Technical Interpretation Policy Manual (TIPM)

INTRODUCTION

The primary objective of the TIPM is to assist operators of "Licensed Meat Facilities" to meet their responsibilities under federal and provincial legislation and to assist inspection personnel and auditors in the performance of their duties.

Note: The term "Licensed Meat Facilities" include provincially licensed abattoirs and other facilities that are involved in production of meat and meat products.

The term "Abattoir" is restricted to facilities that actually slaughter the animal. An abattoir may or may not be involved in other meat production processes.

Other facilities include places where meat is cut, wrapped, frozen, cured, smoked, aged, etc.

The TIPM has the same goals as the meat inspection and public health legislation of the federal and provincial governments:

Note: These goals are to ensure that:

a) food animals are handled in a humane manner;

b) meat and meat products are suitable for human consumption;

c) unsuitable meat and meat products are handled in a manner that does not cause any risk of contaminating edible meat products;

d) meat products are properly identified and appropriate records are kept in case it is necessary to recall any product

The TIPM is a "Living Document" which means it has been written and organized in a manner that will allow changes to be made as new requirements, techniques and methods come about.

Note: Flexibility should also allow the continued use of traditional methods of production as long as food safety isn't compromised.

The TIPM is designed to provide more detail than what is in applicable Acts, Regulations and other documents (e.g. the Meat Facility Standards).

The **TIPM is not** intended to be **a stand alone manual**. It is intended to be used in conjunction with relevant provincial and federal legislation and guidelines.

Note: Unlike an Act, or Regulation, the **TIPM does not have** any **legal authority**. It is intended to be used to provide an interpretation of what is required in the appropriate Act, or Regulation.

APPLICATION OF THE TIPM

The TIPM applies to:

1. Premises, facilities and equipment that are used in the production of edible meat and meat products.
   Note: Edible means suitable for human consumption.

2. Production, segregation, labeling, packaging, storage and transportation of edible meat products.

3. Segregation and labeling of by-products derived from meat or meat products.
   Note: Here we are referring to products such as animal food, materials for educational or research purposes, etc.

4. Production, segregation, storage and removal of inedible materials.
   Note: Inedible materials are materials that are not suitable for human consumption. Some of these materials may be salvaged for animal food and other purposes.

5. Disposal of condemned material.
   Note: Condemned materials are any part of the animal (edible or inedible) that has been condemned by an inspector. All condemned edible products must be handled as an inedible product. Depending on the reason for condemnation, some condemned materials may be salvaged for other purposes.

The **TIPM does not apply to** any meat **products** that have been **exempted under the *Meat Inspection Act* (Canada)**.

FEDERAL AND PROVINCIAL LEGISLATION

Various pieces of federal and provincial legislation apply to the production of safe and wholesome meat products by “Licensed Meat Facilities” in the Province of Alberta.

There are two types of legislated documents:

1. Acts
   Note: Acts are generally quite broad but there are some very specific statements (e.g. maximum penalties for contravention). The *Meat Inspection Act* of Alberta deals with the following issues:
   a) Definitions
   b) Appointment of inspectors
   c) Requirement for inspection
   d) General conditions for the sale of meat
   e) Authority to condemn meat
   f) Ability to Apply for a License
   g) Power of inspectors to enter a premises
   h) Inspector identification
   i) Penalties for contravening the Act
   j) Activities that can be regulated

2. Regulations
   Note: **Regulations** have **more detail about WHAT has to be done**. They are **less specific about HOW** to do it.

   They must be specifically authorized under an Act. The Act will specify what activities can be regulated. **Activities** that are **not specified in the Act can't be regulated**.

The federal and provincial *Meat Inspection Act* (MIA) and *Regulation* (MIR) were developed to specifically deal with activities in abattoirs.

Note: In addition to ensuring the production of safe meat and meat products the MIA and MIR is also concerned with the humane slaughter of animals.

Legislative documents that apply to "Licensed Meat Facilities" in Alberta include:

1. *Meat Inspection Act* (Canada)
2. *Meat Inspection Act* (Alberta)
3. *Meat Inspection Regulations* (Canada)
4. *Meat Inspection Regulation* (Alberta)
   Note: The proper name of this regulation is Alberta Regulation (AR) 42/2003 *Meat Inspection Regulation* (consolidated to 112/2009).
5. *Public Health Act* (Alberta)
6. *Food Regulation* (Alberta)
   Note: The proper name of this regulation is Alberta Regulation (AR) 31/2006 *Food Regulation*.

Complete copies of AR 42/2003 and the provincial MIA are in the appendix of this manual.

Note: Pertinent sections of other related provincial regulations are also in the appendix.

Provincially licensed abattoirs are under the jurisdiction of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD). They **have to comply with all aspects of AR 42/2003**.

Note: There are also federally inspected abattoirs in Alberta. They are licensed and inspected by the Canadian Food Inspection Agency (CFIA). There is no difference in the animal handling and processing requirements between provincially and federally licensed abattoirs. The only real differences are restrictions on where the products can be sold. Meat products from a provincially licensed abattoir can only be sold in Alberta.

Some activities in provincially licensed abattoirs have to meet the requirements of federal legislation. Examples include "Animal Handling Guidelines", *Consumer Packaging and Labeling Regulations* and the *Food and Drug Act* and associated regulations.

Meat facilities, other than provincially, or federally license, operate under the authority of permits issued by the local Regional Health Authority (RHA)

Note: These facilities must comply with the Public Health Act and with AR 31/2006.

MEAT FACILITY STANDARDS

The "Meat Facility Standards" (MFS) is a HACCP (Hazard Analysis Critical Control Point) based food safety standard that encompasses both the "Prerequisite Program" and "Manufacturing Controls" criteria of HACCP.

Note: The HACCP "Prerequisite Program Criteria" includes sanitation programs, recall programs, etc. The "Manufacturing Controls Criteria" includes the 7 "Codex Alimentarius" principles of HACCP.

Implementation of the **MFS is not a full HACCP system.** A fully developed HACCP program includes development, implementation, verification and validation of prerequisite programs and having a HACCP plan for each product that the facility produces.

HACCP systems can be developed, implemented, audited and certified **in non-federally registered meat facilities** but they **are not recognized as federally certified** unless the audit was conducted by the CFIA.

The MFS food safety program outlines the approach that has been taken by ARD for the development and maintenance of written preventative, science-based food safety programs in provincially licensed abattoirs.

Note: Although the MFS is not a legislated document the contents are empowered by section 15.1(a) of AR 42/2003. This section makes compliance with the MFS a lawful requirement for provincially licensed abattoirs and other meat facilities in Alberta.

ORGANIZATION AND STRUCTURE OF THE TIPM

Note: The structure of the TIPM is based on the structure of the draft of the "Canadian Meat Hygiene Standard" which is published by the CFIA and OMAFRA (Ontario Ministry of Food and Rural Affairs).

The TIPM will be divided into **12 chapters**, or sections.

Note: The chapter titles are listed in the Table of Contents

Some of the chapters will be further subdivided.

Each individual document will deal with a specific topic.

Note: This will allow the TIPM to remain current through the replacement of individual documents as required.

Every TIPM document will have a "**RATIONALE**" and an "**OBJECTIVE/OUTCOME**" Section.

If the topic of discussion is something that may be audited there will be a section entitled "**REQUIREMENTS FOR AN AUDITABLE SYSTEM" (MFS)**

Note: The **"Rationale"** section will provide an explanation of **WHY** the particular topic of discussion needs to be done.

The **"Objective/Outcome"** section will state exactly **WHAT** will be done in a facility that is in compliance with the MFS. Statements such as "The facility will ……", "The inspector will ……", "The equipment will ….., etc. will appear in this section.

The **"Requirements for an Auditable System"** (MFS) section will list the **requirements needed** to be in place in order for the facility **to successfully pass an audit requirement**.

As necessary, or applicable, individual TIPM documents will have sections entitled **"Regulatory References"** and **"Related Sections of TIPM"**.

Note: The "Regulatory References" section will be at the beginning of the document. References will include the sections of pertinent legislation and the relevant sections of the MFS.

Whenever there is relevant provincial legislation only that reference will be given. **Federal legislation** will **only** be **cited when there is no provincial legislation** relating to the topic under discussion

Copies of the MIA, MIR and MFS are in the TIPM appendix.

Other TIPM documents that are related to the topic at hand will be listed at the end of the document.

TIPM REVISIONS

The entire TIPM will be reviewed for relevance every 3 years.

Note: Individual topics will be reviewed, and if necessary revised, whenever:

a) changes are made to regulations relating to that topic;
b) reports are received that point out discrepancies between what is in the TIPM and what has been legislated

Revised documents will be sent to appropriate RSD personnel and to all facilities that are known to have a TIPM.

Note: Information on updates will also be posted on the Alberta Agriculture and Rural Development website "Ropin the Web" which can be accessed at: **www1.agric.gov.ab.ca/general/progserv.nsf/all/pgmsrv10**

ACKNOWLEDGEMENTS

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SUBJECT: Meat Facilities- Licensing of	01-A-01
REGULATORY REFERENCES: M-9 RSA 2000 *Meat Inspection Act* (Current to 4/29/2009) Section 3.1 AR 42/2003 *Meat Inspection Regulations* (Consolidated to 112/2009) Sections 15.1, 11, 12 & 13 AR 116/2009 *Fees Regulation* Section 1	**Initial Release** Sept 1, 2009 **Revised** Sept 1, 2010 **Page 1 of 2**

RATIONALE

In accordance with section 3.1(a) of the *Meat Inspection Act* (MIA) a "Meat Facility" can't be operated, in the Province of Alberta, without a license.

Note: By definition the term "Meat Facility" includes the following:

(a) abattoirs,
(b) meat facilities operated by a person with a mobile butcher license
(c) other meat processing facilities that may come under the jurisdiction of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD) in the future.

An "Abattoir" is a premise where animals are slaughtered, or where animals are slaughtered **AND** meat is:

a) prepared;
b) packaged, or
c) stored

Abattoirs are the only facilities in which animals can be slaughtered.

Other licensed meat facilities (including those of mobile butchers) can only prepare, package and/or store meat.

"Meat Facility" licenses are issued by RSD.

Note: The type of facility being licensed will be stated on the license.

To be licensed and to remain licensed, a "Meat Facility" must comply with the *Meat Inspection Act* (MIA) and AR 42/2003.

Note: All aspects must be in compliance, including construction and maintenance of the facility and the processes used. In the case of abattoirs the ongoing activities of MIB inspectors will ensure the abattoir remains in compliance.

Other meat facilities will be inspected and/or audited, at least once a year, to verify compliance.

Licensing of a "Meat Facility" provides assurance, to the public, that the facility is meeting food safety and regulatory standards.

Note: Any facility that is out of compliance is obviously not meeting all of the minimum

TIPM – 01-A-01 Page 2 of 2– RATIONALE (continued)

standards, and thus is not eligible for continued licensing.

Licenses are not transferable from one operator to another and the facility can only have one operator at a time.

OBJECTIVE/OUTCOME

The facility will have a valid license.

Note: The Director of the RSD will only issue a license to individuals that have:

a) submitted a complete application on an approved form

b) paid an appropriate fee (The current fee is $100 for 5 years, set in section 1 of AR 116/2009, is subject to amendment from time to time)

c) demonstrated that they are, in addition to AR 42/2003, compliant with all other applicable legislation (e.g. environmental, municipal, building and plumbing codes, etc)

The Director may place conditions on a license, at any time, if deemed necessary to ensure that meat products produced in the abattoir are safe for human consumption.

The facility will have an assigned number

Note: The assigned number will be on the license.

Applications for the licensing of a new abattoir will undergo a Blueprint Submission and Approval Process as outlined in TIPM document 02-A-01.

Note: A representative from the MIB will perform a "New Facility Final Inspection" (TIPM document 02-A-02) to verify that the abattoir was constructed in an acceptable manner and that written food safety control processes have been evaluated.

REQUIREMENTS FOR AN AUDITABLE SYSTEM

Requirements for **"Licensing"** will be met when a valid "Meat Facility License" is on file.

Note: In accordance with section 12 of AR 42/2003 all licenses expire on December 31st unless suspended or revoked earlier. The expiry date is stated on the license.

Expired licenses are **not valid.**

RELATED SECTIONS OF TIPM

01-A-02 Meat Facility- Renewal of

01-A-03 License Refusals- Appeal of

02-A-01 New Facility Blueprint Submission and Approval

02-A-02 New Facility Final Inspection

ATTACHMENT-TIPM DOCUMENT 01-A-01

Government of Alberta
Agriculture and Rural Development

Application for a Meat Facility License

APPLICATION TYPE ☐ NEW ☐ RENEWAL ☐ ABATTOIR ☐ MOBILE BUTCHER FACILITY

Applicant

By completing this application, you are applying for a licence to operate a meat facility legislated under the Meat Inspection Act.

Name of applicant	
Address	
Town or city	Postal code
Phone number	Fax number

Information about Facility

A 5 year* licence fee is $100.00
* Year is from January 1 to December 31

Legal Name under which business is carried out	
Owner of Facility (if partnership, list names of all parties)	
Mailing address of Facility	
Town or city	Postal code
Phone number	Fax number
Legal land location or street address of Facility	

Information about Activities

Meat Facility Operations Information (both abattoirs and mobile butcher facilities)

Primary Processing (Cutting /Boning)-Check all species that apply					
Beef	Pork	Sheep	Rabbits	Poultry	Alternative Livestock (eg elk, bison, emu, ostrich)

Further Processing – Check all operations that apply					
Curing	Dry Cure	Cooking	Smoking	Fermented	Ground Meat

❑ Other (Please specify):_____

Water Source			
❑ Well	❑ Well with Treatment	❑ Municipal	❑ Other (specify) _____

Payment Method

___Cheque payable to Minister of **F**inance

_____ Visa _____ MasterCard

Card No _____

Expiry Date _____

Card Holder _____

Mail or Fax completed application to :
Regulatory Services Division
Licencing Office
304 J G O'Donoghue Building
7000 – 113 Street
Edmonton, AB T6H 5T6
Phone (780) 427-5083

Abattoirs Only

Species slaughtered- check all that apply					
Beef	Pork	Sheep	Rabbits	Poultry	Alternative Livestock (eg elk, bison, emu, ostrich)

Approximately how many will be slaughtered each week, of:					
Beef	Pork	Sheep	Rabbits	Poultry	Alternative Livestock
___	___	___	___	___	___

Days of slaughter? (Check all that apply)						
❑ Mon	❑ Tues	❑ Wed	❑ Thurs	❑ Fri	❑ Sat	❑ Sun

For office use only:

Facility ID:
Client ID:
Licence ID:
Date Approved:

The personal information requested on this form is being collected for the purpose of licensing meat facilities under the authority of the Freedom of Information and Protection of Privacy (FOIP) Act and is protected by the FOIP Act. If you have any questions about this collection, please contact the Meat Inspection Branch at (780) 422-2104.

Signature of applicant	Date

SUBJECT: Meat Facility Licence –Renewal of	01-A-02
REGULATORY REFERENCES M-9 RSA 2000 *Meat Inspection Act* (Current to 4/29/2009) Section 3.1 AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1, 11, 12 & 13	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

In accordance with section 3.1(a) of the *Meat Inspection Act* (MIA) a "Meat Facility" can't be operated, in the Province of Alberta, without a license.

Note: By definition the term "Meat Facility" includes the following:

a) abattoirs;

b) meat facilities operated by a person with a mobile butcher license;

c) other meat processing facilities that may come under the jurisdiction of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD) in the future

An "Abattoir" is a premise where animals are slaughtered, or where animals are slaughtered and meat is:

a) prepared;

b) packaged, or

c) stored

Abattoirs are the only facilities in which animals can be slaughtered.

Other licensed meat facilities (including those of mobile butchers) can only prepare, package and/or store meat.

"Meat Facility" licenses are issued by the Director of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

Note: The type of facility being licensed will be stated on the license.

All "Meat Facility" licenses will have an expiry date.

Note: Currently, in accordance with section 1 of AR 116/2009 all licenses expire on December 31st in each calendar year. Consideration is being given to changing the terms of a license. If and when this happens there will be appropriate amendments made to AR 116/2009. Regardless of the length of the term there will always be an expiry date on each license.

Re-licensing, following an expiry date, has the effect of ensuring that the facility remains in compliance with the *Meat Inspection Act* (MIA), AR 42/2003 and any other applicable legislation.

Note: In accordance with section 119(c) of AR 42/2003 the Director of the RSD may suspend, revoke, or refuse to re-issue, a license if of the opinion that the individual is no longer in compliance with legislation.

Remaining in compliance provides assurance, to the public, that the facility is meeting food safety and regulatory standards.

OBJECTIVE/OUTCOME

Application for license renewal will be made before the expiry date noted on the license.

Note: A "Meat Facility" license is valid until the expiry date unless suspended, or revoked, earlier by the Director. Licenses will only be renewed if the facility is in compliance with the MIA, AR42/2003 and the MFS.

The Director may suspend, revoke, or refuse to re-issue a license, if in his opinion the individual holding the license has committed any contravention of the legislation that affects, or may affect food safety.

A recommendation, for not renewing a license, can be made by the Head of the Meat Inspection Branch (MIB). The Head of the MIB must clearly state the reason(s) for this recommendation to the Director.

A pre-licensing audit may be required if the facility is deemed to be, or is suspected of being, out of compliance with the MIA, AR 42/2003 or the MFS. The purpose of this audit would be to inform the operator of his obligations and to give an opportunity for compliance before the license is re-issued.

Applications will be submitted to the Director of the Regulatory Services Division in a form that has been approved by the Director.

In accordance with section 1 of AR 116/2009 an appropriate license fee will be tendered.

Note: The fee stipulated in AR 116/2009 is $100.00 per year. This is subject to amendment from time to time.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Meat Facility License- Renewal of"** will be met when a valid "Meat Facility License" is on file.

Note: There is an expiry date on each license.

Expired licenses are **not valid**.

RELATED SECTIONS OF TIPM

02-A-01 Meat Facilities - Licensing of

01-A-03 License Refusals - Appeal of

SUBJECT: License Refusals – Appeal of	01-A-03
REGULATORY REFERENCES *AR 42/2003* Meat Inspection Regulation (Consolidated to 112/2009) Section 15(1)	**Initial Release** Sept 1, 2009 **Page 1 of 1**

RATIONALE

Suspension, revocation, or failure to renew, a meat facility, or mobile butcher, license can cause serious financial hardship for the operator.

Note: The term "Meat Facility" includes abattoirs and other facilities where meat is processed, packaged or stored.

To ensure that these decisions have not been made in error section 15(1) of AR 42/2003 allows the applicant to appeal unfavorable licensing decisions.

