defeathering and evisceration processes.

This topic sets out the poultry carcass dressing requirements that the operator (this includes Establishment management and staff) must meet to ensure that carcasses, and their parts, are prepared hygienically and are ready for inspection.

If an animal welfare or food safety issue or risk occurs due to improper dressing procedures or as a result of poor conditions within the Establishment the inspector will work with the operator to decide what needs to be done to correct the issue or risk.

GENERAL DRESSING REQUIREMENTS AND CONTROLS

1. The identity of the carcass and all its parts must be maintained throughout the dressing process and until the post mortem inspection and disposition are completed.
2. Any visible contamination on the carcass or its parts must be adequately trimmed and rinsed off.
3. Pathological lesions must not be removed (unless permitted by the inspector) until the post mortem inspection is completed.
4. Suspended evisceration lines must be located far enough away from walls and other structures to ensure that no part of a carcass touch any structures.

STICKING AND BLEEDING

1. Stunned birds must remain completely unconscious until death from exsanguination (death from blood loss).
2. There must be enough time provided for the bird to fully bleed out after sticking and before scalding.

Acceptable Outcome for bleeding:

- 👉 The rail distance required to fully bleed the animal will be based on the rail speed, but a general rule is that bleeding time should not be less than 90 seconds.
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3. The sticking knife must be rinsed and sanitized frequently.
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SCALDING, PLUCKING AND WASHING

1. The water temperature and the length of time a bird remains in the scald tank must ensure that feathers are loosened.
 - Inappropriate scalding can result in carcass cooking and the loss of large areas of skin during the plucking process with consequential condemnation of carcasses.
2. All hair, feathers, pinfeathers, dirt and scruff must be completely removed and the carcass washed following scalding and before any incisions are made (except sticking).

Acceptable Outcome for plucking and washing:

- 👉 To reduce the attachment of Salmonella and other bacteria to the skin, spray washing of carcasses should occur within fifteen seconds after plucking.
-

3. Equipment and surfaces must be rinsed frequently to remove any debris, such as feathers or blood.
4. Birds must not pile-up while waiting to be re-hung.

REMOVAL OF OIL GLANDS, HEADS, CROPS, TRACHEAS AND FEET

1. Oil glands, heads and feet may be removed from poultry carcasses either before or after evisceration and inspection.
 - When oil glands, heads and feet are removed after inspection, the carcass must be presented with the feet clean of all manure.
 - Crops and tracheas must be removed after evisceration and inspection.

Acceptable Outcome for head-and-feet-on poultry:

- 👉 Head-and-feet-on poultry is allowed – feet must be clean, disease-free, and have epidermis and toenails removed.
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- When oil glands, heads and feet are removed before inspection, the carcass must first be de-feathered and washed to prevent contamination of cut surfaces.
2. Equipment and surfaces must be rinsed frequently to remove any debris.

EVisCERATION

1. The bird must be eviscerated in a way that it remains free of fecal (manure) contamination.
 - Poultry may be eviscerated manually or mechanically.

Acceptable Outcome for evisceration:

- 👉 Large bird carcasses should be hung in the three-point suspension position.
 - 👉 Broiler chickens and fowl may be hung in the two-point suspension
-

position.

2. The eviscerator's hands and the eviscerating equipment must be visibly clean before entering the abdominal cavity.
3. The head and neck must not drag over equipment as the bird moves along the evisceration line.
4. The carcass must be hung so that the inspector can observe the internal cavity, viscera and external surface.
 - The viscera must remain intact, hanging on the outside of the bird.
5. The viscera including the esophagus, crop, cloaca, lungs, trachea, kidneys and reproductive organs must be removed from the carcass following the post mortem inspection and before the final wash

Acceptable Outcome for evisceration:

- 👉 A vacuum machine may be used to remove kidneys and lungs after the carcass has passed post mortem inspection.
-

TRIMMING AND WASHING

1. The Establishment's *Food Safety Plan* must have an SOP that sets out the critical control points for ensuring carcasses are checked and trimmed completely and consistently before the final wash.
2. Trimming must be done in a designated area of the Establishment.
3. All defects or areas of contamination must be removed before the final carcass wash, such as blood clots, pathological defects, contamination and dressing defects.
4. All approved carcasses must have a final wash with clean potable water.
 - If the carcass is washed manually, the internal areas must be penetrated to ensure adequate washing and drainage.