OBJECTIVE/OUTCOME

In the event that a license has been suspended, revoked, or not renewed, the meat facility operator, or mobile butcher, may:

1. Correct the issue of non-compliance that led to the suspension, revocation, or non-renewal and re-apply for licensing, or
2. Make an appeal in accordance with the provisions of section 7(4) of the MIA and/or section 15(1) of AR 42/2003.

Note: Licenses may be suspended, revoked, or not renewed for contraventions of meat inspection legislation that affects, or may affect, food safety.

Usually a suspension, or revocation, will not take place unless there is a serious breach of legislation.

Minor contraventions, if the licensee is unwilling to make corrections, will lead to a refusal to renew after the expiry date noted on the license.

To launch an appeal the applicant must send a "Notice of Appeal" to the Minister of Agriculture and Rural Development.

Note: The appeal form is located, as a schedule, at the end of AR 42/2003.

Upon receipt of a properly completed appeal the Minister will schedule a hearing at which all parties that are entitled to be heard will be given an opportunity to make their representation pertaining to the appeal.

Following the hearing the Minister may:

a) refuse the appeal thereby upholding the suspension, revocation or non renewal or;

b) allow the appeal

If the Minister allows the appeal an order will be issued for reinstatement of the license on any terms, or conditions, the Minister deems to be appropriate.

RELATED SECTIONS OF TIPM

01-A-01 Meat Facilities - Licensing of
01-A-02 Meat Facility License - Renewal of
01-A-04 Mobile Butchers - Licensing of

SUBJECT: Mobile Butchers- Licensing of	01-A-04
REGULATORY REFERENCES: M-9 RSA 2000 *Meat Inspection Act* (Current to 4/29/2009) Section 3.1 AR 42/2003 *Meat Inspection Regulations* (Consolidated to 112//2009) Sections 11(1)(c), 11(2), 11(3), 11(4), 12, 13, 32, 33 & 34	**Initial Release** Sept 1, 2009 **Revised** Sept 1, 2010 **Page 1 of 2**

RATIONALE

In accordance with section 3.1(a) of the *Meat Inspection Act* (MIA) a person can't operate as a mobile butcher, in the Province of Alberta, without a license.

Note: Mobile Butcher licenses are issued by the Director of Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

A "**Meat facility License**" is **required**, in addition to the mobile butcher license, if an individual wants **to operate a facility for processing, packaging and storing meat products.**

To be licensed an individual must comply with all aspects of AR 42/2003 that apply to mobile butchers.

Note: All aspects of a mobile butcher's activities must take place on the premises of the owner of the animal unless approval has been obtained, under section 32 (1) (b) of AR 42/2003, to conduct some of the operations at another location.

In accordance with section 12 of AR 42/2003, mobile licenses expire on Dec 31st unless suspended or revoked earlier.

Note: This expiry date is stated on the license.

Expired licenses are **not valid** thus must be renewed at the expiry date.

Note: A mobile butcher that is out of compliance is not eligible for continued licensing

Licenses are not transferable from one mobile butcher to another.

In the event that the Director refuses to renew a mobile butcher license the mobile butcher has the right to appeal the decision under section 15(1).

OBJECTIVE/OUTCOME

The mobile butcher will have a valid license.

Note: The Director of the RSD will only issue a license to individuals that have:

a) submitted a complete application on an approved form (see attachment #1)

TIPM – 01-A-04 Page 2 of 2– OBJECTIVE/OUTCOME (continued)

b) paid an appropriate fee (The current fee is $100 for 5 years, set in section 1 of AR 116/2009, is subject to amendment from time to time)

c) demonstrated that they are, in addition to AR 42/2003 that apply to mobile butchers.

Each mobile butcher will have an assigned "client" identification number.

Note: The assigned number will be on the license.

RELATED SECTIONS OF TIPM

01-A-01 Meat Facilities- Licensing of
01-A-03 License Refusals- Appeal of
01-B-01 Mobile Butcher Licensee- Responsibilities of

ATTACHMENT-TIPM DOCUMENT 01-A-04

Government of Alberta
Agriculture and Rural Development

Application for a Mobile Butcher License

APPLICATION TYPE ☐ **NEW** ☐ **RENEWAL**

Applicant

By completing this application, you are applying for a license to operate as a mobile butcher regulated under the Meat Inspection Act.

Information about Mobile Butcher

A 5 year* licence fee is $100.00
* Year is from January 1 to December 31

Name of applicant	
Address	
Town or city	Postal code
Phone number	Fax number

Name under which business is conducted	
Owner of Mobile Operation	
Mailing address of Mobile Operation	
Town or city	Postal code
Phone number	Fax number

Mobile Butcher Operations Information

Species of slaughter animal(s)? (Check all that apply)

Beef	Pork	Sheep	Rabbits	Poultry	Alternative Livestock (eg elk, bison, emu, ostrich)

Method of Stunning? (Check all that apply)

Gun	Captive Bolt	Electric Stunner	Ritual	Other (please state) _____

❑ Other (Please specify):_____

Transporting the carcass following slaughter? (Check all that apply)

❑ Left with owner	❑ Transported to my facility	❑ Transported to another licenced facility	❑ Other (specify) _____

Transport by mobile butcher only- Type of vehicle?

❑ Pickup Truck	❑ Flatbed	❑ Truck with canopy	❑ Reefer vehicle	❑ N/A (no transport)

❑ Other (Please specify):_____

I certify that the foregoing information is, to the best of my knowledge, true and accurate.

If any of the information changes from what is stated above, I will notify Regional Manager, Meat Inspection Branch/Regulatory Services Division within 10 days of the date the changes are made.

Signature of applicant	Date

Payment Method

___Cheque payable to Minister of **F**inance

_____ Visa _____ MasterCard

Card No _____

Expiry Date _____

Card Holder _____

Mail or Fax completed application to :
Regulatory Services Division
Licencing Office
304 J G O'Donoghue Building
7000 – 113 Street
Edmonton, AB T6H 5T6
Phone (780) 427-5083

For office use only:

Facility ID:
Client ID:
Licence ID:
Date Approved:

SUBJECT: Meat Facility Licensee – Responsibilities of	01-B-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 4(1), 40, 41(2), 41(5) & 41(6).	**Initial Release** Sept 1, 2009
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RATIONALE

In accordance with section 3.1(a) of the *Meat Inspection Act* (MIA) a "Meat Facility" can't be operated, in the Province of Alberta, without a license.

In order to obtain the initial license and maintain eligibility for continuing licensing the applicant **must be in compliance with all** of the **requirements of AR42/2003** and the **Meat Facility Standards** (MFS) and any other pertinent federal, or provincial, legislation (e.g. building codes, environmental standards, etc.).

Note: Section 15.1(a) of AR 42/2003 specifically empowers the MFS.

The Regulatory Services Division (RSD) is responsible for the licensing of abattoirs and meat facilities that are owned and operated by individuals holding a mobile butcher license.

Note: To ensure compliance with AR 42/2003 and the MFS, the RSD will inspect the facility before issuing the initial license.

The MIB of the RSD will provide regular ongoing inspection services for abattoirs. In addition to the inspections of animals and carcasses ongoing inspections, in abattoirs, also apply to the facility, all meat products and processes that are being used.

Inspection of other meat facilities will be conducted on an ad hoc basis with a minimum of one annual inspection and/or audit.

In abattoirs **all** of the following requirements **must be met** before any meat, or meat products, can be sold, offered for sale, transported or delivered:

1. The animal must be inspected before it is slaughtered (ante-mortem inspection).
2. Slaughter must take place at a licensed facility (federal or provincial).
3. The carcasses and all internal organs must be examined after the animal has been slaughtered (post-mortem inspection).
4. The carcass and all edible organs or tissues must be deemed, by an MIB Inspector, to be healthy and fit for human consumption.
5. The final product must be stamped with an inspection legend, or labelled in any other appropriate manner, to show that it has passed inspection.

OBJECTIVE/OUTCOME

The licensee will comply with all of the requirements of the Alberta *Meat Inspection Act* and AR 42/2003 and any other Acts and Regulations (federal or provincial) that may apply.

Note: This means that the facility will be maintained and operated in accordance with the standards set out in the MFS.

Specifically the licensee will:

1. Ensure that all animals, carcasses and/or portions, ingredients, etc. are made available to a Meat Inspection Branch (MIB) inspector or assigned delegate.
2. Provide all reasonable assistance to a MIB inspector, or assigned delegate, as required in the performance of their official duties and functions.
3. Assist the MIB, or other assigned authority, in the management and control of any reportable disease that may occur.

   Note: Reportable diseases are diseases that have been identified, as reportable, in either federal, or provincial legislation. Legally anyone that knows of, or suspects the presence of a reportable disease must make it known to appropriate authorities.

4. Ensure appropriate security of the premises is maintained.

   Note: This includes access by personnel and visitors.

RELATED SECTIONS OF TIPM

All sections of TIPM relate to the responsibilities of meat facility licensees in one way or another.

SUBJECT: Meat Inspection Branch – Responsibilities of	01-B-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 41	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

The Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD) has been assigned responsibility for administrating all aspects of the Alberta *Meat Inspection Act* and AR 42/2003 *Meat Inspection Regulation*.

Note: Administrative responsibilities include:

a) provision of inspectors;

b) training of inspectors and auditors to ensure that they are capable of inspecting all meat, meat products and processes to ensure compliance with all applicable legislation.

OBJECTIVE/OUTCOME

The MIB will:

1. Keep the licensees informed about regulatory requirements that must be implemented.

   Note: Individual staff members, of the Meat Inspection Branch (MIB) (including inspectors and auditors) are competent authorities in the production of safe and wholesome meat and meat products.

   MIB Inspectors are appointed in accordance with section 2 of the *Meat Inspection Act* of Alberta. Veterinarians licensed by the Alberta Veterinary Medical Association and other trained individuals are eligible for appointment.

2. Monitor and verify the performance of all activities related to food safety.

   Note: Any appointed inspector (including auditors) has the authority to monitor and verify activities associated with food safety process control systems.

   The nature and intensity of monitoring and verification should be based on risk level and compliance of the facility and should be sufficient to ensure that risks to the consumer are mitigated.

   The frequency and intensity of monitoring should also take into account the quality assurance systems that have been properly implemented by the operator.

3. Verify that all regulatory requirements are met.
4. Implement enforcement actions as required for issues of non compliance.
5. Implement specified official controls such as sampling programs, inspection procedures, or other certification as required under the *Meat Inspection Act* or AR 42/2003.

   Note: This includes the requirements of the Meat Facility Standards (MFS).

6. Administrate meat inspection **services for abattoirs.**

   Note: Administrative duties include establishing the parameters for meat inspection services including hours of work and inspection fees.

   In instances where inspection activities are shared between industry and government, the MIB is responsible for defining the respective roles of each in terms of personnel involvement and verifying that regulatory requirements are met.

RELATED SECTIONS OF TIPM

The MIB has responsibility for all sections of TIPM in one way or another.

SUBJECT: Meat Inspectors – Responsibilities of	01-B-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 35 to 41 Inclusive	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

The Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD) has been assigned responsibility for administrating all aspects of the Alberta *Meat Inspection Act* (MIA) and AR 42/2003.

As part of it's administrative function the MIB is required to provide inspectors for licensed abattoirs.

This document is intended to highlight the responsibilities of appointed meat inspectors (MIB Inspectors).

OBJECTIVE/OUTCOME

The Meat Inspection Branch (MIB) will assign at least one MIB Inspector to the "Licensed Meat Facility" (abattoir).

Note: MIB Inspectors are assigned to abattoirs by the Area Manager (AM) in accordance with section 41 of AR 42/2003.

Sections 40, 44 & 47 of AR 42/2003 make it compulsory for a MIB Inspector to be present for ante-mortem (before death) and post-mortem inspections.

Requirements for MIB Inspectors to be present during any further processing and storage of meat are determined by the MIB in accordance with the MIA, AR 42/2003 and the Meat Facility Standards (MFS).

Normally the AM will assign a resident inspector for all regularly scheduled slaughter days. The operator of the abattoir is responsible for notifying the AM about any changes to their regular slaughter dates. In most instances the licensee will communicate with the AM through the Regional Supervisor (RS).

A slaughter can't proceed if a MIB Inspector hasn't been assigned for that day.

Assigned MIB Inspectors will present appropriate identification upon request.

Note: MIB Inspectors are required to carry an identification certificate (card) during the time they are present in the abattoir. This document, signed by the Director of the Regulatory Services Division, provides proof of their appointment and qualifications.

The MIB is responsible for ensuring that MIB Inspectors have the necessary training, knowledge, skills and ability to fully understand and perform their duties.

Under Section 3 of the *Meat Inspection Act* (MIA) "Medical Officers of Health" and "Executive Officers" under the Public Health Act and the Regional Health Authorities Act are also, by virtue of their offices, considered to be inspectors. Their authority is restricted to their areas of jurisdiction and training. This means that they are not qualified to pass judgment on the suitability of a carcass for human consumption.

MIB Inspectors will ensure that the abattoir is meeting the minimum requirements of the MIA and AR 42/2003.

Note: Inspection procedures are based on current scientific knowledge and practices.

MIB Inspectors and other individuals appointed by the MIB (e.g. veterinarians) have the authority to monitor and verify any activities conducted in the abattoir. Their activities include, but are not limited to:

a) conducting ante-mortem inspections;
b) conducting post-mortem inspections;
c) inspection of facilities and equipment;
d) assessment of food handling, or processing, activities;
e) checking of documents (e.g. livestock manifests, written procedures, records, etc);
f) collection of samples for laboratory examination;
g) observation and verification of written food safety control programs

MIB Inspectors will have access to veterinary expertise at all times.

Note: MIB Inspectors are required to consult, with a veterinarian whenever they are not sure about the suitability of a carcass for human consumption.

Normally the MIB Inspector will consult with a veterinarian that is employed by Alberta Agriculture and Rural Development.

The MIB has the authority to appoint private veterinary practitioners as inspectors. In most instances “Appointed Veterinarians” deal with emergency slaughters but they can also be assigned, to an abattoir, if a regular MIB Inspector is not available.

In the case of on-farm emergency slaughter the “Appointed Veterinarians” can:

a) conduct the ante-mortem inspection then proceed to the abattoir to conduct the post-mortem inspection or
b) document the ante-mortem inspection (on a form approved by the MIB) and send the documentation to the abattoir along with the animal

To exercise option b) above, a MIB Inspector would have to be present at the abattoir to conduct the post-mortem inspection. In either situation the owner of the animal is responsible for paying the veterinarian.

In cases of non-compliance a MIB Inspector will initiate appropriate corrective actions.

Note: Actions taken will vary according to the seriousness of the problem. Serious issues of non-compliance may result in restriction, or suspension, of activities and refusal to use the Meat Inspection Legend.

MIB Inspectors are also authorized to follow-up on any corrective actions that are required to address issues of non-conformance that have been identified through the MIB audit program.

Note: This may be accomplished through the use of interviews with facility personnel, on-site observations or program reviews.

The MIB Inspector will not be expected to perform any duties other than those needed to verify that the requirements of the MIA and AR 42/2003 are being met.

Note: Although some MIB Inspectors may assist facility personnel with their duties it is not a requirement that they do so. These activities, when undertaken are voluntary and must not interfere with their duties as an inspector.

RELATED SECTIONS OF TIPM

Most sections of the TIPM relate to the responsibilities of MIB Inspectors in one way or another.

SUBJECT: Mobile Butcher Licensee – Responsibilities of	01-B-04
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 21, 22, 22.1, 32, 33 & 34 Note: This document only applies to the responsibilities of mobile butcher licensees conducting mobile butchering activities performed outside of any licensed meat facility operated by the mobile butcher. Mobile butchers that hold a separate license for a meat facility have additional responsibilities that are outlined in TIPM document 01-B-01.	**Initial Release** Sept 1, 2009 **Page 1 of 2**

OBJECTIVE/OUTCOME

The mobile butcher licensee will:

1. **Perform** the **complete slaughter operation** including stunning, bleeding, skinning, eviscerating and removal of the head and feet **on** the **premises of the owner** of the animal unless permission has been granted, under section 32(1)(b) of AR 42/2003, to conduct some of the slaughter operations at another location.

   Note: Stunning must be done in a humane manner (in accordance with section 58 of AR 42/2003).

   If the mobile butcher has a separate facility (room) for skinning the animal can be transported to this facility with the hide on. All other dressing procedures must still be completed on the premises of the owner of the animal.

2. Identify the carcass and all edible portions as un-inspected.

   Note: This is done by applying a tag that states **"UNINSPECTED - NOT FOR SALE"**.

3. Transport the carcass, and edible portions, in a manner that does not compromise the safety of the meat for human consumption.

   Note: This means that transportation must be done promptly and in a clean and sanitary manner. The mobile butcher must ensure that all carcasses are kept separate from hides, inedible parts and other sources of contamination.

4. Submit a monthly report, to the MIB in a form required by the Director.

   Note: This report must provide the following information:

   a) names, addresses & telephone numbers of owners of animals that were slaughtered;

   b) a full description of each animal;

   c) destination of each carcass;

   d) any other information requested by the Director of the RSD

5. Remain eligible for relicensing by complying with all requirements.

Note: The Mobile Butcher Coordinator, or designate, will conduct periodic inspections of all mobile butchers. The results of these inspections will be recorded on a form called the MIF - 18 Mobile Butcher Inspection Report. This is an official form in the RSD Manual of Directives and Procedures.

Inspection of the mobile butcher will include:

a) Method and Location of Slaughters

b) Transportation Vehicle or Conveyance

c) Identification of Carcasses

d) Monthly Slaughter Reports

The coordinator, or designate, will report any issues of non-compliance, in writing, to the mobile butcher and to the Regional Supervisor and/or Area Manager.

The mobile butcher will be advised that items of non-compliance could result in loss of their license.

RELATED SECTIONS OF TIPM

01-A-03 License Refusals - Appeal of
01-A-04 Mobile Butchers - Licensing of
01-B-01 Meat Facility Licensee - Responsibilities of

SUBJECT: New Facility Blueprint Submission & Approval	02-A-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1, & 16 Meat Facility Standards (MFS) Section A	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2010 **Page 1 of 2**

RATIONALE

A "Licensed Meat Facility" (facility) must meet certain basic criteria before it can be considered for licensing.

Proceeding with construction, either for a new facility or the renovation of an existing one, without assurance that it will be eligible for licensing could result in considerable unnecessary expense and inconvenience to all concerned.

Note: Not only is it practical to obtain **prior approval** it **is** also **a legal requirement**.

Sections 16(1) and (2) of AR 42/2003 require the submission of plans and specifications, respecting design and construction, to the Director for review prior to the commencement of any construction, or alterations.

OBJECTIVE/OUTCOME

The Area Manager (AM) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD) will be contacted before constructing a new facility, or renovating an existing one.

Note: The AM that is responsible for the area in which the new, or renovated, abattoir is, or will be, located is the individual that must be contacted.