POULTRY SALVAGING

When a carcass is contaminated with gastrointestinal contents, the operator may salvage any uncontaminated portions at an off-line salvage and reprocessing station. Salvage operations must meet the following requirements:

1. The inspector's disposition will set out requirements for carcass handling and salvaging procedures.
2. A designated room or area must be available for the salvaging operation.
3. Salvaging must be done in a timely manner.
4. Carcasses must not pile-up at the salvage station.
5. Edible products must not be contaminated by contact with inedible products or dirty equipment.

MISCELLANEOUS PROCESS REQUIREMENTS

OVERVIEW

An operator may request the BCMIP’s approval to:

1. Perform ritual slaughter.
2. Harvest offal for pharmaceutical use.
3. Harvest meat products for human consumption.
4. Salvage meat products for animal food.

The operator must contact the Regional Supervisor to review the regulatory and program requirements before performing any of the above listed processes.

An operator intending to undertake any of the above processes has a regulatory requirement to develop, maintain and follow a written SOP for the process. The BCMIP must approve the SOP, and all program requirements prior to the operator performing any of the above processes.

If an animal welfare or food safety issue or risk occurs due to improper procedures, or as a result of poor conditions within the Establishment, the inspector will work with the operator to decide what needs to be done to correct the issue or risk.

1. RITUAL SLAUGHTER

A. HALAL SLAUGHTER

DEFINITIONS

Pre-Cut Stunning: Stunning an animal to render them unconscious prior to a neck cut being made.

Post-Cut Stunning: Stunning an animal immediately after a neck cut is made.

OVERVIEW

In British Columbia, licensed operators in all classes of slaughter establishments (Class A, B, D and E)¹ who wish to conduct religious slaughter in order to produce halal meat products must ensure that:

1. The animal slaughtered is handled in a manner that does not subject the animal to avoidable distress or avoidable pain (Meat Inspection Regulation, British Columbia).
2. For meat products sold under the halal label, a person must not use, in labelling, packaging, advertising or selling a food, the word “halal” or any letters of the Arabic alphabet or any other word, expression, depiction, sign, symbol, mark, device or other representation that indicates or that is likely to create an impression that the food is halal

unless the name of the person or body that certified the food as halal is indicated on the label or package or in the advertisement or sale (Food and Drug Regulations, Canada).

3. The operating procedures governing animal welfare in the slaughter establishment are part of the Food Safety Plan, and are subject to approval and review by the BCMIP.

¹For Class D and E Slaughter facilities please refer to the BCMIP Feasibility Study for complete requirements.

REQUIREMENTS

A licensed operator must meet all of the following requirements for halal slaughter:

General:

1. Operators must fulfill all the requirements in the checklist for the species to be slaughtered before approval is granted by the BCMIP. Checklists are available through the Regional Supervisor.
 - Slaughter must be performed by a person who has been certified by an organization such as the BC Muslim Association.

Eligible Species:

- cattle (and all bovine animals, including calves).
- sheep.
- goats.
- birds (chickens, turkeys, ducks, guinea fowl, geese or quails).

Restraint:

1. Temperament of the animal must be considered in deciding whether they are suitable for halal slaughter.
2. The animal must remain calm during the slaughter process. If an animal is agitated and cannot be restrained for a proper cut, it is not eligible for slaughter without pre-cut stunning and must be stunned immediately.
3. The animal must be restrained in a comfortable and upright position. Inverting any animal (rabbit included) is prohibited.
4. Manual restraint is acceptable for animals less than 60 kg. Manual restraint must be suitable for the species and size of animal being slaughtered, and meet all other requirements.
5. The operator must ensure that restraining equipment is:
 - inspected and maintained according to the manufacturer's instructions or approved by the BCMIP after a trial period, if constructed in-house; and
 - used in the way described in the manufacturer's instructions or as approved by the BCMIP after a trial period, if constructed in-house.
6. The animal must only be moved into the restraining device immediately before slaughter to avoid unnecessary stress or discomfort for the animal.
7. Restraining equipment must be suitable for the species, size and weight of the animal.

8. Equipment must:
 - run quietly and smoothly,
 - provide secure footing for the animal, allow for entry of one animal at a time, confine the animal without discomfort or without force, and must allow the animal to be held forward by a pusher or similar restraining device.
9. The head restraint must provide for comfortable placement of the animal's head into the forehead bracket and chin lift and provide proper access at the correct angle for cutting.
10. The head restraint must not overextend the neck.
11. Nose tongs are prohibited.
12. The head restraint must allow adequate access to the head to examine for loss of consciousness and post-cut stunning, if required.
13. The cut portion of the neck where the cut is made must not contact with the restraint device in order to ensure that the edges of the cut do not close.
14. The head must be supported after the cut is made to maximize blood loss.

Stunning:

Acceptable Outcome for stunning:

- The pre-cut stunning of all animals is encouraged. If a pre-cut stun is not feasible or desired, all conditions of this policy pertaining to slaughter without pre-cut stun apply.
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1. If pre-cut stunning is not feasible, post-cut stunning should be considered for all ruminants.
2. For any animal, back-up stunning equipment approved by the BCMIP must be kept close to the restraining equipment so that it can be used immediately when an animal experiences avoidable pain, suffering or agitation, or has been injured.

Neck Cutting and Bleeding:

1. For any animal (including birds), a hand-held knife that is sharp and the appropriate length for the animal must be used. Rapid and uninterrupted movements of the knife must be used. A general guideline is that the blade of the knife must be at least twice as long as the width of the animal's neck.
2. For cattle, sheep and goats the cut must sever both an animal's carotid arteries and its jugular veins.
3. For birds the cut must sever both carotid arteries.
4. The cut must be a single pull stroke of the knife in all circumstances. In large ruminants this may have to be modified to include a push and pull motion. Sawing back and forth is prohibited.
5. It is prohibited, after making the cut, to remove and reinsert the knife.
6. Animals must be stunned immediately if they do not lose consciousness under the following conditions:
 - Bovines if they do not lose consciousness within 30 seconds post- cut.

- Small ruminants (goats and sheep) if they do not lose consciousness within 15 seconds post-cut.
 - Rabbits, if they do not lose consciousness within 15 seconds post-cut.
 - Any animal if they are showing vocalizing movements after the cut.
7. Birds must be restrained in order to permit adequate bleeding for at least:
- 2 minutes for turkeys or geese.
 - 90 seconds for any other bird

Unconsciousness and Signs of Life:

1. Any one of the following indicates that the animal may return to consciousness and must be stunned immediately:
 - rhythmic breathing.
 - natural blinking.
 - righting reflex (attempting to stand up).
 - vocalization movements (see below).
 - controlled tongue or lip movements.
2. Loss of consciousness must be confirmed by the slaughter person by observing the following:
 - No rhythmic breathing.
 - No natural blinking, tracking of movement or other eye movements including nystagmus (movement of the eye from side to side).
 - Permanent loss of muscle tone and righting reflex (animal attempts to get upright).
 - No vocalization or vocalization movements. As the voice box is severed, normal vocalizing is not possible. An open mouth with extended neck and rolled tongue indicates that an animal is attempting to vocalize.
 - No tone in the neck muscles resulting in a floppy head.
 - Loose tongue.
 - No controlled tongue or lip movements.
3. Animals must be unconscious before the restraining device is released, unless required to apply a post-cut stun.
4. Animals must not be wholly or partially lifted, inverted, shackled or suspended by any means until the animal has lost consciousness.
5. Dressing procedures must not be performed on an animal that shows signs of a possible return to consciousness.

HALAL SPECIAL REQUIREMENTS CONCERNING POULTRY

1. **Pre-slaughter reversible stunning is encouraged to ensure that birds are insensible at the time of the cut.**
2. Birds may retract their head which will delay bleeding. Proper restraint must continue until there is loss of consciousness and to ensure adequate and timely bleeding.
3. Cones, if used, must suit the size and species of bird. Proper restraint of a bird in a cone involves continuing to hold the head after the cut has been made and until loss of consciousness occurs.
4. The halal certified slaughter person must be ready to perform the cut as soon as the bird is restrained. Once the head is restrained, the neck cut must proceed with no more than a 10 second delay.
5. Both carotid arteries and jugular veins must be rapidly, simultaneously and completely severed with a single stroke of the knife.
6. Birds must be rapidly decapitated in the event of a poor cut.
7. Animal welfare and the loss of consciousness must be monitored for every bird through cutting and bleeding until death.
8. All birds must be insensible before they are moved or manipulated.
9. Birds must be dead before entering a scalding tank or a water tank.
10. Dressing procedures must not be performed on a bird that shows signs of a possible return to consciousness.

2. OFFAL HARVESTED FOR PHARMACEUTICAL USE

1. The operator must contact the Regional Supervisor before harvesting any meat offal product for pharmaceutical use.
2. The following initial considerations must be made in addition to any requirements set out by the Program:
 - Harvesting organs or parts of organs for pharmaceutical use must not interfere with sanitary operations in the Establishment.
 - Whole fetuses or their organs may be harvested for pharmaceutical or research purposes.
 - Gallbladders containing bile may be harvested for pharmaceutical use.
 - Container must be labeled “For Pharmaceutical Use Only” prior to being shipped.