Upon receipt of a proposal for a new facility, or renovations of an existing one, the following steps will be taken by the RSD:

1. The proposal will be referred to the appropriate AM.

   Note: As a part of the initial enquiry process the AM will require the applicant to submit a "Letter of Intent".

   The AM is responsible for providing references and interpretation of ARD requirements for registration and licensing of the facility and for reviewing the initial application for conditional acceptance.

   Procedures outlined in the Directive MI – 37 "Blueprint Approval and Review Process - Facility Construction" will be followed for all applications. The MI - 37 is a document in the RSD "Manual of Directives and Procedures".

   Alberta **Government Employees,** including the AM, that are **directly involved** with the application, **CANNOT act as a consultant** for the applicant.

2. Following receipt of the "Letter of Intent" the AM will send an information package to the applicant

Note: The information package will include copies of the:

a) *Meat Inspection Act* (MIA)

b) *Meat Inspection Regulation* (AR 42/2003)

c) Meat Facility Standards (MFS)

d) MIF-10 Blueprint Submission Checklist

The MIF-10 is a document, from the RSD "Manual of Directives and Procedures", which outlines requirements for a proper blueprint submission.

The information package will also include notification about the requirements for any written programs that will be needed before the final Inspection can be completed.

3. The applicant will be advised that the AM, or a RSD auditor for the area, will be available to assist with the application process including a review of conceptual drawings.

   Note: Conceptual drawings are sketches, or drawings, that have not been certified by a professional. They may, or may not, be drawn to scale.

4. Once it has been determined that the conceptual drawings are appropriate, the AM will advise the applicant to submit a complete set of blueprints.

   Note: Normally the blueprints submitted at this stage must be prepared by a qualified architect or engineer. Minor renovations, which are defined as renovations where there is minimal change in product flow, employee traffic flow, activities or operations are exempt from this requirement.

5. Upon receipt of the blueprints the AM will review them to ensure that all of the requirements of the MIF - 10 Blueprint Submission Checklist have been fulfilled.

   Note: For minor renovations the AM, in consultation with the Division Veterinarian (DV) may give approval at this stage.

6. Once it has been determined that the requirements of the MIF – 10 have been fulfilled the AM will initiate the "Blueprint Approval and Review Process" in accordance with Directive MI - 37 in the RSD "Manual of Directives and Procedures"

   Note: The MI - 37 specifies the qualifications of individuals that will comprise a committee to review the blueprints.

   The MIF - 11 "Blueprint Approval Checklist" from "Manual of Directives and Procedures" will be used as a guide for this review.

7. The "Blueprint Review Committee" will approve, or reject the blueprints.
8. Results of the "Committee" will be communicated to the applicant.

   Note: If the blueprints are deemed to be unacceptable a written request will be made asking the applicant to make changes and to resubmit their application.

RELATED SECTIONS OF TIPM

01-A-01 Meat Facilities - Licensing of

02-A-02 New Facility Final Inspection Process

SUBJECT: New Facility Final Inspection Process	02-A-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1, 11 & 12 Meat Facility Standards (MFS) All sectiona	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2010 **Page 1 of 2**

RATIONALE

Section 11(2)(b) of AR 42/2003 indicates that the Director must be satisfied that the licensed facility will operate in accordance with the requirements, of the legislation before a license will be issued.

The only way to confirm that all requirements have been met is to conduct a pre-license assessment of the new, or renovated, facility.

Note: A license will not be issued unless the facility has been constructed, or renovated, in accordance with the approved blueprints and all of the requirements set forth by the Area Manager (AM), including written programs, have been complied with.

OBJECTIVE/OUTCOME

A final assessment of a new, or renovated facility, or a facility that has acquired a new owner/operator will be conducted prior to licensing, or re-licensing.

Note: The assessment will be done by a RSD Auditor, or a designated MIB inspector using the “Final Inspection Checklist” of the MIB Audit Program. The checklist can be obtained from the AM or RSD auditor at any time.

This inspection will be conducted in the presence of the owner/operator of the facility and it is recommended that the AM or another MIB also be present.

All findings will be recorded in the “New Facility Final Inspection Checklist”.

Note: The operator/owner will also advised of any major or critical deficiencies on the “Final Inspection Checklist” will need to be corrected and verified by MIB as corrected, before licensing is granted.

The Director of the Regulatory Services Division will be notified when the facility has corrected the identified critical and major deficiencies.

Note: This is done so a license can be issued in accordance with Section 11 of AR 42/2003.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"New Facility Final Inspection Process"** will be met when:

1. The assigned RSD representative(s) has:
    a) contacted the owner/operator and set a time and date for the assessment;
    b) conducted the assessment in the presence of the owner/operator;
    c) recorded all findings on the "New Facility Final Inspection Assessment";
    d) advised the facility owner about any deficiencies requiring correction;
    e) posted the final assessment report on RSD's files.
2. The AM has:
    a) in the case of deficiencies
        i. arrange for the provision of assistance, as required and requested by the operator, to correct the identified deficiencies;
        ii. arranged for further follow-up, as required;
    b) in the case of a satisfactory inspection result or follow-up, notified the Head of the Meat Inspection Branch who in turn will notify the Director.
3. A license has been issued.

RELATED SECTIONS OF TIPM

01-A-01 Meat Facilities - Licensing of

02-A-01 New Facility Blueprint Submission & Approval

SUBJECT: Drainage & Dust Control	02-B-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section A.1.1.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

The establishment of proper drainage and implementation of dust control measures are effective methods of ensuring that pests and environmental contaminants are less likely to gain access to a "Licensed Meat Facility" (facility).

Stagnant water provides an ideal breeding ground for pests particularly insects and good drainage eliminates this type of favorable environment.

Good drainage also reduces the possibility of contamination of the facility's water source.

Note: This is of particular importance for facilities that rely on wells for their water.

Control of dust from roadways and parking areas is essential in controlling the entry of potential environmental contaminants into the plant.

OBJECTIVE/OUTCOME

The facility will be landscaped and roadways and parking lots designed, or graded, in a manner that directs all surface water from rain, or snow melt, away from the facility and any local water sources.

Dust control measures will be implemented.

Note: Effective dust control measures include but are not restricted to the following:

a) paving of roadways and parking lots;

b) compacting and treating non-paved roads and parking lots with dust suppressing agents;

c) ensuring all doors are close fitting;

d) keeping doors and windows, in processing rooms, closed as much as possible, while they are being used;

e) following the "Common Industry Practice" of maintaining a 1 meter wide gravel, asphalt, or concrete, perimeter around the building to eliminate the growth of vegetation immediately against the building

Written **"External Premises Inspection Procedures"** will be developed and implemented.

Note: These procedures include the keeping of **"External Premises Inspection Records"**.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for "**Drainage and Dust Control"** will be met when:

1. Detailed written **"External Premises Inspection Procedures"** are on file.

   Note: These procedures must have a section for evaluating the efficacy of drainage and dust control practices.

2. Up-to-date **"External Premises Inspection Records"** are on file at the facility.

   Note: These records should verify that inspections have been conducted at regular intervals and issues with drainage and dust control have been recorded and that appropriate corrective actions were taken as needed.

3. On site observations demonstrate that there is appropriate drainage and dust control.

RELATED SECTIONS OF TIPM

02-B-02 Protection against Pests & Environmental Contaminants

03-A-03 External Premises Inspection

SUBJECT: Protection against Pests & Environmental Contaminants	02-B-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 AR 31/2006 *Food Regulation* Section 17(2) Meat Facility Standards (MFS) Sections A.1.1.1, 2.1.6, 2.1.7, 2.3.2	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Pests and environmental contaminants can be significant food safety hazards in a "Licensed Meat Facility" (facility).

Note: Pests include mice, birds and other vermin as well as flying and crawling insects.

Dust is an important environmental contaminant.

A number of factors allow pests and environmental contaminants to enter a facility including:

1. The location of the facility.

   Note: Locating a facility close to sources of pollution or near conditions that favors the development of pests, or environmental contaminants will likely cause problems.

2. Outside sanitation.

   Note: Failure to remove debris and control weed on premises surrounding the meat facility will also favor the development of pests and environmental contaminants, odors, etc.

3. The absence of barriers that will prevent entrance (e.g. screens, self closing tight fitting doors, etc.).

The operator of a facility must take appropriate steps to eliminate, or at the very least eliminate, the possibility of pests, or environmental contaminants from entering the facility.

OBJECTIVE/OUTCOME

The facility will be constructed and maintained in a manner that protects against the entry of pests, or environmental contaminants.

All doors, windows, ventilation outlets, etc. will be designed to exclude, pests, dust and other particulate environmental pollutants.

Note: The control of dust from roadways and parking areas is of particular importance. Paving is recommended but if this is not possible appropriate dust control measures must be taken.

It is highly recommended that outside shipping and receiving areas be paved and adequately drained.

The area immediately adjacent to the facility will be kept free of vegetation.

Note: It is "Common Industry Practice" to have a one (1) meter wide gravel, asphalt, or concrete, perimeter immediately adjacent to the building.

The facility will develop and follow written **"External Premises Inspection Procedures"**.

Procedures will be in place to deal with any pests, or environmental contaminants that may gain entry.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for "**Protection against Pests & Environmental Contaminants"** will be met when:

1. Written **"External Premises Inspection Procedures"** are on file.

   Note: These procedures must include a section dealing with the evaluation of external conditions that may enhance the harboring of pests and or the presence of other environmental contaminants.

2. **"External Premises Inspection Records"** are on file.

   Note: These records should clearly indicate that inspections have been conducted and that issues, relating to exterior conditions, which may lead to the harboring of pests, or the entry of environmental contaminants, have been addressed with appropriate corrective actions.

3. Screen and filter maintenance and/or cleaning is included as part of the "**Sanitation" and/or "Maintenance Schedule".**
4. On site observations demonstrate that pests and environmental contaminants are not a problem in the facility.

RELATED SECTIONS OF TIPM

02-B-01 Drainage & Dust Control

03-A-03 External Premises Inspection

SUBJECT: Design - Layout & Separation of Incompatible Operations	02-C-01
REGULATORY REFERENCE AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18 Meat Facility Standards (MFS) Sections A.2.1 (8 & 9), 2.3 (1 & 3)	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

The best method of ensuring the production of safe meat products is for the "Licensed Meat Facility" (facility) to be designed in a manner that allows only a one way flow of product and personnel from the arrival of raw product through to the packaging and shipping of finished product.

Note: This is a basic principle that must be followed whether the facility has one, or more, floors.

The flow of product should always be away from areas of greater potential contamination to cleaner and cleaner areas.

Note: As an example, abattoirs should be designed so that the product progresses from the point where live animals are received through the slaughtering, dressing, chilling, processing, packaging, finished product storage and shipping areas, to the loading docks.

Every effort should be made, during planning, of a facility, to provide for future expansion of all segments of the operation without causing serious congestion, or other disruptions, to the desired one way flow of product and personnel.

Note: In Canada, seafood products are included among the top 8 causes of allergic reactions therefore special precautions are required in facilities that handle, or store, live, or raw, un-cleaned fish, or other seafood products.

OBJECTIVE/OUTCOME

The construction and operation, of the facility will ensure separation of incompatible areas (e.g. edible and inedible product areas, raw and ready-to-eat products, etc.) through all stages of production, storage and shipment.

Note: There should also be separation of personnel that work in different parts of the facility and if personnel have to work in more than one area they should move from cleaner to dirtier areas, or take steps (e.g. changing clothing) to minimize food safety hazards if they have to move in a contrary direction.

If **new**, the **facility** will be designed to facilitate hygienic operations by means of a regulated, one way flow in the process from the arrival of raw materials through to the packaging and shipping of finished product.

Note: A properly designed facility will also have a sufficient number of appropriately fitted (e.g. proper ventilation) rooms that will ensure the separation of incompatible activities.

An example of an incompatible activity would be the skinning and slicing of edible livers on the slaughter floor. These functions may however, be carried out in a non-refrigerated room.

In an **existing facility**, where it is not possible to have complete separation of incompatible activities, "**operational separation**" of activities **will be achieved** through the implementation of effective operational controls.

Note: Operational controls must be thoroughly described in writing and strictly followed at all times.

All rooms and equipment will be designed and constructed in a manner that allows:

1. Effective cleaning and inspection.
2. Controlled product and personnel flow that facilitates hygienic operations.
3. A safe working environment.
4. Effective performance of duties by personnel.

Animal holding areas **will not open directly** into areas where food, or packaging materials, are handled or stored.

Note: Shipping and receiving areas should also be physically separated from other areas of the facility.

Living quarters, if present, will be completely separate from the rest of the facility.

Note: Parts of the building, in which a licensed meat facility is located, can be used as living quarters providing the living area is permanently and completely separated by means of a solid floor, wall or ceiling, and there is **no interior access** from such quarters to any part of the licensed area.

The facility will be **completely separated from** any other **unlicensed areas** where activities are carried out that are incompatible with the safe handling of meat products.

Note: Separation between licensed and non-licensed areas, or buildings, is interpreted to mean that there is no direct internal access between the two areas. This prohibits the access of animals directly from adjacent farms, or feedlots; or direct access to the licensed facility by doorways, windows, stairs, elevators, passageways, or loading or unloading docks.

This separation must be clearly established when the layout of the licensed facility is being designed.

All rooms and areas with direct access to the licensed facility are considered to be part of the licensed facility but, this does not mean that construction standards, in the non-meat product handling areas, must meet the same standards as those required for meat product handling areas. The amount of latitude extended, in relation to construction standards, is based on an assessment of potential adverse effects on the operation of the meat product handling area. Non-meat product handling areas must also comply with the requirements of any other regulatory agency.

Retail outlets, forming part of the licensed meat facility, will be designed and constructed to allow the implementation of controls that will prevent the contamination of meat products.

If the licensed facility operates out of multiple buildings they must be located within one continuous and self enclosed piece of property.

Note: The property may be composed of one, or several, adjoining municipal parcels, or lots.

An exception to the requirement of continuity may be considered if portions of the facilities located on separated pieces of property are connected by an underpass or overpass.

Handling, or storage, of live, or raw, un-cleaned fish, or other seafood products, **will not take place** in a licensed meat facility **when other meat products are being processed, handled or stored unless** these products are **handled in** their own **dedicated room**, or they are processed at a time when other meat processing operations are not being performed.

Note: Appropriate precautions must be taken to prevent cross contamination including an effective ventilation system that will efficiently remove odors.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

The requirements for **"Design - Layout & Separation of Incompatible Operations"** will be met when:

1. A facility specific, written, **"Internal Premises Inspection Procedure"** is on file.

   Note: This procedure must contain a section for evaluating the adequacy of the layout.

2. Up-to-date **"Internal Premises Inspection Records"** are on file.

   Note: These records should demonstrate that issues with location and layout are being recorded and corrective action is being taken as required.

3. Up-to-date, written **"Ready to Eat (RTE) Procedures"** have been developed, implemented and maintained.

   Note: These procedures must have **control measures** to prevent the contamination of RTE products through direct, or indirect, contact with raw products, **whenever RTE products** are **not handled, packaged, or stored in a dedicated room**.

4. On site observation demonstrates that the written procedures are being followed.

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval

02-C-03 Design - Product & Personnel Flow

SUBJECT: Design - Location of Entrances & Exits	02-C-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18 Meat Facility Standards (MFS) Section A. 2.1.8	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

The movements of people, supplies, animals and air currents all have the potential to cause contamination of meat and meat products in a "Licensed Meat Facility" (facility).

Although there are a number of ways of minimizing contamination of products the most important way is to control the flow of processed material so that there is no chance of backtracking.

Note: The flow of product should progress in one direction from the area of highest contamination to areas that are cleaner and cleaner. For example, slaughter plants should be designed to allow a continuous progression, of product, from the animal receiving area and through the slaughtering, dressing, chilling, processing, packaging and shipping areas to the loading docks.

The location of loading and unloading areas is very important in preventing cross contamination of product.

Note: Under ideal conditions animals will be unloaded at one end of the building and the finished product will be loaded out at the other end.

The unloading area for other items, such as packaging materials, ingredients, meat products from other facilities, etc. should be at a different location than the animal unloading facilities.

It is also essential that access routes to different parts of the facility, including entrances and exits, are designed and situated so that the one-way flow of product and personnel is enhanced, or encouraged.

Note: Facility personnel should be able to conduct their duties without any back tracking. When this is not possible facility personnel must be required to take steps such as washing their hands, changing outer clothing, etc. to reduce the risk of contamination.

Implementing the aforementioned practices minimizes the chance of contamination and ensures the production of safe meat products.

OBJECTIVE/OUTCOME

The facility will be designed, constructed and maintained in a manner that provides for a uni-directional (one way) flow of meat and meat products.

The uni-directional flow will be achieved by:

1. Locating entrances and exits in a manner that promotes movement in one direction.

Note: Outside entrances and/or exits should not open directly into areas where carcasses, meat products and packaging material may become contaminated. Generally they should originate from, or enter into, a hallway, or other intermediate area.

2. Separating the unloading facilities (areas) for live animals from those where items such as packaging materials, product ingredients, meat products from other facilities, etc are received.
3. Having internal entrances and exits originate from, or enter into, a connecting hallway.

   Note: Facility personnel shouldn't have to access food handling areas through drip coolers, inedible rooms, or other work areas.

4. Locating offices and retail areas so airflow from the production areas doesn't move into these areas.

   Note: Access to these areas should also be through an intermediate hallway.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Design - Location of Entrances and Exits"** will be met when:

1. A blueprint, or schematic drawing, showing the location of all interior and exterior entrances and exits, is on file.

   Note: The blueprints, or drawing, must depict where the entrances and exits are actually located.

2. The location of all entrances and exits facilitates a unidirectional flow of product **OR**
3. If the location of entrances and exits are deemed to have the potential of causing cross contamination, written operational and/or scheduling controls are on file and have been implemented.

   Note: These written procedures must be effective in minimizing the chance of cross contamination.

4. On site observation demonstrates that doors and exits are suitably located or written procedures, deemed to be effective in reducing chances for contamination, are in place.

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval

02-C-01 Design- Layout & Separation of Incompatible Operations

SUBJECT: Design - Product & Personnel Flow	02-C-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections A.2.1.8, 3.1.2	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Meat and meat products can be subjected to many potential sources of contamination during handling and processing in the normal operations of a "Licensed Meat Facility" (facility).

Buildings and equipment should be designed to minimize the chance of contamination by providing conditions that are conducive to preventing backtracking from the time of arrival of the raw material through to the completion of all processing steps and storage.

Note: Backtracking is defined as the movement of product, or personnel, back through an area where earlier processing steps were performed. An example of backtracking would be the movement of an inspected and approved carcass back through the area where hide removal or evisceration takes place, on its way to the chill cooler. This practice greatly increases the chances for contamination. The prevention of backtracking eliminates many potential sources of contamination.

In addition to ensuring there is no backtracking of product the movement of facility personnel must also be assessed and analyzed for backtracking.