3. HARVESTING MEAT PRODUCTS FOR HUMAN CONSUMPTION

1. The operator must contact the Regional Supervisor before harvesting any meat product for human consumption.
2. Meat products can only be harvested from carcasses that are passed for human consumption. Establishments that harvest meat products have a regulatory requirement to develop, maintain and follow written meat product harvesting operating procedures. The procedures must ensure that:

- The identity of all prepared meat products is tracked until the post mortem inspection is complete and the carcass is passed.
- The establishment configuration and employee movement for harvesting procedures is designed so that the meat products or slaughter areas do not become cross-contaminated by hair, body fluids or other products of the animal.
- Harvested meat products are free from pathological conditions.
- Meat products must be chilled to 4°C or lower, as soon as possible after harvesting and prior to shipping, to ensure that the product does not present a food safety risk to the public.

A. RED MEAT

The harvesting of meat products for human consumption is described below for all red meat species including, but not restricted to: cattle, hogs, emu, ostrich, rhea, buffalo, bison, deer, sheep and goats. Species-specific handling procedures are noted as required.

BLOOD

Animal blood can be collected for human consumption from any clean red meat species.

A closed harvesting system must be used for collection, e.g., a hollow knife or cannula. Blood draining into an open pail under the carcass is not acceptable. Blood collection must be free from contamination by hair or body fluids.

NOTE: With cattle over thirty months (OTM), cross-contamination could occur when brain tissue exudes from the stun hole. Blood collected for edible purposes must be protected from contamination by SRM neural tissue. It is the responsibility of the establishment operator to ensure that controls are in place to prevent this contamination.

The operator must be able to identify the blood's source, until the post mortem inspection is complete and the carcass is passed for human consumption. Ideally, blood should be collected and stored in separately labelled containers. Blood from a condemned carcass will also be condemned and discarded in an appropriate manner.

If blood from more than one animal is stored in the same container, the complete container of blood will be condemned if any one animal contributing blood to that container is condemned.

Approved anticoagulants are used to prevent blood clotting. Alternatively, mechanical defibrination that uses suitable beaters that are washed and sanitized between uses is acceptable.

Blood is highly susceptible to the growth of pathological organisms that can cause serious and possibly fatal illness. All blood products must be chilled to 4°C or lower, as soon as possible after harvesting and prior to shipping, to ensure that the product does not present a food safety risk to the public.

BRAINS

Brains can be harvested for human consumption from cattle, sheep, lambs, goats and hogs.

Brains from animals stunned electrically, or with a penetrating percussion pistol (captive bolt), must be adequately trimmed.

Brains must be washed immediately after inspection and chilled to 4°C or lower, as soon as possible and before shipping, to ensure that the meat product does not present a food safety risk to the public.

Brains cannot be harvested for human consumption if they are:

1. From OTM cattle (designated as SRM).
2. Contaminated with bone splinters, bullet particles, hide, or hair. Brains that contain particles of skin, bone or blood clots can be salvaged for pet food.
3. From an animal stunned with lead or fragile bullets.

HEADS

Head meat can be harvested for human consumption only after the post mortem inspection is completed and the carcass has been passed.

The intact head must be skinned and visibly clean. The nasal and oral cavities must be flushed before the head is presented for inspection.

Cheek meat must be trimmed free of the salivary glands and mucous membranes, washed thoroughly and then chilled to 4°C or lower, as soon as possible and before shipping, to ensure that the meat product does not present a food safety risk to the public.

If firearms are used for stunning, the cheek meat cannot be harvested unless the operator has written standard operating procedures and that they have a suitable method of ensuring that lead fragments did not entered the cheek muscles during the stunning process.

Head-on-rabbit: the head must be completely skinned and disease free on inspection.

Sheep/Goat: if heads left attached to the carcass the head must be completely skinned and disease free on inspection.

TONGUES

Tongues can be harvested for human consumption. Tongues must be trimmed to remove any portions of the larynx, epiglottis, or tonsils. The severed base of the tongue must be trimmed if there is any contamination. Tongues must be washed and then chilled to 4°C or lower, as soon as possible and before shipping, to ensure that the meat product does not present a food safety risk to the public.

If a firearm is used in the stunning process, the inspector must carefully observe the surface of the tongue for lead fragments. Scraping the blade of the knife over the tongue may allow for better detection of small entry points.

HEARTS

Hearts can be harvested for human consumption.

Hearts must be properly trimmed to remove the major blood vessels (aorta, pulmonary artery, vena cava) within 2 cm of their origin. Hearts may have to be opened, depending on the species, to remove all blood clots.

The atria do not need to be trimmed, except to accommodate removal of the major blood vessels.

After washing, hearts must be drained and then chilled to 4°C or lower, as soon as possible and before shipping, to ensure that the meat product does not present a food safety risk to the public.

LUNGS

Lungs can be harvested for human consumption, if they are free of pathological lesions and contamination.

Lungs with defects such as parasites, lump, tumour, or abscess (one or more) cannot be approved for human consumption.

When prepared for consumption, the trachea and main bronchi of the lungs must be opened for inspection to ensure that they are free of ingesta (stomach contents) or any aspirated scald water. Contaminated lungs will not be approved for human consumption.

The use of lungs as an ingredient in meat products constitutes adulteration. **Under no circumstances are lungs permitted for use as an ingredient in food products.**

Lungs must be washed and then chilled to 4°C or lower, as soon as possible and before shipping, to ensure that the meat product does not present a food safety risk to the public.

THYMUS (SWEETBREAD)

Thymus glands can be harvested for human consumption, if they are free of pathological lesions. Approved thymus glands must be washed to remove blood and blood clots, and then chilled to 4°C or lower as soon as possible and before packaging, or they can be washed, packaged and immediately frozen.

KIDNEYS

Kidneys can be harvested for human consumption, if they are free of any pathological lesions.

Kidneys must be deeply incised, soaked in water and washed before they are incorporated into any meats.

Kidneys must be chilled to 4°C or lower, as soon as possible and before shipping, to ensure that the meat product does not present a food safety risk to the public.

Kidneys must not be used to produce lard or tallow.

NOTE: Health Canada policy does not permit the harvesting of horse kidneys for human consumption due to their high Cadmium content. The high Cadmium content can cause a serious food safety risk.

Kidneys from ostriches, rheas and emus must be condemned unless the producer can provide data that indicates that the levels of heavy metals (primarily Cadmium) are within a range acceptable to Health Canada.

LIVERS

Livers can be harvested for human consumption and must be prepared as follows:

1. The gallbladder is removed and particular attention must be paid to ensure there is no spillage of bile.
2. Dry adhesions are removed by trimming. If the liver is too severely affected with dry adhesions or parasitic scars to be harvested for human consumption, it can be salvaged for pet food.

Livers must be chilled to 4°C or lower, as soon as possible after harvesting and prior to shipping, to ensure that the product does not present a food safety risk to the public.

SPLEEN

Spleens can be harvested for human consumption if they are free of pathological lesions or contamination. Spleens with defects such as lumps, tumours, or abscess (one or more) cannot be harvested for human consumption.

Spleens must be chilled to 4°C or lower, as soon as possible after harvesting and prior to shipping, to ensure that the product does not present a food safety risk to the public. Spleens approved for human consumption must be chilled before packaging.

GASTRO-INTESTINAL TRACT

All portions of the gastro-intestinal tract can be harvested for human consumption.

The distal ileum of cattle of all ages is considered SRM and cannot be harvested for edible or inedible purposes.

Harvesting procedures must be highly controlled and monitored as the potential for cross-contamination is very high when processing the gastro-intestinal track. The opening, emptying and cleaning of all portions of gastro-intestinal tract must be done in an area that is physically separate from the kill floor. The air flow in the establishment and the movement of the employees must be designed to prevent cross contamination.

The inspector must approve the use of automated equipment. This approval is required to ensure that only approved materials and procedures are used.

Products must be washed clean and chilled to 4°C or lower, as soon as possible after harvesting and prior to shipping, to ensure that the product does not present a food safety risk to the public.

Intestines, Bungs, and Gallbladders

Intestines, bungs, and gallbladders can be harvested for human consumption, if they are free of pathological lesions.

Intestines, bungs, and gallbladders must be emptied and cleaned as soon as possible and must be:

1. Rinsed inside and out with potable water until the water dripping from the product is clear; and
2. After rinsing, trimmed to remove any visible contamination or defect (e.g. parasites, parasitic lesions, inflammation, foreign bodies, lump)

If a portion of the intestine is used for prepared meat products, such as a sausage or haggis, the intestine must be scalded with hot water or approved chemicals, or both.

Bungs must be salted following cleaning.