Note: The movement of personnel from dirtier to cleaner areas should be eliminated or at least minimized. If it is impossible to stop all such movement then control mechanisms need to be implemented to minimize the risk of contamination.

OBJECTIVE/OUTCOME

Meat products and facility personnel will move in one direction, from receiving to shipping, in a continuous manner without any crossing over or backtracking.

Note: In the case of an abattoir products will flow, without crossing over, or backtracking, from the point where the live animals are unloaded and held all the way through the slaughtering, dressing, chilling, processing and packaging areas and into the storage area. This will minimize any chance of product contamination.

Inedible materials will **always move away from edible products** and directly to the storage area for inedible products.

Note: Parallel or crossing paths greatly increase the chance of contamination.

Drip coolers and the storage area for inedible products (cooler or bins) will be located in separate areas but both will be by the kill floor.

Movement of facility personnel from dirtier areas to cleaner areas will be kept to a minimum and when this occurs precautionary measures will be implemented to minimize the chance of product contamination.

Note: Examples of precautionary measures would include, but are not restricted to:

a) use of boot dips;

b) changing outer clothing;

c) hand washing

Under ideal conditions facility personnel would always move from cleaner to dirtier areas during the course of their duties.

Facility personnel that perform microbiologically sensitive duties will remain separated from other facility personnel.

Note: Microbiologically sensitive duties are duties where great care has to be taken to prevent contamination of product with micro-organisms (bacteria, molds, fungi, etc.) Handling or "Ready to Eat" (RTE) product is microbiologically sensitive because the RTE product won't be subjected to any processes that would kill micro-organisms (e.g. cooking) before they are eaten.

Methods, or procedures, will be developed to prevent cross contamination by controlling access to microbiologically sensitive areas.

Note: In the performance of their inspectional and other regulatory duties, Alberta Agriculture and Rural Development (ARD) personnel (e.g. meat inspectors and auditors) may need to move to and from incompatible areas.

When this is necessary the facility must provide the equipment, or materials, that are needed to comply with their food safety system and/or hygiene requirements and ARD personnel will comply with the facility's program.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Design - Product & Personnel Flow"** will be met when*:*

1. A facility specific blueprint, or schematic drawing, showing optimum personnel and product flow patterns is on file.
2. On site observations demonstrate that actual personnel and product flow patterns in the blueprint, or drawing, are in fact occurring.
3. Records are on file showing that the facility reviews and verifies product and personnel flows at least once a year **AND**
4. In facilities where it is not possible to implement an ideal product and personnel flow, written operational and scheduling controls are in place to ensure that any risk of cross contamination is minimized.

Note: These procedures must be written, implemented and kept on file at the facility.

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval

02-C-02 Design - Location of Entrances & Exits

03-A-01 Product, Personnel & Equipment Flow

SUBJECT: Construction - Suitability of Construction Material - General	02-C-04
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18 Meat Facility Standards (MFS) Sections A.2.1 (2, 3, 4, & 5), 2.2.2	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

The physical structure of a "Licensed Meat Facility" (facility), where food animals are slaughtered and meat is processed, is subject to abuse from a number of factors, including but not restricted to:

1. Large and occasionally agitated animals;
2. Moisture;
3. Fats;
4. Grease;
5. Movement of heavy objects, etc.

Depending on the activities being conducted, different types of construction materials are required throughout the abattoir.

Note: For example, wood is not an acceptable construction material for processing areas because it is not impervious to moisture. On the other hand, wood is acceptable in an office, or employee lunchroom.

Construction materials for abattoirs and other meat facilities must be:

1. Durable;
2. Easily cleaned;
3. Easily sanitized.

Note: Essentially construction materials, in many parts of the facility, must be:

a) hard;
b) smooth;
c) impervious to moisture

It is particularly important for these types of materials to be used where meat and meat products are processed.

Outside walls, doors, windows, etc. must be constructed of materials that will be:

1. Able to withstand wear and tear;
2. Able to keep pests out;
3. Smooth;
4. Easily cleaned.

Note: Smooth materials are easier to clean and they don't have characteristics (cracks or depressions) that encourage the accumulation of dirt thus providing a favorable environment for the development of micro-organisms (bacteria, fungi, molds, etc.).

The information in this document is intended to provide general guidelines. More specific information about acceptable construction materials and methods of construction can be found in a publication called the "Reference Listing of Accepted Construction Materials".

Note: This reference is published by the Canadian Food Inspection Agency (CFIA). It can be accessed at:

http://www.inspection.gc.ca/english/ppc/reference/cone.shtml

OBJECTIVE/OUTCOME

Precautions, such as conducting soil tests, will be taken during construction.

Note: Soil testing ensures the construction of a sound foundation. A sound foundation minimizes the chance that settling and sagging will lead to breaches in the integrity of the walls, doors and/or windows that would make it easier for pests and environmental contaminants to gain access.

Construction materials will be:

1. Suitable;

   Note: "Suitable" is defined as being able to withstand the demands of the activity being performed in for each particular area.

2. Strong;
3. Durable;

   Note: Masonry and steel construction have proven to be the most acceptable construction materials for meat facilities.

   Combinations of steel, concrete or masonry, metal or metal-clad doors and door jambs, heavy metal screening of all accessible apertures will provide satisfactory control of all pests.

4. Easily cleaned and maintained.

   Note: This will enhance the hygienic (clean) handling of meat and meat products at all stages of production and during storage.

Interior room surfaces (floors, walls and ceilings) in areas where food animals are slaughtered, dressed, inspected, refrigerated, processed, packaged, labeled, stored (in a refrigerated state), shipped, received, or otherwise transported will be:

1. Smooth
2. Hard
3. Impervious to moisture.

   Note: These characteristics facilitate easy cleaning and withstand demanding work conditions.

   Anti-slip floor coverings, or applications, may be used for safety reasons.

   When plastic, or metal, panels are used, for internal finishes, in processing areas they must be affixed (laminated), to the underlying structure(s), over their entire area, with CFIA approved adhesives. **The use of rivets, screws or nails** for attaching panels to the substructure **is NOT acceptable**.

Safety light bulbs and fixtures will be used in areas where carcasses, parts of carcasses, meat products, ingredients, food contact surfaces or packaging materials are exposed.

Note: This is necessary to prevent contamination in case of breakage. If safety fixtures are not used meat products, ingredients and packaging materials must be protected.

In general **painting is NOT recommended.**

Note: This is due to the possibility of contamination of products from flaking and chipping of paint.

Painting is permitted if:

1. It is the only practical solution to the prevention of rusting of structural components **OR**,
2. It is the only practical solution for providing a smooth easily cleanable surface on walls and ceilings of existing buildings **OR**,
3. It is used for an aesthetic (pleasing) effect in non-production areas.

Note: **Paint CANNOT BE USED on product contact surfaces**.

The use of **lime based** white washes can ONLY be used in livestock pens and chutes.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Construction - Suitability of Construction Material- General"** will be met when*:*

1. Only approved construction materials, deemed to be suitable for each area of the facility, have been used.
2. Written facility design and maintenance programs are on file.

Note: These programs must be in accordance with the MFS.

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval
02-C-05 Construction - Ceilings & Overhead Structures
02-C-06 Construction - Floors & Walls
02-C-07 Construction - Stairs & Elevators
02-C-08 Construction - Doors & Door Frames
02-C-09 Construction - Windows & Screens
02-C-10 Construction - Shelving & Racks for Storage
03-A-02 Internal Premises Inspection
03-A-03 External Premises Inspection

SUBJECT: Construction - Ceilings & Overhead Structures	02-C-05
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18 Meat Facility Standards (MFS) Sections A. 2.1.(2, 3 & 5)	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

A "Licensed Meat Facility" (facility) and the equipment in it must be designed and constructed to:

1. Facilitate effective cleaning and sanitation.
2. Enable the safe and sanitary handling of meat and meat products.

The information in this document is intended to provide general guidelines on the construction of ceilings and overhead structures. More specific information about acceptable construction materials and methods of construction can be found in a publication called the "Reference Listing of Accepted Construction Materials".

Note: This reference is published by the Canadian Food Inspection Agency (CFIA). It can be accessed at:

http://www.inspection.gc.ca/english/ppc/reference/cone.shtml

OBJECTIVE/OUTCOME

The following general principles will apply to the construction and maintenance of ceilings and overhead structures.

Ceilings

Ceilings will be:

1. Constructed of suitable materials.

Note: "Suitable" is defined as being able to withstand the demands of the activity being performed in each particular area.

Interlocking, rust-resisting metal sheeting, such as heavy gauge, heavy duty, galvanized steel, anodized aluminum or stainless steel, are acceptable providing they are fastened to the metal infrastructure by acceptable means. When galvanized metal is used, the zinc coating must be at least ASTM A525M grade 350.

ASTM stands for the American Society for Testing and Materials. This organization, formed over 100 years ago, is one of the largest voluntary standards development organizations in the world. It is a trusted source for technical standards for materials, products, systems, and services.

The durability of the underlying ceiling structures is very important.

2. White or light-colored.

   Note: Similar to walls this is done to promote light reflection and to allow easy observation of any dirt on the surface.

3. A suitable height.

   Note: Ceilings with overhead rail systems must be high enough to accommodate the minimum rail height needed to keep carcasses from contacting the floor. In most instances heights of 3,000 mm (12 feet), or more, are suitable.

   In areas used for poultry receiving, de-feathering and evisceration the ceiling should at least 4,000 mm (13.3 feet) high.

4. High enough to provide access for cleaning and inspection of processing equipment.

   Note: It is "Common Industry Practice" to have access heights of at least 800 mm (2.5 feet).

5. Built with closed joists except for those in evisceration areas and in carcass coolers.

   Note: Open joist ceilings are allowed in these areas providing there are provisions to check and if necessary to trim carcasses, for contamination, before they are subjected to further processing or shipping.

   This type of ceiling is not allowed where exposed meat products are processed or packaged.

   All open joist ceilings must be:

   a) treated to prevent rusting and corrosion;
   b) constructed so as to not collect dust;
   c) readily cleanable

   It is "Common Industry Practice" to have joists constructed 900mm (3 feet) on center.

6. Maintained in a suitable manner.

Overhead Structures

Catwalks, or mezzanines, located above product handling areas shall be of solid masonry or metal construction with adequately raised edges to prevent possible product contamination.

Note: **Expanded metal** catwalks are **NOT permitted**.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Construction - Ceilings & Overhead Structures"** will be met when:

1. A **"New Facility Final Inspection"** has deemed their construction to be acceptable.

   Note: This inspection will be performed by qualified Meat Inspection Branch personnel and should demonstrate that ceilings and overhead structures are designed and constructed in a manner that will facilitate maintenance, cleaning and sanitation.

2. The written "**Internal Premises Inspection Procedures**", for the facility include ceilings and overhead structures.
3. "**Internal Premises Inspection Records"** are on file.

   Note: These records must show that issues relating to ceilings and overhead structures are recorded and that corrective action has been taken to deal with any problems.

4. Ceilings and overhead structures are included in the **" Sanitation Schedule"**.

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval
02-A-02 New Facility Final Inspection Process
02-C-04 Construction - Suitability of Construction Material - General
02-C-06 Construction - Floors & Walls
02-C-07 Construction - Stairs & Elevators
02-C-08 Construction - Doors & Door Frames
02-C-09 Construction - Windows & Screens
03-A-02 Internal Premises Inspection

SUBJECT: Construction - Floors & Walls	02-C-06
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009*)* Sections 15.1 & 18 Meat Facility Standards (MFS) Sections 2.1.(2, 3, & 4)	**Initial Release** Sept 1, 2009 **Revision Date** Sept 1, 2011 **Page 1 of 3**

RATIONALE

Walls and floors must be made of smooth, hard and impervious materials to facilitate acceptable sanitation practices.

Note: Examples of suitable materials include, but are not limited to:

a) prefabricated panels;

b) glazed tile;

c) smooth steel;

d) troweled cement, or plaster, etc

For the same reason floors and walls must be free of pitting, indentations, cracks, crevices and ledges.

Note: Walls constructed with cement blocks, or troweled plaster, must be sealed with an epoxy coating that provides a smooth surface that is easy to clean.

Wood, as a structural material, is only suitable, for floors and walls, in non-processing areas of the facility. The use of **dry-wall, or wood**, either on the surface, or as underlying structural support, **is NOT acceptable in processing areas**.

Note: Wooden support structures will absorb moisture, become weak and provide and environment suitable for the growth of micro-organisms such as bacteria and moulds.

Existing facilities that contain wood as a structural material must mitigate this risk by using an **approved** waterproof paint.

The information in this document is intended to provide general guidelines on the construction of floors and walls. More specific information about acceptable construction materials and methods of construction can be found in a publication called the "Reference Listing of Accepted Construction Materials".

Note: This reference is published by the Canadian Food Inspection Agency (CFIA). It can be accessed at:

http://www.inspection.gc.ca/english/ppc/reference/cone.shtml

OBJECTIVE/OUTCOME

The following general principles will apply to the construction and maintenance of floors and walls in the facility.

Floors

Floors will be:

1. Constructed of suitable materials.

   Note: "Suitable" is defined as being able to withstand the demands of the activity being performed in each particular area.

   Dense acid resistant, non-dusting and waterproof concrete, masonry floor tiles, vitrified bricks and some synthetic materials have been found to be suitable construction materials for floors.

2. Sloped to drains.

   Note: In new facilities the slope must be sufficient to effectively remove all fluid wastes thus preventing the pooling of liquids and facilitating clean-up. It is "Common Industry Practice" to have a grade of at least 1% toward drain inlets.

   In existing facilities with less than adequate drainage, operational measures must be implemented to ensure that pooling doesn't occur.

3. Insulated as necessary.

   Note: Insulation is required in freezer floors to prevent damage caused by the penetration of frost into the underlying soil.

4. Maintained in a suitable manner.

Walls

Walls will be:

1. Constructed of suitable materials.

   Note: Walls made of prefabricated panels, or covered with fiber reinforced panels (FRP), should be protected, at the base, with 45^0 sloped curbs that protrude from the wall surface a minimum of 50 mm and have a minimum height of 400 mm to protect them from damage.

   Curbs must be smooth, impervious, and free of cracks, chipping, or other surface defects.

2. Finished with a white, or light colored, surface.

   Note: This is done to promote light reflection and to allow easy observation of any soiling of the surface.

3. Coved as required.

   Note: It is "Common Industry Practice" to cove wall to wall and floor to wall junctions in production areas. Coving should have a radius of at least 2.5 cm, or a minimum 3.5 cm face chamfer with open angles of 135^0 to

enhance cleaning.

Coving is **compulsory** in **newly constructed** or **renovated** facilities.

Coving facilitates effective and easy cleaning by preventing the accumulation of foreign material at these junction points.

4. Made with water tight seals at the junction of adjacent walls and floors.
5. Suitably maintained.

   Note: Suitable maintenance will prevent the accumulation of debris and facilitate effective cleaning. This is particularly important in older facilities.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Construction - Floors & Walls"** will be met when:

1. A **"New Facility Final Inspection"** has deemed their construction to be acceptable.

   Note: This inspection will be performed by qualified Meat Inspection Branch personnel and should demonstrate that walls and floors are designed and constructed in a manner that will facilitate maintenance, cleaning and sanitation.

2. The written "**Internal Premises Inspection Procedures**", for the facility include walls and floors.
3. "**Internal Premises Inspection Records"** are on file.

   Note: These records must show that issues relating to walls and floors are recorded and that corrective action has been taken to deal with any problems.

4. Walls and floors are included in the **"Sanitation Schedule"**.

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval
02-A-02 New Facility Final Inspection Process
02-C-04 Construction - Suitability of Construction Materials - General
02-C-05 Construction - Ceilings & Overhead Structures
02-C-07 Construction - Stairs & Elevators
02-C-08 Construction - Doors & Door Frames
02-C-09 Construction - Windows & Screens
03-A-02 Internal Premises Inspection
12-B-03 Floors - Safety of

SUBJECT: Construction - Stairs & Elevators	02-C-07
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18 Meat Facility Standards (MFS) Section A.2.1.5	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

A "Licensed Meat Facility" (facility) must be designed and constructed to:

1. Facilitate effective cleaning and sanitation.
2. Enable the safe and sanitary handling of meat and meat products.

The information in this document is intended to provide general guidelines on the construction of ceilings and overhead structures. More specific information about acceptable construction materials and methods of construction can be found in a publication called the "Reference Listing of Accepted Construction Materials".

Note: This reference is published by the Canadian Food Inspection Agency (CFIA). It can be accessed at:

http://www.inspection.gc.ca/english/ppc/reference/cone.shtml

OBJECTIVE/OUTCOME

The following general principles will apply to the construction and maintenance of stairs and elevators.

Stairs

Stairs in production areas will:

1. Be constructed with impervious material such as concrete, or metal;
2. Have solid treads;
3. Have closed risers;
4. Have curbed sides.

Note: The curbs must be at least 50 mm in height if possible, measured at the front edge of the tread.

Elevators

Elevators will meet the following requirements:

1. Cars will be of metal construction;
2. Cars will be maintained free of rust and corrosion;
3. Shafts will have smooth, hard and impervious surfaces;
4. Shafts will be maintained in a clean and sanitary condition;
5. Superstructures will be completely enclosed except for required cable apertures;

6. Openings on each floor level shall be raised, or otherwise protected;

   Note: This is required to prevent the spillage of liquids from the floor into the shaft.

7. Shaft pits will be made of concrete, or other equivalent material, and sloped to facilitate drainage.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Construction - Stairs and Elevators"** will be met when:

1. A **"New Facility Final Inspection"** has deemed their construction to be acceptable.

   Note: This inspection will be performed by qualified Meat Inspection Branch personnel and should demonstrate that stairs and elevators are designed and constructed in a manner that will facilitate maintenance, cleaning and sanitation.

2. The written "**Internal Premises Inspection Procedures**", for the facility include stairs and elevators.
3. "**Internal Premises Inspection Records"** are on file.

   Note: These records must show that issues relating to stairs and elevators are recorded and that corrective action has been taken to deal with any problems.

4. Stairs and elevators are included in the **"Sanitation Schedule"**.

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval
02-A-02 New Facility Final Inspection Process
02-C-04 Construction - Suitability of Construction Materials - General
02-C-05 Construction - Ceilings & Overhead Structures
02-C-06 Construction - Floors & Walls
02-C-08 Construction - Doors & Door Frames
02-C-09 Construction - Windows & Screens
03-A-02 Internal Premises Inspection

SUBJECT: Construction - Doors & Door Frames	02-C-08
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18 Meat Facility Standards (MFS) Sections A 2.1.9	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Doors and frames in a "Licensed Meat Facility" (facility) must be constructed in a manner that prevents the entrance of outside environmental contaminants and pests to the facility.

Note: This means that outside doors should not be at ground level. There has to be a lip, or curb, to prevent rodents from entering from under the door.

They must also be constructed so that they are easily cleaned and sanitized.

The strategic placement of inside doors is very important in preventing contamination of meat products. They should separate incompatible activities and should be located in a manner that promotes appropriate traffic flow.

Note: Backtracking through areas where incompatible activities are performed must be avoided as much as possible.

The information in this document is intended to provide general guidelines on the construction and location of doors and door frames. More specific information about acceptable construction materials and methods of construction can be found in a publication called the "Reference Listing of Accepted Construction Materials".

Note: This reference is published by the Canadian Food Inspection Agency (CFIA). It can be accessed at:

http://www.inspection.gc.ca/english/ppc/reference/cone.shtml

OBJECTIVE/OUTCOME

Doors and door frames will be constructed and maintenance in accordance with the following principles:

1. Doors and frames will be durable;

   Note: They should be made of rust-resistant metal, or other suitable material.

2. Doors will be self-closing;

   Note: This is particularly important for outside doors, to prevent the entry of pests and environmental contaminants. It is also important, in minimizing chances for contamination by separating areas of the facility where incompatible activities are taking place.

3. Door jams will be made of, or clad with, rust resistant materials;
4. The junction between the wall and the door jamb will be completely sealed;

   Note: This can be accomplished by using a flexible sealing, or caulking, material.

5. Outside shipping and receiving doors will be equipped with bumper door seals, or other equivalent devices;
6. Doorways will be wide enough to facilitate the movement of product, equipment and facility personnel;

   Note: To allow the safe and convenient passage of items such as carcasses, smokehouse trees, trucks, palletized product, etc. it is "Common Industry Practice" to have door openings that are 300 mm (1 foot) wider than the widest object that has to move through the door.

7. Doors will be located so that they promote a uni-directional (one way) flow of product and personnel;

   Note: Doors through which live animals are unloaded will be separate from doors used for shipping and receiving meat products, packaging materials and ingredients.

8. All doors and frames will be maintained, cleaned and sanitized in an appropriate manner

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Construction - Doors & Door Frames"** will be met when:

1. A **"New Facility Final Inspection"** has deemed their construction to be acceptable.

   Note: This inspection will be performed by qualified Meat Inspection Branch personnel and should demonstrate that ceilings and overhead structures are designed and constructed in a manner that will facilitate maintenance, cleaning and sanitation.

2. The written "**Internal Premises Inspection Procedures**", for the facility include ceilings and overhead structures.
3. "**Internal Premises Inspection Records"** are on file.

   Note: These records must show that issues relating to ceilings and overhead structures are recorded and that corrective action has been taken to deal with any problems.

4. Ceilings and overhead structures are included in the **"Sanitation Schedule"**.

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval
02-A-02 New Facility Final Inspection Process
02-C-04 Construction - Suitability of Construction Materials - General
02-C-05 Construction - Ceilings & Overhead Structures
02-C-06 Construction - Floors & Walls
02-C-07 Construction - Stairs & Elevators
02-C-09 Construction - Windows & Screens
03-A-02 Internal Premises Inspection

SUBJECT: Construction - Windows & Screens	02-C-09
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18 Meat Facility Standards (MFS) Section A. 2.1.6	**Initial Release** Sept 1, 2009 **Initial Release** Sept 1, 2010 **Page 1 of 2**

RATIONALE

Windows & screens in a "Licensed Meat Facility" (facility) must be constructed and maintained in a manner that prevents the entrance of outside environmental contaminants and pests to the facility.

Note: To prevent the entry of pests all windows and screens must be tight fitting. It is "Common Industry Practice" to have non-opening windows in production areas.

All windows that open to the outside must have tight fitting screens.

Window frames must be maintained in a good state of repair for a proper seal.

Debris from broken windows can be hazardous in production areas therefore windows in production areas should be adequately protected or made of shatterproof material.

The information in this document is intended to provide general guidelines on the construction and location of doors and door frames. More specific information about acceptable construction materials and methods of construction can be found in a publication called the "Reference Listing of Accepted Construction Materials".

Note: This reference is published by the Canadian Food Inspection Agency (CFIA). It can be accessed at:

http://www.inspection.gc.ca/english/ppc/reference/cone.shtml

OBJECTIVE/OUTCOME

Windows and screens will be constructed and maintained in accordance with the following principles:

1. Windows will be constructed and/or located to minimize the chance of breaking.

   Note: This is particularly important in production areas. The chance of breaking can be reduced by:

   a) constructing them of approved shatterproof material;

   b) covering them with a film

   c) mitigating the risk of product contamination by breakage through the use of a written glass policy.

2. Window sills will be sloped.

   Note: This is done to prevent the accumulation of debris. It is "Common Industry Practice" for sills to be sloped internally at a 45° angle.

3. Frames will be tight fitting and they won't be made of wood.

   Note: Wooden frames are hard to keep clean and will deteriorate quickly from exposure to moisture.

4. All opening exterior windows will have tight fitting screens.

   Note: Screen openings must be small enough to prohibit the entry of the smallest of insects and screens must be maintained in a good state of repair.

   It is "Common Industry Practice" to have non-opening windows in all production areas.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Construction - Windows & Screens"** will be met when:

1. A **"New Facility Final Inspection"** has deemed their construction to be acceptable.

   Note: This inspection will be performed by qualified Meat Inspection Branch personnel and should demonstrate that windows and screens are designed and constructed in a manner that will facilitate maintenance, cleaning and sanitation.

2. The written "**Internal Premises Inspection Procedures**", for the facility include windows and screens.
3. "**Internal Premises Inspection Records"** are on file.

   Note: These records must show that issues relating to windows and screens are recorded and that corrective action has been taken to deal with any problems.

4. Windows and screens are included in the **"Sanitation Schedule"**.

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval
02-A-02 New Facility Final Inspection Process
02-C-04 Construction - Suitability of Construction Material - General
02-C-05 Construction - Ceilings & Overhead Structures
02-C-06 Construction - Floors & Walls
02-C-07 Construction - Stairs & Elevators
02-C-08 Construction - Doors & Door Frames
03-A-02 Internal Premises Inspection

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RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval
02-A-02 New Facility Final Inspection Process
02-C-04 Construction - Suitability of Construction Material - General
02-C-05 Construction - Ceilings & Overhead Structures
02-C-06 Construction - Floors & Walls
02-C-07 Construction - Stairs & Elevators
02-C-08 Construction - Doors & Door Frames
03-A-02 Internal Premises Inspection

SUBJECT: Construction - Shelving & Racks for Storage	02-C-10
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18 Meat Facility Standards (MFS) Sections B.1.1 (2 & 3), 1.2.1, 2.1.2, 2.3.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Equipment (shelves, racks, etc.) used for the storage of meat products, ingredients and packaging materials need to be properly designed and maintained to prevent contamination of items in storage.

Floors are a serious potential source of contamination thus meat products, ingredients and packaging materials, in storage, must not contact the floor.

In order to prevent contamination, materials used to construct storage equipment must be non- toxic.

In order to stand up to repeated cleaning and sanitation storage equipment must be made from smooth, corrosion-resistant and non-absorbent material.

Proper maintenance of storage equipment is also important in lessening the chance of contamination of stored product, or other materials.

OBJECTIVE/OUTCOME

Shelves, racks and other containers, in product processing, handling and storage areas will be made of acceptable materials.

Note: Acceptable materials will be:

a) smooth;

b) non-absorbent;

c) non-toxic;

d) resistant to corrosion;

e) able to withstand repeated cleaning and sanitation

The lowest level of any shelf, rack or other container should be at least 100 mm (4 inches) off of the floor.

Note: The floor is an ever present source of potential contamination thus all meat products, ingredients (e.g. spices) and packaging materials must be kept off of the floor. It is “Common Industry Practice” to have the lowest level of any storage equipment at least 100 mm (4 inches) off of the floor. This minimum distance also makes it possible to clean and inspect under the equipment.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Construction - Shelving & Racks for Storage"** will be met when:

1. A **"New Facility Final Inspection"** has deemed their construction to be acceptable.

   Note: This inspection will be performed by qualified Meat Inspection Branch personnel and should demonstrate that shelves, racks and other storage containers are designed and constructed in a manner that will facilitate maintenance, cleaning and sanitation.

2. The written "**Internal Premises Inspection Procedures**", for the facility include shelving and racks.
3. "**Internal Premises Inspection Records"** are on file.

   Note: These records must show that issues relating to shelves, racks and other storage containers are recorded and that corrective action has been taken to deal with any problems.

4. Shelves, racks and other storage containers are included in the **"Sanitation Schedule"**.
5. A written **"Storage Procedure"** is on file.

   Note: This procedure must outline proper storage conditions for all items that will be stored in the facility.

RELATED SECTIONS OF TIPM

02-A-02 New Facility Final Inspection Process
02-C-04 Construction - Suitability of Construction Material - General
03-A-02 Internal Premises Inspection
03-B-02 Storage Procedures & Records
03-E-04 Sanitation Schedule

SUBJECT: Inedible Facilities, Equipment & Containers	02-D-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 18(1)(b)(ii), 18(c) & 18(f) Meat Facility Standards (MFS) Sections A.2.4.2, A.2.5.(1, 2 & 3)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Improper handling of inedible meat products creates a serious potential for the contamination of edible product.

Note: **Condemned inedible products** are particularly dangerous.

Inedible meat products must be handled in a manner that ensures they are not mixed with products intended for human consumption either accidentally, or on purpose.

Sections 18(1)(b)(ii), 18(1)(c) & 18(1)(f) of AR 42/2003 require the operator of a "Licensed Meat Facility" (facility) to provide appropriate facilities and equipment for the collection, sanitary handling, storage and disposal of inedible materials from red meat animals and poultry respectively.

Note: It is important that containers used for collecting and storing inedible materials be provided with insect-proof lids. Tight fitting lids will also contain the odor of inedible materials thus reducing the attraction of insects and rodents. Insects or rodents coming into contact with inedible product are very dangerous sources of contamination for any edible product they might contact.

All containers used for the collection and storage of inedible product must be clearly labeled as such.

Note: Clear labeling of the containers eliminates any chance of inadvertent mix-ups while inedible products are held in storage or are being transported elsewhere for rendering. Clear and permanent labeling also prevents these containers from being used in edible areas of the abattoir.

OBJECTIVE/OUTCOME

The facility will have satisfactory facilities, equipment and containers for the handling, storage and removal of garbage, animal waste (where appropriate) and all inedible material in a sanitary manner.

Note: Satisfactory means that all equipment and containers used for inedible products will be capable of being cleaned and disinfected and in most instances, will have secure closing lids. In addition all equipment and facilities must be properly maintained.

Utensils and containers for handling inedible materials, or other garbage, will never be used to handle edible meat products.

Note: In addition to meat products, this prohibition also applies to packaging materials, or ingredients, that are used for edible products.

Ventilation will be set to ensure that airflow is not directed from the inedible facilities into portions of the facility where edible product is processed, or stored.

Dedicated storage areas will be established for garbage, animal waste and inedible meat products.

Note: If a dedicated storage area cannot be established all such materials must be removed immediately from the facility and its' premises.

A labeling and/or color coding system will be in use.

Note: The labeling and/or color coding system must clearly identify all facilities, equipment and utensils used for handling inedible products from those used for edible product.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Inedible Facilities, Equipment & Containers"** will be met when:

1. Detailed written **"Inedible Product Handling and Storage Procedures"** are on file**.**

   Note: These procedures must include:

   a) a color coding and/or labeling system that will clearly identify facilities and equipment used for inedible materials;

   b) methods of cleaning and sanitizing inedible facilities and equipment

2. On site observation demonstrates that the procedures are fully implemented in the day-to-day operation of the facility.

RELATED SECTIONS OF TIPM

02-D-02 Inedible Room or Area

03-E-03 Sanitation Procedures

SUBJECT: Inedible Room or Area	02-D-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1, 18(1)(b)(ii) & 18(1)(f) Meat Facility Standards (MFS) Sections A.2.5.(1, 2 & 3)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Improper handling of inedible meat products, in a "Licensed Meat Facility" (facility), creates a serious potential for the contamination of edible product.

Note: **Condemned inedible products** are particularly dangerous.

Inedible meat products must be handled in a manner that ensures they are not mixed with products intended for human consumption either accidentally, or on purpose.

Note: It is important for all inedible materials, including hides, to be immediately moved from the meat production area to the inedible rooms, or areas, in a sanitary manner.

Facility operators are responsible for providing a room, or area that is specifically designated for the handling of inedible products.

Note: The requirement for a specific area is mandated by sections 18(1)(f) of AR 42/2003.

Ideally all inedible material will be disposed of daily. If inedible material has to be kept for more than 24 hours, refrigeration is a requirement.

Note: Refrigeration is required to reduce the growth rate of micro-organisms (bacteria, molds, fungi, etc.) and the rate at which chemical and enzymatic reactions take place in inedible materials.

OBJECTIVE/OUTCOME

The facility will have a dedicated room, or area, for the handling and storage of inedible material including hides.

Note: The dedicated room, or area, should be located so inedible materials can be moved in, from processing areas, without any backtracking.

Written procedures, for the movement of inedible materials, must be in place and followed if it is not possible to move inedible materials without back tracking. The written procedures must reduce the risk of cross contamination.

Written "Inedible Room, or Area, Procedures" will be on file at the facility.

Note: These procedures must be followed in the day-to-day operation of the facility.

Inedible material, including hides, will be promptly removed, in a sanitary manner, from processing areas, to the room, or area, of the facility designated for inedible materials.

Note: In the absence of an inedible room, or area, inedible material must be removed from the facility and its' premises daily so that there is no accumulation in the facility or on the premises. The inedible room or area must be refrigerated if inedible material is going to be stored for more than 24 hours.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Inedible Room or Area"** will be met when:

1. Detailed written **"Inedible Room, or Area, Procedures"** are on file**.**

   Note: These procedures must include cleaning and sanitizing activities.

2. The **"Sanitation Schedule"** or a **"Pre-Operational Sanitation Record"** identifies the:

   a) individual(s) responsible for the cleaning & sanitizing the room, or area;

   b) frequency of cleaning and sanitizing and

   c) requires that activities be recorded

3. On site observation demonstrates that cleaning and sanitizing of the inedible rooms, or areas, are conducted in accordance with the written procedures.

RELATED SECTIONS OF TIPM

02-D-01 Inedible Facilities, Equipment & Containers

03-E-03 Sanitation Procedures

03-E-04 Sanitation Schedule

SUBJECT: Shipping & Receiving Facilities	02-E-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections B.1.1 (1-3), B.1.2 (1 & 2) B.2.1 (1 & 2)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

To prevent the possible contamination of edible meat products, shipping and receiving areas in a "Licensed Meat Facility" (facility) must:

1. Be designed and located in a manner that avoids back tracking.
2. Provide sufficient receiving and shipping space for the volume of product handled at the facility.

   Note: Shipping and receiving facilities must be able to handle meat products as well as dry goods such as ingredients, cleaning supplies and packaging materials, etc.

Shipping and receiving areas should be separate from entrances for:

1. Facility personnel;
2. Customers;
3. Live animal receiving;

   Note: Using the live animal unloading area to receive other materials or to ship carcasses, or other meat products, leads to a high risk of contamination of edible product.

4. Removal of inedible product.

Shipping and receiving areas must be:

1. Clean;
2. In a good state of repair;
3. Maintained in a sanitary condition.

OBJECTIVE/OUTCOME

The facility will have suitable areas and equipment for the receiving and shipping of carcasses, meat products, ingredients and packaging materials.

Note: Suitable means that these areas are:

a) adequate for the volume of carcasses, meat products, ingredients and packaging materials handled;

b) located and maintained in a manner that ensures that edible meat products and the interior of the facility are not contaminated during loading and unloading

It is recommended that outside shipping and receiving aprons be paved and properly drained.

Shipping and receiving areas will be physically separated from processing and storage areas.

Note: There must be separate areas for receiving live animals and for the removal of inedible products.

These areas should not be used for the shipping, or receiving, any edible products, packaging materials, or ingredients, that will be used for edible meat products.

Shipping and receiving rooms, or areas, for edible meat products, packaging and/or ingredients used in the manufacturing of edible meat products will be physically separated from areas where inedible materials are handled, processed or stored.

Shipping and receiving areas will be refrigerated if they are going to be used for:

1. Staging, or holding of meat products that require refrigeration prior to shipment.
2. Holding of perishable meat products that are being received.

Detailed written procedures for shipping and receiving will be on file at the facility.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Shipping & Receiving Facilities"** will be met when:

(1) Shipping and receiving facilities, for edible products are separated from facilities used to ship, receive, handle, or store inedible materials.

(2) The written **"Sanitation Procedures"**, for the facility include these facilities.

Note: These procedures detail the particulars of required cleaning and sanitizing activities.

(3) Individuals assigned with the responsibility of cleaning the shipping and receiving facilities are identified and the frequency of cleaning and sanitation are shown on **Written Sanitation Procedures**.

(4) Records of the frequency of cleaning and sanitation are kept on a **Sanitation Schedule** or **Pre-Operational Record.**

(5) Written **Shipping Procedures** are on file.

Note: These procedures must detail the requirements for product protection, temperature, and the condition of transport vehicles.

(6) Accurate, up-to-date, **Shipping Records** are kept.

Note: These records must prove that all edible products, transported by the facility's vehicle(s), are kept at 4^0C or less during shipment, until such time as it reaches the customer.

(7) Written **Receiving Procedures** are on file at the facility.

Note: These procedures must detail the requirements for product protection, including temperature, and the conditions of the transport vehicle that are considered to be suitable in order for goods to be received.

(8) Accurate, up-to-date, **Receiving Records**, are kept:

Note: These records must prove that all of the product(s) received, by the facility, meet the written standards of the facility.

RELATED SECTIONS OF TIPM

03-A-01 Product, Personnel & Equipment Flow
03-B-01 Receiving Procedures & Records
03-B-03 Shipping Procedures & Records

SUBJECT: Dry Storage Areas	02-E-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections B.1.1.3, B 2.1.2, B.2.2.2	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Many different materials are used, for the production of different types of meat products, in a "Licensed Meat Facility (facility).

Note: Examples include packaging materials, spices, binders, etc.

Proper storage facilities are essential to prevent contamination of materials that are incorporated into, or come into contact with, meat products.

Note: Improper storage of dry ingredients, or incompatible storage with other non-food chemicals, could result in their degradation with subsequent damaging effects on meat, or meat products.

"Dry Storage Areas" must have an adequate number of shelves, racks, or pallets, to accommodate the quantity of ingredients and packaging materials stored at the facility.

Note: To allow ease of cleaning and the prevention of contamination, from mice and other vermin, it is important that products be elevated off the floor.

The storage of "dead" or "non-rotating" stock must be avoided.