Products must be chilled to 4°C or lower, as soon as possible after harvesting and prior to shipping, to ensure that the product does not present a food safety risk to the public.

NOTE: Gallbladders containing bile can be harvested for pharmaceutical purposes. The establishment operator must ensure there is no contamination in the collection of the product and it must be chilled to 4°C or lower, as soon as possible after harvesting and prior to shipping, to ensure that the product does not present a food safety risk to the public. The container holding the gallbladders must be labelled “For Pharmaceutical Use Only” prior to being shipped.

Stomach (Abomasum, Omasum, Reticulum and Rumen)

Cattle and hog stomachs can be harvested for human consumption provided they are free of pathological lesions. Preparation of stomachs must be carried out in an area separate from the kill floor.

Stomachs must be handled in the following manner:

1. The stomach contents must be removed; and
2. The raw product is washed inside and out.
 - Any contamination of the attached fat that is not removed by washing must be trimmed

The mucosal lining of the gastric compartments in ruminants and of the monogastric stomach must be completely removed.

Hog stomachs used for prepared meats must be scalded and the mucous lining must be completely removed.

The product must be chilled to 4°C or lower, as soon as possible after harvesting and prior to shipping, to ensure that the product does not present a food safety risk to the public.

Tripe

In the processing of tripe, the mucosal (inner) lining of the rumen must be entirely removed. The clean, raw tripe must be presented for inspection before chilling and packaging as raw tripe or before scalding, chilling and packaging as scalded tripe.

Tripe must be chilled to 4°C or lower, as soon as possible after harvesting and prior to shipping, to ensure that the product does not present a food safety risk to the public.

Casings

Casings can be prepared for human consumption from intestines, bladders and esophagi of cattle, calves, sheep, lambs, goats and hogs, if they are free of pathological lesions.

Preparation of casings must be done in an area separate from the kill floor.

Details of casing preparation including the separation, cleaning, sliming, washing, testing, and salting must be detailed in the Establishment's written operating procedures.

NOTE: Hog urinary bladders must be emptied, inverted, flushed with water, and soaked in brine for a minimum of 12 hours.

NOTE: If a product is packaged and shipped and has not been cleaned and scalded as per the above requirements, this product must be labelled accordingly. The cleaning of such a product shall be covered in detail in the standard operating procedures of the facility and the packaging shall clearly show the words "Raw, Unprocessed" as part of the description of the product.

TESTICLE AND PIZZLES

Testicles and pizzles cannot be harvested for human consumption. This policy is currently under review.

FATTY TISSUES

Fatty tissues can be harvested for human consumption from approved dressed carcasses and approved detached portions. The collection must be carried out as quickly as possible and the fatty tissue rendered or chilled to 4°C or lower, immediately after collection and before shipping, to ensure that the meat product does not present a food safety risk to the public.

The inspector will not approve fat for human consumption that is taken from a carcass before the ante mortem is completed and the carcass is passed.

FEET

Feet can be harvested for human consumption from approved carcasses if they are free of any visible lesions.

Hog's feet must be cleaned with hot water (scalded) to ensure the complete removal of any manure, or other foreign material from the foot.

- The inter-digital spaces (between the toes) require special attention to completely remove any dirt, scurf and bristles. Toenails must be removed.

Cattle feet must be skinned including complete removal of the hoof wall (shell) and cleaned in hot water (scalded).

- The proximal (upper) open end of the foot will become contaminated during the scalding process. This surface contamination must be removed by trimming prior to washing.

Feet must be chilled to 4°C or lower, as soon as possible and before shipping, to ensure that the meat product does not present a food safety risk to the public. The inspector may direct that the feet be placed in a suitable container to ensure no cross-contamination in the cooler.

CATTLE TAILS

Cattle tail meat can be harvested for human consumption only after the post mortem inspection is complete and the carcass is passed. If the tail is harvested before the final approval of the dressed carcass the identity of tails must be maintained until inspection of the carcass has been completed.

Contamination of skinned tails must be removed by trimming prior to washing.

Approved tails must be chilled to 4°C or lower, as soon as possible after harvesting and prior to shipping, to ensure that the product does not present a food safety risk to the public.

SKINS

Skins cannot be harvested for human consumption. All red meat animals must have skins removed as part of the dressing operation.

B. POULTRY

Individual poultry meat products harvested for human consumption are handled as described below.

NECKS

Necks can be harvested for human consumption only after the post mortem inspection is complete and the carcass is passed. Necks must be free of contamination. Necks must be chilled to 4 °C or lower within 2 hours of their removal from the carcass, as they are highly susceptible to the growth of pathological organisms, which can present a serious food safety risk to the public.