Note: This is important to avoid problems with regular clean up and the removal of unnecessary clutter.

Ingredients and packaging materials must be stored in a manner that minimizes the chance of food allergies.

Note: Food allergies can be life threatening, for sensitive individuals, thus every effort must be taken to ensure that non-allergenic ingredients don't become contaminated with allergenic ingredients. Many food recalls are due to cross-contamination with allergens. An effective allergen control program will help reduce this very serious risk. Failure to declare allergens on the label has also led to recalls.

Labeling of ingredient materials is also very important.

Note: Proper labeling is essential in preventing public health risks by ensuring that ingredients do not exceed tolerance levels established in food legislation. Labeling also allows easy identification of expired materials so they can be discarded.

OBJECTIVE/OUTCOME

The facility will have a dedicated "Dry Storage Area":

Note: Storage areas should be located close to the processing area and it must be secure from any potential contamination. It is "Common Industry Practice" to store ingredients in an area adjacent to the meat processing area and packaging materials in a location adjacent to the area where they will be used.

The floors, walls, ceilings and other structures, in the storage area, will be maintained in a satisfactory state of cleanliness and repair.

Note: Sanitation procedures must be included in the "Sanitation Program".

Dry goods will be stored on acceptable pallets, racks, or portable shelves.

Note: Acceptable pallets, racks, or shelves are defined as those that can be moved for cleaning and the lowest portion (shelf) should be at least ten (10) cm. (4 inches) off the floor.

Open packaging, or ingredient, materials will be suitably protected from contamination.

All ingredient materials will be properly labeled.

Note: Proper labeling requires:

a) identification of the product;

b) identification of allergens;

c) date product was opened (if applicable);

d) best before dates (if applicable).

Ingredients that contain allergens will be stored separate from other ingredients.

Appropriate written allergen control procedures will be developed and implemented.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Dry Storage Areas"** will be met when:

1. Written **"Sanitation Procedures"**, for the facility, include **"Dry Storage Areas"**.
   Note: These procedures will:
   a) detail the particulars of cleaning and sanitizing activities;
   b) identify facility personnel responsible for cleaning and sanitation.
2. **"Dry Storage Areas"** are identified in the facility's "**Sanitation Schedule"**.
   Note: The frequency of cleaning and sanitation should be shown.
3. Records of **"Sanitation Procedures"** are on file.
4. A written and implemented **"Allergen Control Program"** is on file.
   Note: This program must address the control of ingredients and finished products containing allergens. These items must be segregated, clearly labeled, and handled in a manner that prevents contamination of other ingredients, packaging materials and finished products.
5. Written **"Internal Premises Inspection Procedures"** are on file.
   Note: These procedures must have a section that evaluates the suitability of construction materials and the upkeep of "Dry Storage Areas".
6. **"Internal Premises Inspection Records"** are on file.
   Note: These records should demonstrate that corrective actions have been taken as required.

RELATED SECTIONS OF TIPM

03-A-02 Internal Premises Inspection
03-E-03 Sanitation Procedures
03-E-04 Sanitation Schedule
03-G-12 Allergen Control Program

SUBJECT: Shipping Vehicles - General Condition of	02-E-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 AR 31/2006 *Food Regulation* Sections 25(1), (2) & (4) Meat Facility Standards (MFS) B.1.1 (1 & 2), B.1.2 (1 & 2), B.2.3.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Transportation conditions are critical in maintaining the wholesomeness of meat and meat products.

Unsanitary transportation conditions will lead to contamination of meat and meat products while improper temperatures could lead to deterioration of these products.

Note: It is essential that meat and meat products be protected from contamination and maintained at an appropriate temperature during transportation.

Refrigeration is essential to prevent bacterial growth in meat and meat products.

All internal finishes, in transportation vehicles, must be smooth, impervious and easy to clean and disinfect.

Note: Construction materials must be corrosion-resistant material.

All transportation vehicles must be cleaned and sanitized and loading procedures must be developed which prevent contamination of meat and meat products.

OBJECTIVE/OUTCOME

Vehicles used to transport meat and meat products will be of suitable construction.

Note: Suitable is defined as having an interior lining constructed with an approved, smooth, impervious and washable material.

Approved materials will be free of any components that could contaminate meat, meat products, or ingredients. The lining must be installed in a suitable manner.

To prevent contamination and physical damage, vehicles used to transport carcasses should have rails positioned so that carcasses don't contact the floors or walls of the vehicle.

Transport vehicles will be properly cleaned and sanitized.

Note: Meat products must not be placed in a dirty vehicle.

Transportation vehicles must be able to maintain proper temperatures until the meat and meat products reach the customer.

Note: Refrigeration units must be capable of maintaining a constant low temperature that ensures products are kept at regulated temperatures.

Good air circulation and appropriate humidity are also very important along with a high standard of insulation, an impermeable internal lining, air-tight door seals, and water-tight flooring.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Shipping Vehicles - General Condition of"** will be met when:

1. The vehicle is capable of maintaining appropriate temperatures.

   Note: **Refrigerated product** must be maintained at a temperature of **4^0C or less**.

   Frozen product must be maintained at a temperature of **-18^0C or less**.

2. Written **"Shipping Procedures"** are on file.

   Note: These procedures must detail:

   a) requirements for product protection;

   b) transportation temperatures;

   c) condition of the transport vehicle

3. Up-to-date **"Shipping Records"** are on file.

   Note: There must be sufficient detail, in these records, to prove that all meat and meat products were maintained at appropriate temperatures until they reached the customer.

4. Vehicle cleaning and sanitation records are on file.

RELATED SECTIONS OF TIPM

02-E-04 Shipping Vehicles - Incompatible Goods

03-B-03 Shipping Procedures & Records

03-E-04 Sanitation Schedule

SUBJECT: Shipping Vehicles - Incompatible Goods	02-E-04
REGULATORY REFERENCE: AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) B.1.1 (1 & 2)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Using the same vehicle to transport meat and meat products and other products, either at the same time or in subsequent loads can lead to contamination of the meat, meat products, or ingredients, from trace chemicals, micro-organisms (bacteria, molds, fungi, etc.), dust and other foreign materials.

Ideally vehicles used to transport meat and meat products will not be used to transport any incompatible substances that could compromise food safety.

If it is absolutely necessary to haul incompatible materials in a vehicle used to haul meat and meat products, a program must be in place to ensure that food safety risks are mitigated.

OBJECTIVE/OUTCOME

Ideally vehicles used to transport meat, meat products, or ingredients will not be used to transport incompatible materials that may compromise meat, meat products, or ingredients.

Note: Items considered to be incompatible with the transportation of meat products include, but are not restricted to:

a) live animals;

b) inedible materials;

c) garbage;

d) pest control products;

e) non-food chemicals

If it is necessary to transport meat, or meat products, in a vehicle used to haul other materials a program will be in place to eliminate any food safety risk.

Note: Under this program specific cleaning, sanitizing, and carrier inspection procedures must be documented and practiced.

When meat products are transported in a vehicle with other compatible materials (e.g. other types of food) conditions must ensure that there is no adverse effect on the meat products.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Shipping Vehicles - Incompatible Goods"** will be met when:

1. Written **"Shipping Procedures"** are on file.

   Note: Ideally these procedures would require the use of vehicles that are designated for food use only.

2. **Written "Sanitation Procedures"** are on file.

   Note: These procedures must detail the requirements for vehicle sanitation and inspection prior to loading. This is particularly important when dual use carriers are being used.

3. The cleanliness and suitability of the shipping vehicle is documented on a **"Shipping Record/Log"**.

   Note: These records are required for both dedicated food use and dual use vehicles.

RELATED SECTIONS OF TIPM

02-E-03 Shipping Vehicles - General Condition of

03-B-03 Shipping Procedures & Records

SUBJECT: Product Protection during Transportation	02-E-05
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section B.1.2 (1 & 2)	**Initial Release** Sept 1, 2009 **Revision Date** Sept 1, 2011 **Page 1 of 2**

RATIONALE

Meat and meat products need to be protected from contamination during transportation.

Note: In addition to protection from physical deterioration meat and meat products must be protected from degradation due to adverse temperatures. (See TIPM document 02-E-06 for specific information on temperature requirements.)

Acceptable methods of protection include:

1. Packaging;

   Note: To be effective in preventing contamination packaging must be done properly.

2. Use of containers;

   Note: Containers must be clean and free of contaminants, tightly sealed and free of any cracks or holes.

3. Proper hanging;

   Note: Rails, used for unprotected carcasses, or portions, must be positioned so there is no contact between the meat products and the floor or walls of the transport vehicle.

4. Pre-shipment sanitation of the transportation vehicle.

   Note: Regardless of the type of packaging, or containers, it is essential for the transport vehicle to be clean before it is loaded.

OBJECTIVE/OUTCOME

Meat and meat products will be prepared for transport and loaded in a manner that prevents, or minimizes, any chance of contamination from the environment during transportation.

The transport vehicle will be clean and free from contamination.

Transport containers will be constructed from materials that are free of any components that may cause contamination of meat products.

The inner surfaces, of transport containers, will have interior surfaces that are hard, smooth and impervious to moisture.

Note: All containers must be maintained in a good state of repair.

Open containers such as tanks and vats will be adequately covered with a sheet of polyethylene.

Note: It is recommended that polyethylene films be secured on the rim of the tank.

Meat cuts (e.g. hams, pork shoulders, bellies, shanks, beef cuts, etc.) will be enclosed

in an approved packaging material, and will not contact the floor of the vehicle.

Note: These products, if not packed in a covered container, must be shipped on clean racks, dollies, plastic pallets, vinyl carpets or on any other acceptable and approved packaging or shipping material. The **use of paper or cardboard**, as a sole floor covering**, is unacceptable**.

Wooden pallets are acceptable for transportation and storage activities provided they are kept clean and in a state of good repair.

Unwrapped sides, quarters and primal cuts may be hung providing the transportation vehicle was designed to prevent contamination of these types of products.

Note: Special care must be taken to ensure that hanging carcasses do not contact the floor. Consideration must be given to the amount of stretching that might occur.

Product must also be hung in a manner that prevents excessive swinging during transport.

Unsuspended sides, quarters, or primal cuts, such as beef chucks, briskets and ribs, must be protected with an appropriate material.

Note: Acceptable coverings include, but are not restricted to:

a) good quality paper bags;
b) stockinettes;
c) wax paper;
d) any other food grade packaging material

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Product Protection during Transportation"** will be met when:

1. Written **"Shipping Procedures"**, specific for the "Licensed Meat Facility", are on file.

   Note: These procedures should outline requirements for product protection and identify suitable transportation containers for different types of products.

2. All products are properly wrapped, packaged, and/or handled in a manner that protects them from contamination.

   Note: This includes the prevention of contact with the floor of the transport vehicle. Product that is not in a suitable container must be kept off the floor at least 10 cm (4 inches).

3. Written **"Sanitation Procedures"** for shipping containers are on file.

   Note: These procedures must identify facility personnel that are responsible for the cleaning and sanitation.

4. Up-to-date **"Shipping Records"** are on file.

   Note: There must be sufficient detail, in these records, to prove that all products were properly protected during shipment.

RELATED SECTIONS OF TIPM

02-E-06 Product Temperature during Transportation
03-B-03 Shipping Procedures & Records
03-E-03 Sanitation Procedures
03-E-04 Sanitation Schedule

SUBJECT: Product Temperature during Transportation	02-E-06
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) B.1.2 (1 & 2)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Refrigeration, or freezing, of meat products is a very effective way of preventing spoilage or deterioration.

Note: Refrigeration refers to temperatures between 0 and 4^0 C. Frozen products must be held in the range of -18 to -20^0 C.

Cold temperatures inhibit the growth of micro-organisms (bacteria, molds, fungi, etc.) that can cause the spoilage of meat and meat products.

Maintaining proper temperatures at all stages of handling, including transportation, will prolong the shelf life of meat and poultry products.

All transportation vehicles should be equipped with refrigeration units that are capable of maintaining the required low temperatures for refrigeration, or freezing, good air circulation, and appropriate humidity.

OBJECTIVE/OUTCOME

Transportation vehicles will maintain proper temperatures until the meat and meat products reach the customer.

Note: **Refrigerated product** must be maintained at a temperature of **4^0C or less**.

Frozen product must be maintained at a temperature of **-18^0C or less**.

The controls, on transportation vehicles, will be adequate to ensure that meat products are transported at the required temperature, humidity and other such conditions as may be necessary for the product.

Note: Refrigerated vehicles must have:

a) a high standard of insulation;

b) an impermeable internal lining;

c) air-tight door seals;

d) water-tight flooring;

e) sufficient air flow to maintain proper humidity

Refrigerated vehicles must be equipped to prevent freezing if hauling products that would be damaged by freezing.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Product Temperature during Transportation"** will be met when:

1. Written **"Shipping Procedures"**, specific for the "Licensed Meat Facility", are on file.

   Note: These procedures must address the temperature requirements of the transportation vehicle and the temperature protection practices for different types of products.

2. Up-to-date **"Shipping Records"** are on file.

   Note: These records must prove sufficient detail to verify that the temperature requirements, in the **"Shipping Procedures"**, were met for all refrigerated, or frozen, products until they reached the customer.

3. All temperatures are taken using calibrated probe thermometers.

4. Thermometer **"Calibration Records"** are on file.

   Note: These records are required to verify the accuracy of the thermometers that were used.

RELATED SECTIONS OF TIPM

02-E-03 Shipping Vehicles - General Conditions of

03-B-03 Shipping Procedures & Records

03-C-03 Calibration Procedures - Records of

SUBJECT: Returned Products - Receiving of	02-E-07
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section B.2.3.2	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

To ensure that meat products that are returned to a "Licensed Meat Facility" (facility) are not a food safety risk, a control system, for returned product must be in place.

The control system must include:

1. A designated area for handling returns.

   Note: This area must be located away from any areas where edible product is handled. This will prevent any chance of cross contamination.

2. An inspection system.

   Note: Inspection must:

   a) verify the returned product originated from the facility;

   b) ensure that the product is wholesome

3. Records of returned product.

   Note: These records must document how the returned product has been handled.

OBJECTIVE/OUTCOME

The facility will have a specific and clearly designated area for the receipt of returned, defective, re-worked, or suspect, products.

Note: This area should be as close as possible to the receiving dock, or area.

Records of returns are kept.

Note: Returned product records should include the:

a) date the product was returned;

b) name of the customer making the return;

c) nature and condition of the product;

d) eventual disposition

Products intended to be reused, or resold, will be thoroughly investigated to ensure that the product is wholesome and safe for human consumption.

Unwholesome products will be condemned.

Note: All condemned products must be transferred to the inedible section of the meat facility immediately.

Customer complaints will be fully investigated if that was the reason for the return.

Note: Any time there is a complaint relating to food safety the operator of the facility must determine whether there is a need to issue a recall.

If returned products are reworked, or incorporated, into other meat products records of the resultant batches must be kept.

Note: Only returned products that are deemed to be safe for human consumption can be reworked or incorporated into other products.

Records kept must be sufficiently detailed to ensure that an appropriate recall can be conducted if necessary.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Receiving of Returned Products"** will be met when:

1. The facility has a designated area for the handling and examination of returned product.
2. Written **"Recall Procedures"**, specific for the facility, are on file.

   Note: These procedures must:

   a) include provisions for the receiving, inspection and disposition of all returned products;

   b) include specifics about the use of the designated area for returns;

   c) be communicated to facility personnel
3. Up-to-date **"Returned Product & Customer Complaint Records"** are on file.

   Note: It is essential for these records to completely document the circumstances involved with a food safety complaint, or suspicion.

RELATED SECTIONS OF TIPM

03-F-02 Recall Procedures

SUBJECT: Facilities & Equipment - Adequacy of	02-F-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18(1)(b) AR 31/2006 *Food Regulation* Sections 17(1)(b), 17(1)(c) & 29 Meat Facility Standards (MFS) Sections A. 3.2 (1 & 2)	**Initial Release** Sept 1, 2009 **Revision Date** Sept 1, 2011 **Page 1 of 2**

RATIONALE

Proper sanitation, in a "Licensed Meat Facility" (facility) is fundamental to creating an environment that will assist in the production of safe and aesthetically pleasing meat and meat products.

Proper sanitation requires:

1. Sanitation standards.

   Note: Standards are critical in ensuring proper sanitation of facilities and equipment.

2. Guidelines for regular cleaning, washing and sanitation (as required).

   Note: Regularity ensures the timely removal of contaminants such as micro-organisms (bacteria, molds, fungi, etc.), flaking paint, rust, dust, etc.

3. Appropriate equipment.

   Note: The type of equipment used can significantly alter parameters such as contact time, mechanical action, etc. These factors have a significant impact on the concentration and amount of detergent required.

   Equipment that increases contact time and/or mechanical action will greatly improve the cleaning process. For example, high-pressure pumps provide greatly increased mechanical action. They are particularly useful for the pre-rinse but have limited effectiveness in the application of detergents.

   Compressed air foamers, used in combination with a foaming detergent, greatly increase contact time, by causing the foam to cling to all surfaces including vertical ones.

   Metered equipment is particularly useful for flood sanitizing because it allows for the accurate, effective and easy application of sanitizers.

   Whatever equipment is used it should be designed to be effective for the purpose and it should be used in the intended manner.

It is possible to implement a satisfactory sanitation program using manual (by hand) methods but in many instances manual procedures are less efficient and effective.

Note: It is the degree of difficulty and time commitment that makes manual cleaning less effective and efficient. It is very difficult for manual methods to ensure complete cleaning of, and access to, high areas, nooks, crannies and corners.

It is important to prevent the contamination of meat, meat products and other equipment during the cleaning and sanitizing process.

Note: It is generally advisable to remove and isolate the item to being cleaned and

sanitized from other equipment and meat handling, or storage, areas.

OBJECTIVE/OUTCOME

The facility will:

1. Be constructed and maintained in a manner that facilitates regular cleaning and sanitation.
2. Have appropriate written cleaning and sanitation procedures.
3. Have proper cleaning and sanitation equipment.

   Note: Available equipment must be appropriate for cleaning and sanitizing all types of equipment (small or large) and different areas within the facility.

4. Fully implement the written cleaning and sanitation procedures.

Cleaning and sanitation **practices <u>will not</u> create** a **risk of <u>contamination</u>** of any meat products, ingredients, or packaging material.

Note: Under ideal conditions, rooms will only be cleaned and sanitized after all edible products and ingredients have been removed from that room.

If this is not possible, specific procedures must be in place to ensure that edible product, or ingredients, are not contaminated during the process.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Sanitation of Equipment and Facilities"** will be met when:

1. A written **"Sanitation Program"**, specific for the facility, is on file.

   Note: This program must fully detail the particulars of required cleaning and sanitizing activities.

2. An up-to-date, facility specific "**Sanitation Chemicals and Equipment List"** is on file.

   Note: This list must include all of the equipment and chemicals used in the **"Sanitation Program"**.