TONGUES

Tongues can be harvested for human consumption if they are free of contamination. Tongues must be chilled to 4 °C or lower within 2 hours of harvesting, as they are highly susceptible to the growth of pathological organisms, which can present a serious food safety risk to the public.

LUNGS

Poultry lungs cannot be harvested for human consumption.

GIBLETS

The term giblets refers to the heart, liver and gizzard as a single item.

Poultry giblets can be harvested for human consumption, if they are free of pathological lesions.

Contamination of the giblets must be avoided during preparation and inspection. Giblets must be cleaned and trimmed at the time of harvesting. The accumulation of giblets for later preparation is not permitted.

The preparation of giblets includes:

- The base of the heart must be removed.
- The pericardium (sac around the heart) must be removed .
- The liver must be separated from the rest of the viscera and the gallbladder removed. Care must be taken to avoid the release of bile onto edible products .
- Gizzards must be separated from the viscera. The contents and the lining must be removed.

Following preparation giblets must be washed and drained. Giblets must be chilled to 4 °C or lower within 2 hours of harvesting, as they are highly susceptible to the growth of pathological organisms, which can present a serious food safety risk to the public.

KIDNEYS

Poultry kidneys cannot be harvested for human consumption.

OVA / TESTICLES

Ova are partially developed eggs on the ovary of laying hens. Ova and testicles can be harvested for human consumption only after the post mortem inspection is complete and the carcass is passed.

Ova and testicles must be refrigerated to 4°C or lower within 2 hours of their removal from the carcass, as they are highly susceptible to the growth of pathological organisms, which can present a serious food safety risk to the public.

FEET

Poultry feet can be harvested for human consumption provided the requirements below are met:

- Feet must be clean of any manure or loose debris.
- Feet must remain attached to the carcass until after the post mortem inspection and the carcass is passed.
- Feet must be scalded and the epidermis and toenails are removed. Only feet free of fecal contamination are transferred to the edible product processing area.

The inspector may direct the operator to remove and discard feet unsuitable for human consumption before the carcass reaches the location where edible feet are being removed.

- Sorting, trimming and packaging operations must be performed such that, feet ready for packaging are not contaminated by defective feet.

All edible feet contact surfaces located in non-refrigerated rooms must be thoroughly cleaned and maintained due to the high potential of contamination.

Edible feet must be chilled to 4°C or lower, as soon as possible after the scalding and prior to shipping, to ensure that the product does not present a food safety risk to the public.

Unacceptable feet tend to be associated with a flock; the inspector has the authority to prohibit the harvesting of feet from a complete flock.

4. SALVAGING MEAT PRODUCTS FOR ANIMAL FOOD

1. The operator must contact the Regional Supervisor before salvaging any meat product for animal food.
2. The following initial considerations must be made in addition to any requirements set out by the BCMIP:
 - There must be enough space and adequate equipment for the separate handling and storage of inedible meat products for use in animal food.
 - Meat products that are suitable for use as animal food include:
 - **Approved meat products:** If approved meat products are used for animal food they must be handled and processed in the same way as meat products prepared for human consumption.
 - **Inedible meat products:** Some meat products that are not suitable for human consumption are identified as inedible and can be used for animal food.
 - **SRM** from cattle carcasses cannot be used in animal food.
 - **Condemned offal or carcasses** and their parts **cannot** be used in animal food.
3. The identity of all meat products salvaged for use in animal food must be maintained until the post mortem examination of the carcass is completed.

POST MORTEM INSPECTION REQUIREMENTS

OVERVIEW

The post mortem (after death) inspection is done after slaughter but before the carcass is removed from the slaughter floor. The post mortem inspection is a regulatory requirement of the BCMIP.

Most disease conditions cause visible changes (lesions) in the carcass. Lesions are defined as any visible abnormality in a carcass or any of its parts regardless of cause. Lesions may be caused by disease, physical injury or other factors. The post mortem examination is intended to detect any lesions in the carcass or any of its parts. The inspector's examination will enable a proper disposition of the carcass, and approval only of carcasses, or parts, that are safe for human consumption.

The inspector's post mortem inspection and disposition are supported by the technical reference documents: *BC Meat Inspection, Poultry Inspection Procedures and Disposition of Abnormalities Manual* and the *BC Meat Inspection, Red Meat Poultry Inspection Procedures and Disposition of Abnormalities Manual*.

If a food safety issue or risk occurs due to improper post mortem handling, or as a result of poor conditions within the Establishment, the inspector will work with the operator to decide what needs to be done to correct the issue or risk.

OPERATOR RESPONSIBILITIES

- Ensure that the carcass, and its parts, is clean, prepared and presented for inspection in a hygienic manner.
 - Provide an assigned area of adequate size where the inspector can move freely to do the post mortem inspection.
 - Provide employees to move carcasses or to perform any task needed for the inspector to do the post mortem inspection.
 - Provide a trimmer to remove carcasses and to trim inedible portions as instructed by the inspector.
 - Keep track of the carcass identity until the final disposition of the carcass; including the identity of head or any harvested meat products.
1. The operator will receive a copy of the **“Red Meat Weekly Kill Report”** or the **“Poultry Daily Kill Report”**.
 2. The operator will ask the inspector to fill out the **“Red Meat Certificate of Condemnation”**, or the **“Poultry Certificate of Condemnation”** for any animal or flock condemned at post mortem inspection.
 3. Slaughter floors or coolers used to hold suspect or condemned animals must be thoroughly cleaned and disinfected.

RE-INSPECTION

1. The operator will ensure the on-going monitoring (re-inspection) of meat products after the post mortem inspection to confirm their integrity.
2. Only inspected meat products may be accepted as returned shipped products. If any other type of meat product (such as non-inspected products) is identified, it must be condemned immediately.

REFRIGERATION OF MEAT PRODUCT REQUIREMENTS

OVERVIEW

Refrigeration, which includes both chilling and freezing, is critical to ensuring food safe meat products. Refrigeration slows down the chemical and enzymatic changes that occur in tissues after slaughter and slows down or stops the growth of micro-organisms that might spoil meat products or cause food poisoning. Refrigeration also destroys parasites that may be present in certain meat products.

Effective refrigeration depends on the unit itself, air circulation and proper spacing of carcasses. Overcrowding reduces a cooler’s effectiveness as there is not enough air circulation and heat is created from freshly slaughtered carcasses.

As a general rule, refrigeration of carcasses must begin promptly after the end of carcass dressing and the product must be cooled as quickly as possible.

An Establishment must develop, maintain and follow a written SOP for meat product cooling and control.

GENERAL REFRIGERATION PRACTICES

1. Procedures must be in place to protect meat products from condensation build up in coolers.

Acceptable Outcome for addressing condensation:

- ☛ Protective measures could include the use of drip pans and ducts, wiping or sponging surfaces, improving ventilation and placing exposed product in areas to ensure that dripping condensation does not occur.
-

2. The maximum storage capacity of a cooler must not be exceeded and there must be adequate air flow.

Acceptable Outcome for cooler capacity:

- ☛ Monitoring internal temperatures of carcasses will confirm if a cooler is overcrowded.
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3. Packaged or unpackaged meat products must not come into contact with drippings from carcasses.
4. Any ice build-up in freezers must be removed.
5. Records of refrigerated products must be maintained and product turnover must be managed to ensure frozen products do not remain in storage for extended periods of time.
6. Records of cooler and freezer temperatures must be maintained.
7. Meat products shipped from an Establishment must be fully chilled to 4°C or lower.

REFRIGERATING RED MEAT

1. **Carcasses and Cuts:** The cooling of carcasses and cut products must be continuous until an internal temperature of 4° C or lower is reached.
 - The surface temperature of red meat carcasses and cuts must be 7° C or less within 24 hours of the end of carcass dressing.
 - After reaching a surface temperature of 7° C, the product's internal temperature must be continuously cooled, as quickly as possible, until 4° C or lower is reached.
2. **Carcass Parts** includes edible meat products: offal, trims, meat, and meat by-products. Carcass parts must be continuously cooled to 4° C or lower within 12 hours of harvesting.

REFRIGERATING POULTRY

1. **Carcasses and Carcass Portions:** The cooling of poultry carcasses and carcass portions must be continuous until an internal temperature of 4° C or lower is reached
 - Chill tanks must not be overcrowded and the water must be continuously replaced.

Acceptable Outcomes for chill tanks:

 - ☞ Initial volumes of potable water and ice in the chill tank are:
 - 2 litres for each carcass weighing 2.5 kg or less.
 - 2.75 litres for each carcass between 2.5 and 6.5 kg.
 - 3.5 litres for each carcass weighing more than 6.5 kg.

2. **Giblets** must be chilled to 4° C or lower as quickly as possible and within two hours of harvesting.