3. On site observations demonstrate that:

   a) the "Sanitation Program" is being followed;

      Note: The program must result in effective sanitation of the facility, equipment and utensils.

   b) cleaning and sanitation equipment, in use, is suitable for their intended purposes

      Note: Properly designed sanitation equipment will not pose a risk of contamination to any food, ingredient, and/or packaging material.

RELATED SECTIONS OF TIPM

03-C-04 Preventative Maintenance Procedures - Records of
03-E-03 Sanitation Procedures
03-E-04 Sanitation Schedule
03-E-05 Sanitation Records - Pre-operational Inspections

SUBJECT: Crate Construction & Cleaning	02-F-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1, 18(1)(h) & 21(1) Meat Facility Standards (MFS) Sections A. 3.2 (1 & 2), E.1.1.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Normally live birds and rabbits are transported to a "Licensed Meat Facility" (abattoir) in wooden, or plastic, crates.

Note: Each type has advantages and disadvantages relevant to cleaning.

Wooden crates are difficult to maintain because they absorb moisture and they are easily damaged. When cracks develop they become hard to clean and provide an environment where micro-organisms (bacteria, molds, fungi, etc.) can grow and thrive.

Plastic crates are generally smooth and impervious to moisture, but can become scratched, scored and pitted, which makes them difficult to clean.

It is essential that crates for birds, rabbits and other small birds and mammals be specifically designed and constructed for these types of animals and maintained in a satisfactory condition.

Note: This is necessary to ensure that these species can be loaded, transported and unloaded without discomfort or injury. This is a specific requirement of sections 18(1)(h) & 21(1) of AR 42/2003.

To prevent the transmission of disease only clean crates should be used.

Note: The only way to prevent the transmission of disease, from the abattoir, to the farm, is to clean and sanitize the crates at the abattoir. For this reason every abattoir requires crate washing equipment and facilities.

Crate washing and storage facilities must be separate from areas where edible product is processed, stored, shipped, or otherwise handled.

OBJECTIVE/OUTCOME

Crates used for the transportation and holding of live poultry, rabbits and other small birds and mammals will be properly:

1. Designed

   Note: A properly designed crate will provide sufficient ventilation and space to meet the needs of the species being handled without causing any undue distress or pain.

2. Constructed

   Note: Crates must be constructed with materials that can be easily cleaned and sanitized.

3. Maintained

   Note: All crates must be kept in a good state of repair to:

   a) facilitate cleaning;

   b) ensure that animals are not subjected to any hazards

4. Cleaned & sanitized **after every use**

   Note: All crates must be cleaned and sanitized as soon as they have been emptied and before they are moved to any other part of the facility, or before leaving the facility to go back to the farm.

Written cleaning and sanitation procedures will be in place and implemented.

Only approved sanitizing chemicals will used.

Appropriate facilities and equipment will be available for cleaning and sanitizing crates.

Note: Crate cleaning facilities must be close to, but separate from, the receiving and holding areas and separate from any area where edible product is processed.

Clean crates will be stored separately from dirty crates.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Crate Construction and Cleaning"** will be met when:

1. The abattoir's written **"Sanitation Program"** includes the cleaning of crates.

   Note: This program must detail the particulars of required cleaning and sanitizing activities.

2. Crates have been included, as "equipment", in the abattoir's **"Preventative Maintenance Program"**.
3. The cleaning and sanitizing of crates has been included in the **"Pre-Operational or Cleaning Records"**.
4. On site observations demonstrate that crates are being properly maintained, cleaned and sanitized in accordance with the written procedures.

RELATED SECTIONS OF TIPM

03-C-04 Preventative Maintenance Procedures - Records of

03-E-03 Sanitation Procedures

03-E-04 Sanitation Schedule

SUBJECT: Knives & Utensils - Sanitizing of	02-F-03
REGULATORY REFERENCE AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18(1)(g) Meat Facility Standards (MFS) Section A.3.2 (1 & 2), E.1.1.2	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Proper sanitation of small utensils (e.g. knives), in a "Licensed Meat Facility" (facility), is an essential part of the overall sanitation program, which has the intent of creating an environment that will assist in the production of safe and aesthetically pleasing meat and meat products.

Note: Having sanitizing stations at multiple locations will make it convenient for facility personnel to sanitize their small utensils frequently.

The most common methods of sanitizing knives and other small instruments are moist heat (hot water or steam) or chemical agents.

Note: Only approved chemical sanitizers can be used. Chemicals will not be approved unless they are:

a) as effective as hot water sanitizing;

b) harmless to meat, or meat product

Sanitizing reduces the number of **micro-organisms** (bacteria, molds, fungi, etc.) **on clean surfaces.**

Note: Dirt, particularly organic material (blood, meat particles, etc.), on dirty instruments, provides physical protection for micro-organisms. Dirt and organic debris also inactivates most sanitizing chemicals. For these reasons it is essential for instruments to be cleaned before they are put into the sanitizing solution.

Pre-cleaning of instruments does not guarantee that particles of organic matter won't accumulate in the solution. Water sanitizers must be operated with a continuous supply of potable water- to prevent the accumulation of debris in the solution, a continuous inflow and overflow of water is recommended. Solutions in chemical sanitizers should be changed frequently.

The number of sanitizers required in a meat facility depends on:

1. Size of the facility;
2. Volume of product handled;
3. Number of personnel involved;

4. Complexity of the processing operations.

    Note: The best way to judge how many sanitizers are needed is to assess the following:

    a) number of individual processing steps;

    b) location of the operational steps;

    c) number of personnel involved

    These assessments should be validated by observing the frequency of use in relation to the need and efficiency and convenience of locations.

OBJECTIVE/OUTCOME

Sanitizers will be located throughout the facility, in sufficient numbers to allow convenient access by all personnel involved in processing activities.

Note: It is essential that sanitizers be located on the kill floor and in areas where carcasses are dressed and parts of carcasses, or other meat products, are processed.

All sanitizers will be in good working order.

Note: The temperature of hot water sanitizers must be 82^0 C (180^0 F) or higher and they must have a continuous supply of potable water.

Chemical sanitizers must be free of accumulated debris and a letter of authorization, for the use of the chemical sanitizer as an interim measure, must be on file at the facility.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Knifes and Utensils - Sanitizing of"** will be met when:

1. Functional and conveniently located sanitizing equipment is being used by facility personnel.
2. Calibrated probe thermometers are being used to take the temperature of hot water, or steam sterilizers, and the results are recorded.

    Note: Temperatures may be recorded in the **"Pre-Operational Sanitation Record"**.

3. **"Calibration Records"** are on file.

    Note: These records should demonstrate that the thermometers used to take the temperature of the water are accurate.

4. Chemical sanitizers are clean and replenished regularly.

RELATED SECTIONS OF TIPM

02-F-01 Facilities & Equipment - Adequacy of

03-C-03 Calibration Procedures - Records of

03-E-05 Sanitation Records - Pre-operational Inspections

SUBJECT: Non-food Chemicals - Storage Of	02-F-04
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18(1)(g) Meat Facility Standards (MFS) Section B.2.2 (2, 3 & 4)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Some of the chemicals used in a "Licensed Meat Facility" (facility) are toxic (poisonous).

Note: Examples of potential toxic chemicals, that have to be used in a facility, include industrial strength cleaners, sanitizers and pest control products.

Procedures must be in place to prevent the inadvertent contamination of edible products with toxic chemicals.

All non-food chemicals must be stored properly.

Note: Ideally they will be stored in a location separate from where meat, meat products, ingredients, or packaging materials are stored.

Storage of hazardous products in food handling areas could interfere with cleaning and sanitizing procedures of that area in addition to presenting the chance of contaminating edible product and possible occupational health and safety hazards.

Chemicals should be stored in their original containers with their original labels.

Note: Re-labeling is permissible as long as it is done under WHMIS guidelines.

OBJECTIVE/OUTCOME

All non-food chemicals will be stored away from any edible product or, if this is not possible, they will be stored in closed containers and with sufficient separation, from edible products, or materials, to minimize any chance of contamination.

Note: It is "Common Industry Practice" for chemical storage rooms, or partitioned areas of a joint use storage room, to be locked with controlled access being given to a responsible individual, or a small group, of facility personnel.

A locked cabinet, in a joint use storage area, is another acceptable method of storage.

Only approved chemicals will be in use.

Note: A list of approved chemicals can be accessed at:

http://www.inspection.gc.ca/english/fssa/reference/refere.shtml

Facility personnel that use chemicals will be trained in their proper use.

Note: Color coding, or some other similar type of system, is strongly recommended so that facility personnel can identify different types of chemicals.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Storage/Location of Non-Food Chemicals"** will be met when:

1. An up-to-date, facility specific, **"Sanitation Chemicals and Equipment List"** is on file.

   Note: This list must include documentation verifying that all of the chemicals used in the **"Sanitation Program"** have been approved for use in a food processing facility.

2. All chemicals used for sanitation, maintenance and pest control are stored in their original containers or in containers that have labels correctly identifying the contents and prescribed dilutions.

3. All non-food chemicals are stored in a separate room, or area, from meat, meat products, ingredients, or packaging materials or if this is not possible they are kept in closed containers and physically separated from any edible products.

RELATED SECTIONS OF TIPM

03-B-01 Receiving Procedures & Records

03-E-02 Approved Chemicals & Chemical Listing

12-A-03 WHMIS Program for Chemicals

SUBJECT: Processing Rooms - Temperature Requirements	02-G-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section B.2.3.1, E.1.1.2	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2010 **Page 1 of 2**

RATIONALE

High environmental temperatures, in a "Licensed Meat Facility" (facility) enhance the growth of micro-organisms (bacteria, molds, fungi, etc.) that are capable of causing the spoilage of meat and meat products.

Note: Smaller portions of meat and ground meats have relatively more surface area and are more easily penetrated by water and oxygen. All of these factors (surface area, moisture and oxygen) have a great impact on the rate, growth and activity of harmful micro-organisms.

Lower temperatures will inhibit the growth and activity of micro-organisms thus temperature control is an effective way of reducing the rate at which meat and meat products spoil.

Low temperatures are particularly important, in boning and cutting areas.

OBJECTIVE/OUTCOME

All cutting, boning and packaging rooms, in the facility will be designed and constructed in a manner that ensures appropriate temperatures are maintained.

Temperatures will be regularly monitored, at prescribed frequencies, and results will be recorded.

Written operational controls will be implemented when it is not possible to maintain an ambient temperature of 6^0 C, or less in curing areas and 10^0 C, or less, in other processing areas.

Note: These control measures must ensure that meat products are not compromised.

Examples of control measures include monitoring the internal temperature of the meat to ensure that it doesn't exceed 4^0 C and a mid-shift clean-up procedure if the processing shift is longer than 4 hours.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for "**Processing Rooms - Temperature Requirements"** will be met when*:*

1. Refrigerated processing room temperatures are monitored.
2. Up-to-date **"Calibration Records",** for temperature measuring devices, are on file.
3. Up-to-date **"Storage Records"** are on file at the facility.

   Note: These records must have sufficient detail to verify what the temperatures were in the cutting and/or boning area at regularly, prescribed frequencies.

4. A plant specific **"Storage Procedure"** is on file.

   Note: This procedure must include corrective actions required and taken when the temperature of the processing areas have exceeded the regulated temperatures.

5. Written "**Operational Controls**" are in place to ensure that all meat products are not compromised and are maintained at appropriate temperatures.

   Note: Operational controls include, but are not limited to:

   a) limits on the length of processing shifts;

   b) mid-shift cleanup, **"Sanitation Procedures"** and records;

   c) recording temperatures of processed products and/or the processing room at prescribed intervals;

   d) unplanned sanitation procedures, as required, during production

RELATED SECTIONS OF TIPM

02-G-03 Temperature Recording Devices
03-B-02 Storage Procedures & Records
03-C-03 Calibration Procedures - Records of
03-E-03 Sanitation Procedures

SUBJECT: Coolers & Freezers	02-G-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18(1)(c) Meat Facility Standards (MFS) Sections B.1.2.1, 2.1 (1 & 2), 2.3.1	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Prompt chilling to an internal temperature of 4^0 C or less, delays the growth of micro-organisms (bacteria, molds, fungi, etc.) that cause spoilage of meat and meat products.

Note: Air chilling is an effective way of cooling meat and meat products providing the cold air moves freely in the proper direction and at the proper velocity.

Freezing is an excellent method of preserving meat because it stops the growth of meat spoiling micro-organisms and slows down the rate at which rancidity develops in meats that are rich in unsaturated fatty acids (e.g. pork).

Note: To effectively control the growth of micro-organisms, freezer temperatures must be maintained at -18^0 C, or lower.

Stable freezer temperatures also minimize the development of ice crystals and subsequent drip associated losses when the meat is thawed.

OBJECTIVE/OUTCOME

The “Licensed Meat Facility” (facility) will be designed and constructed in a manner that provides for the cooling and/or freezing of meat and meat products to appropriate temperatures and allows these products to be held at appropriate temperatures.

Note: Appropriate temperatures are those listed in the following text for different types of cooling and freezing methods.

All temperatures will be continuously monitored and recorded either manually, at frequent intervals, or through the use of continuous recording devices.

Note: When freezers are used to inactivate *Trichinella spiralis* larvae it is mandatory to have a self-recording thermometer.

The adult form of *Trichinella spiralis* is a worm that lives in the intestinal tract of humans, pigs, bears and other carnivores. The intermediate, or larval, form lives in the muscles of the same hosts. The parasite can be inactivated by subjecting it to cold temperatures for a specified period of time. Self recording thermometers serve to verify that temperatures needed for inactivation have been achieved.

Chill (Drip) Coolers

Temperature in these coolers should be set in the range of -2^0 C to 2^0 C with a maximum temporary allowable upper limit of 10^0 C after the introduction of warm carcasses.

Note: The cooling process must be continuous. The temperature of the cooler must not exceed 4^0 C if carcasses, or meat products from previous slaughters, are being stored in the cooler.

The introduction of warm carcasses must not cause sweating (condensation) on surfaces of carcasses from previous kills, walls, ceiling, or equipment.

Coolers will be capable of reducing the surface temperature of carcasses to less than 7^0 C within 24 hours and reaching an internal temperature of 4^0 C as soon as possible.

Note: Carcasses must not freeze during this chilling process.

Aging (Holding) Coolers

The temperature in these coolers will be maintained at less than 4^0 C without causing freezing of the product.

Note: Aging cooler temperatures should not fluctuate more than +/- 0.5^0 C.

Ready to Eat (RTE) Coolers

The temperature in these coolers will be maintained at less than 4^0 C without causing freezing of the product.

Note: RTE cooler temperatures should not fluctuate more than +/- 0.5^0 C.

Curing Coolers

The temperature in these coolers will be maintained between 3 and 6^0 C

Note: RTE cooler temperatures will not fluctuate more than +/- 0.5^0 C.

Blast (Sharp) Freezers

The temperature in these freezers will be kept at -25^0 C, or lower.

Holding Freezers

The temperature in these freezers will be maintained at -18^0 C, or lower.

Note: Holding freezer temperatures should not fluctuate more than +/- 1^0 C.

All freezers and coolers will be routinely monitored for proper operation and maintenance.

Note: Proper monitoring and operation of a freezer includes:

a) monitoring to detect any broken cartons or accidentally exposed product
b) avoiding ice and/or frost build up;
c) ensuring product turnover thus avoiding extended periods of storage;
d) practicing preventative maintenance to avoid breakdowns;
e) repairing or replacing coolers and/or freezers or components that break down.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Coolers and Freezers"** will be met when*:*

1. Written **"Storage Procedures"**, specific for the facility is on file.

   Note: These procedures must outline proper storage conditions and facilities required for various products.

2. Up-to-date **"Storage Records"** are on file.

   Note: These records must be detailed enough to verify that the temperature of all coolers and freezers are being monitored regularly.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

3. The facility's written **"Internal Premises Inspection Procedures"**, include coolers and freezers.

   Note: This procedure must contain a section that evaluates the suitability of construction materials for freezers and coolers. It must also contain recommendations for their upkeep and maintenance.

4. **"Internal Premises Inspection Records"** include freezers and coolers.

   Note: These records must identify any issues with cooler or freezers and include records of any corrective actions taken.

5. The facility's **"Sanitation Procedures", "Sanitation Schedule**" and **"Sanitation Records"** include freezers and coolers.

   Note: These records should include the following information for all coolers & freezers:

   a) frequency of sanitation;

   b) personnel responsible for sanitation;

   c) methods, tools and chemicals used

6. In the absence of a separate RTE cooler detailed, written **"RTE Storage & Handling Procedures"** will be on file.

   Note: These procedures must detail how risks of cross contamination, between RTE products and raw or semi-cooked products, are prevented, or eliminated.

7. On site observation demonstrates that all procedures for freezers and coolers are being implemented and that proper storage practices are in effect.

   Note: Proper storage practices include ensuring that all food, or food contact product, is placed on acceptable racks, shelves, or storage containers within coolers and freezers.

RELATED SECTIONS OF TIPM

02-C-06 Construction - Floors & Walls
02-C-10 Construction - Shelving & Racks for Storage
03-E-03 Sanitation Procedures
03-E-04 Sanitation Schedule
03-G-11 Ready to Eat (RTE) Storage & Handling
09-A-01 Trichinosis - Control of

SUBJECT: Temperature Recording Devices	02-G-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18(1)(c) Meat Facility Standards (MFS) Sections B.1.1.2, 1.2 (1 &2), 2.1.1, 2.3.1, C.1.2.2	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

The growth of micro-organisms (bacteria, molds, fungi, etc.), in meat and meat products, will cause spoilage.

Refrigeration, or freezing, greatly reduces the growth and activity of meat spoiling micro-organisms thus these are very effective ways of ensuring food safety and preventing spoilage of meat and meat products.

To ensure, or guarantee, that meat and meat products have been processed and stored at appropriate temperatures all coolers and refrigeration units must be equipped with properly calibrated thermometers.

Temperature storage records are among the most basic type of records that are used to ensure food safety.

Note: Temperature storage records can be developed by keeping continuous recording charts or by manually monitoring and recording temperatures several times during every 24-hour period.

Accurate temperature records, from product chilling and storage areas, will provide the best assurance that meat and meat products have been kept under acceptable temperatures as they moved through the “Licensed Meat Facility” (facility).

Note: Recording temperatures allows for the early detection of problems thus allowing immediate corrective action to be taken.

All temperature monitoring equipment needs to be calibrated regularly to ensure that they are working properly.

Note: It is recommended that thermometers and probes, for temperature controlled areas, be calibrated at least twice a year. In addition the performance of these devices must be verified regularly between calibrations.

Calibration should only be performed by authorized and trained personnel.

OBJECTIVE/OUTCOME

The facility will be designed, constructed and equipped in a manner that allows temperatures, in controlled areas, to be monitored and recorded, on a daily basis.

Note: Freezers used to inactivate the larvae of *Trichinella spiralis* must be equipped with a self-recording thermometer.

The adult form of *Trichinella spiralis* is a worm that lives in the intestinal tract of humans, pigs, bears and other carnivores. The intermediate, or larval, form lives in the muscles of the same hosts. The parasite can be inactivated by subjecting it to cold temperatures for a specified period of time. Self recording thermometers serve to verify that temperatures needed for inactivation have been achieved.

All temperature recording devices will be calibrated at established regular frequencies.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Temperature Recording Devices"** will be met when:

1. A written **"Storage Procedure"** is on file at the facility.

   Note: This procedure will outline proper storage temperatures and facilities required for the products being produced or handled.

2. **"Storage Records"** are on file at the facility.

   Note: These records will show that there has been regular recording of temperatures in all temperature controlled areas.

3. Written **"Calibration Procedures"** are on file.

   Note: These procedures will outline what needs to be done to ensure temperature recording devices are calibrated and remain accurate.

4. **"Calibration Records"** are on file at the facility.

   Note: These records will identify deviations from required temperatures and list corrective actions taken in response to any deviations.

5. **"Service Records"**, for computer controlled digital recording devices are on file.

   Note: These records will indicate:

   a) regular and frequency servicing;

   b) programmed temperature ranges;

   c) set points

6. On site observations demonstrate that all procedures relating to temperature recording devices are being implemented, and records are detailed enough to verify that all meat, meat products and food contact products are stored at acceptable temperatures.

RELATED SECTIONS OF TIPM

02-G-01 Processing Rooms - Temperature Requirements
02-G-02 Coolers & Freezers
03-C-03 Calibration Procedures - Records of
09-A-01 Trichinosis - Control of

SUBJECT: Air Flow & Humidity Control	02-G-04
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 10 18(c), 18(1)(e) & 18(2) Meat Facility Standards (MFS) Sections A.2.3 (1, 2 & 3), B.2.1 (1 & 2)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Micro-organisms (bacteria, molds, fungi, etc.) capable of causing disease and/or the spoilage of meat, or meat products, are an ever present hazard in coolers and other refrigerated areas in a “Licensed Meat Facility” (facility).

The air quality in refrigerated areas is directly affected by the:

1. Quality of air entering the area;
2. Amount of air circulation within the cooler;
3. Humidity;
4. Air temperature.

Condensation on surfaces of equipment (including refrigeration equipment), overhead structures and water lines indicate excessive humidity.

Note: Frosting of coils, common in drip coolers and freezers, is also a sign of high humidity. Proper ventilation and adequate defrosting procedures will prevent the formation of ice on the coils.

High humidity also facilitates the growth of molds and fungi.

Note: Some molds may be difficult to see on a carcass. They have thread-like branches and roots that may penetrate deeply into the meat product. For this reason molds are very difficult to trim adequately. Moldy meat products are also more likely to have invisible bacteria growth along with the mold.

All areas require adequate, but not excessive, air movement (exchange) to prevent increasing levels of humidity.

To minimize contamination air should always be moved from clean areas to areas that are not as clean.

Inedible and hide storage rooms must be adequately ventilated to prevent objectionable odors from entering production areas.

OBJECTIVE/OUTCOME

There will be sufficient ventilation, throughout the facility, to prevent the build up of excessive heat, humidity and condensation during normal operations.

Air will move from cleaner to dirtier areas.

Note: There must be positive air pressure in areas that handle RTE (Ready-to-Eat) meat products.

Refrigerated rooms will be designed, equipped, operated and maintained in a manner that controls temperature and humidity with minimal external ventilation.

Note: In coolers, there must be enough space between individual carcasses and between the carcasses and the floor, walls and ceiling, of the cooler, to allow for the efficient circulation of air.

Carcasses should be at least 45 cm (18") off of the floor.

Boxed product should be kept 10 cm (4") off the floor and away from the walls to ensure thorough air circulation.

Air circulation must be sufficient to establish proper humidity levels without the development of condensation or adversely affecting the temperature of meat and meat products.

When operational ventilation is required, the source should be adequately filtered and conditioned to prevent condensation within refrigerated rooms.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Air Flow and Humidity Control"** will be met when:

1. Walls and ceilings are free of condensation during processing.
2. There is effective circulation of air in carcass and meat product storage areas.
3. Airflow is directed from clean areas to areas that are not as clean.

   Note: This is particularly important in RTE areas.
4. The direction of air flow is monitored and recorded.
5. A written **"Internal Premises Inspection Procedure"** is on file.

   Note: This procedure will contain a section for evaluating the effectiveness of ventilation, airflow, and refrigeration. Monitoring and recording of the direction of air movement should also be included in this procedure.
6. Written **"Internal Premises Inspection Records"** are on file.

   Note: These records must show that issues concerning condensation and sanitation of refrigeration equipment are being monitored and recorded and that corrective action is taken to correct any identified problems.
7. Detailed written **"Sanitation Procedures"** for refrigeration equipment are on file.

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval
02-G-05 Cleaning of Cooling Units
02-H-03 Vents, Filters & Ducts
02-H-04 Air Flow - General
03-A-03 External Premises Inspection
03-E-03 Sanitation Procedures

SUBJECT: Cleaning of Cooling Units	**02-G-05**
REGULATORY REFERENCE: AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections A.2.3.1, E.1.1. (1 & 2)	**Initial Release** Sept 1, 2009 **Page 1 of 1**

RATIONALE

Contamination of meat and meat products, with micro-organisms (bacteria, molds, fungi, etc.) that are capable of causing disease, or spoilage, are constant hazards in a "Licensed Meat Facility" (facility).

Various components of the cooling system (e.g. drip trays, fans, coils, etc.) can become heavily contaminated during use.

Note: Drip trays, in particular, are a serious source of contamination because the moisture produced during the defrost cycle enhances the growth of micro-organisms which are then picked up and distributed throughout the cooler when fans are in operation.

To minimize contamination, regular cleaning and sanitizing schedules must be established for all refrigeration components.

Note: The frequency of cleaning depends on the amount of use. The frequency of cleaning and sanitation can be simply determined by watching how long it takes for cooling units to become dirty.

OBJECTIVE/OUTCOME

"Sanitation Procedures", for cooling units (including fans, trays and coils) will be developed and implemented.

Note: These procedures must include cleaning schedules and methods that will ensure effective sanitation.

Cooling unit **"Sanitation Procedures"** will be effective in controlling contamination.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Cleaning of Cooling Units"** will be met when:

1. The facility's **"Sanitation Schedule"** and **"Sanitation Program"** includes detailed written **"Sanitation Procedures"** for coolers.

   Note: These procedures must include:

   a) frequency of cleaning and sanitation;
   b) responsible personnel;
   c) methods, tools and chemicals used

2. **"Sanitation Records"** for cooling units are on file.

   Note: These records must be filled out when sanitation activities mandated by the **"Sanitation Program"** are specified.

3. On site observations demonstrate that the cleaning and sanitation procedures and schedules, for cooling units, are effective.

RELATED SECTIONS OF TIPM

02-G-02 Coolers & Freezers
03-E-03 Sanitation Procedures
03-E-04 Sanitation Schedule

SUBJECT: Separation of Un-inspected Meat	02-G-06
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1, 18(1)(b)(ii), 77 & 78 Meat Facility Standards (MFS) Section B.2.3.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Un-inspected carcasses are **more likely to be contaminated**. For this reason there must be physical separation, of these carcasses, from inspected carcasses in a "Licensed Meat Facility (facility) that handles both inspected and un-inspected carcasses.

Note: Physical separation is an effective way to minimize, or eliminate, the chance of contaminating inspected carcasses.

For the same reason, meat products from uninspected carcasses must be kept separated from meat products made with inspected meat.

Cross contamination is more likely to occur when coolers are filled beyond their capacity. Overcrowding must be avoided.

Note: Overcrowding also has an adverse effect on the rate of cooling of carcasses.

Because of their different characteristics (skin, hair, wool, taste, odor, etc.) carcasses and meat products from different species should also be kept separate during all phases of processing, packaging and storage.

Note: The separation of different species is not as critical a food safety issue as the need to separate un-inspected from inspected carcasses but it is important from the aspect of aesthetics and food quality.

OBJECTIVE/OUTCOME

When both inspected and un-inspected meat are handled the facility will:

1. Develop a system that ensures the complete physical separation of inspected meat from any un-inspected meat as well as from any inedible animal parts, or products, that are kept on the premises.

   Note: This physical separation must be maintained during all activities relating to processing, packaging and storage.

2. Clean and sanitize all equipment used for the processing of un-inspected meat before using that equipment to process inspected meat.

3. Have sufficient cooler space to ensure there is **no possible contact** between **un-inspected and inspected** carcasses, or between carcasses of different species.

4. Clearly identify all un-inspected meat in the facility.

   Note: Inspectors appointed by the Meat Inspection Branch (MIB) will put a yellow MIF - 16 tag on un-inspected carcasses. The MIF-16 tag has been approved by the MIB. This tag meets the requirements of Section 77(a) of the MIR by clearly indicating that the carcass is un-inspected and by providing a space to record the name and address of the owner and the date of slaughter.

   Edible products, derived from un-inspected carcasses, must be labeled "UN-INSPECTED - NOT FOR SALE".

5. Post a conspicuous sign that states "The sale of un-inspected meat is prohibited in Alberta. Un-inspected meat is processed on these premises for the owner of the animal.

   Note: This sign is a specific requirement of section 78(2) of the MIR.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the "**Separation of Un-inspected Meat"** will be met when:

1. All un-inspected carcasses are clearly identified as such.
2. All finished products that contain meat from un-inspected carcasses are labeled "Un-inspected - Not for Sale".
3. There is **complete physical separation of uninspected product**, from inspected product, **at all times**, during processing, packaging and storage.
4. Written "**Un-inspected Meat Handling Procedures"** are on file at the facility.

   Note: These procedures must address proper storage, handling, and sanitation practices for the handling of un-inspected meats.

5. On site observations demonstrate that the **"Un-inspected Meat Handling Procedures"** are being implemented.

RELATED SECTIONS OF TIPM

02-G-02 Coolers & Freezers

SUBJECT: Product Protection during Freezing & Refrigeration	02-G-07
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections B. 2.2.1, 2.3.1	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2010 **Page 1 of 1**

RATIONALE

It is common practice for meat and meat products to be refrigerated, or frozen.

Note: This is done to limit the growth of micro-organisms (bacteria, fungi, molds, etc.) that may cause spoilage or disease.

Environmental conditions during refrigerated and frozen storage can have an adverse impact on the quality and safety of meat and meat products.

Note: Examples of adverse effects include:

a) drying of muscle tissue from prolonged exposure to air;

b) development of freezer burn;

c) rancidity due to excessive exposure to oxygen

Approved packaging materials must be used for protection for long term refrigeration, or freezing and approved closed containers should be used for short term storage.

OBJECTIVE/OUTCOME

All meat products, stored in temperature controlled areas, will be:

1. Packaged in an acceptable manner.
2. Protected from contamination.
3. Elevated from direct contact with the floor with the use of approved materials.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Product Protection during Freezing and Refrigeration"** will be met when:

1. Food grade packaging, or storage materials, is used for the refrigeration, or freezing, of meat and meat products.
2. On site observations demonstrate that all meat and meat products, in coolers and freezers, are adequately protected from adverse environmental conditions and any sources of contamination.

RELATED SECTIONS OF TIPM

02-G-02 Coolers & Freezers

03-B-02 Storage Procedures & Records

SUBJECT: Poultry Chilling Equipment	02-G-08
REGULATORY REFERENCE AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 & 18(1)(c) Meat Facility Standards (MFS) Sections B.2.1.1, 3.3	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

In accordance with AR 42/2003, "Licensed Meat Facility" (abattoir) operators must have adequate facilities to accommodate the hygienic slaughtering, dressing, handling, storing and processing of animals including poultry.

Of particular importance is the rapid cooling of meat and meat products.

By regulation, poultry carcasses must be chilled, immediately after completion of dressing and inspection procedures, to an internal temperature of 4^0 C, or less, as quickly as possible.

Note: This is done to prevent the growth of micro-organisms (bacteria, fungi, molds, etc.) capable of causing disease, or meat spoilage.

Chilling can be accomplished by using "Chill Tanks" or "Air Coolers".

To be effective water in chill tanks should be kept between 0 and 2^0 C.

Note: This can be done through refrigeration or the use of ice.

Chill tanks must not be overcrowded and the water should be continuously replaced.

The tanks should be located in a separate room, away from incompatible activities such as evisceration, plucking, scalding, and cleaning.

Note: This separation reduces the possibility of direct, or airborne, contamination of clean carcasses that are ready for chilling.

Opportunities may arise for the contamination of product after chilling. This is particularly true during the transfer of product from the chill tanks.

Note: Plant sanitation practices and personal hygiene of abattoir personnel are particularly important at this time. These factors must be carefully controlled to ensure that the finished product is of optimum safety and quality.

OBJECTIVE/OUTCOME

All poultry products will be chilled in accordance with one of the following methods.

Chill Tanks

Water immersion chill tanks will be constructed of approved material.

Note: Approved materials are:

a) corrosion resistant;

b) easy to clean and sanitize;

c) free from substances that may contaminate poultry carcasses

Large chill tanks (used in medium and high volume poultry operations) will be equipped with a satisfactory overflow mechanism.

Note: Satisfactory overflow mechanisms are defined as one that will:

a) provide enough water to remove large pieces of extraneous material and

b) provide a continuous supply of fresh cold water

A floor drain must be close to the waste water overflow outlet.

Chill tanks (regardless of size) will be located in an area that prevents product contamination by facilitating a one-way flow of product and abattoir personnel.

Note: Operations must be adjusted, to ensure that risks of contamination are minimized, when it isn't possible to establish a one-way flow of product and personnel.

Examples of ways to minimize the risk of contamination include the use of tank covers, avoiding other activities (e.g. cleaning) while product is being chilled, etc.

Chill tank temperatures will be maintained at 2^0 C, or less, through the use of ice, or refrigeration.

Note: When refrigeration is used, the temperature must be monitored and recorded, using a calibrated thermometer, or temperature gauge. Monitoring and recording of the temperature in ice cooled chill tanks is also needed to provide proof of continual chilling.

Chill tanks will not be overcrowded.

Note: It is "Common Industry Practice" to put the following initial volumes of potable water and ice in the chill tank:

a) 2 liters for each carcass weighing 2.5 kg or less;

b) 2.75 liters for each carcass between 2.5 and 6.5 kg and;

c) 3.5 liters for each carcass weighing more than 6.5 kg.

Chill tanks will be positioned so they are readily accessible for cleaning, servicing and inspection.

Chill tank water **will <u>not</u> be <u>reused</u>** for processing **purposes.**

<u>Air Chilling</u>

Air chilled poultry coolers will run at 2^0 C.

Note: The temperature of the air, in the cooler and the temperature of the poultry product must be monitored to ensure that cooling is occurring within the required times.

Fans will be properly positioned to ensure that sufficient heat transfer occurs to ensure effective air chilling.

Note: To ensure proper heat transfer fans must achieve:

a) sufficient volume of air circulation;

b) sufficient velocity of air circulation;

c) an appropriate direction of circulation.

The relative humidity will also be controlled to prevent condensation.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for "**Poultry Chilling Equipment"** will be met when:

1. Chill water is maintained at 0 to 2^0 C.

   Note: In chill tanks it is necessary to continuously replace water to achieve adequate chilling.

2. Accurate and up-to-date **"Poultry Cooling Records"** are on file.

   Note: These records should have sufficient detail to verify that poultry products reached an internal temperature of 4^0 C, as well as how long it took to reach that temperature.

3. Calibrated probe thermometers are used to take temperatures of the chill water (or air) and the poultry.

4. Thermometer **"Calibration Records"** are on file.

RELATED SECTIONS OF TIPM

03-G-09 Cooling of Poultry

SUBJECT: Windows	02-H-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 18(1)(e) & 18(2) Meat Facility Standards (MFS) Sections A.2.1.6, 2.3.2	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

The use of open windows, as a means of ventilation, air flow, or humidity control carries the risk of allowing the entry of birds, insects, dust, smoke, odors, etc. into the "Licensed Meat Facility" (facility).

Open windows must not pose a risk to the safety, or quality, of the final product.

Properly screened windows that open should be restricted to those on the kill floor and other outside windows that don't open directly into areas where meat, or meat products, are being processed.

All opening windows must be properly screened to prevent the entry of birds, insects and other pests.

Note: All other air inlets must also be screened and if necessary filtered.

OBJECTIVE/OUTCOME

All windows and screens, in the facility, will be constructed in accordance with the requirements in a document entitled "Reference Listing of Accepted Construction Materials".

Note: This document is produced by the Canadian Food Inspection Agency. It can be accessed at: **http://www.inspection.gc.ca/english/ppc/reference/cone.shtml**.

Windows in areas where exposed processed products are handled will be sealed.

Note: It is "Common Industry Practice" to have **sealed windows** in all **production areas**. The panes, of sealed windows, must be made of approved shatter proof material.

There will be screens for any windows that can be opened.

Note: Opening windows are permitted on the kill floor and in other areas of the plant that don't open directly into a processing area.

Screens will be maintained in a good state of repair.

Note: To facilitate proper maintenance, screens must be accessible and removable.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Windows"** will be met when:

(1) Written **"Maintenance Procedures"**, for screens and filters, are on file.

Note: These procedures must identify the frequency of inspection and contain a section for evaluating the adequacy and upkeep of windows and screens.

(2) Windows, screens and filters are being maintained and cleaned on a regular basis.

Note: Maintenance and cleaning records may be shown on any of the following documents:

a) **"Sanitation Schedule";**

b) **"Internal Premises Inspection Records";**

c) **"Maintenance Schedules";**

d) **"Maintenance Records"**

(3) On site observations demonstrate that:

a) windows in areas where exposed products are sealed and constructed of shatter proof material;

b) opening windows are properly screened

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval
02-C-09 Construction - Windows & Screens
02-H-02 Air Intakes
02-H-03 Vents, Filters & Ducts
02-H-04 Airflow - General
03-A-02 Internal Premises Inspection
03-C -04 Preventative Maintenance Procedures - Records of
03-E-04 Sanitation Schedule
12-A-02 Ventilation Requirements

SUBJECT: Air Intakes	02-H-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1, 18(1)(e) & 18(2) Meat Facility Standards (MFS) Section A 2.3.2	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Adequate air exchange is an effective and economical way of controlling humidity and temperature in warm production areas and on the kill floors.

Air intakes must be protected to prevent the entry of pests.

Note: Pests include mice, birds and other vermin as well as flying and crawling insects.

OBJECTIVE/OUTCOME

All air intakes will be properly located, constructed, screened and filtered if necessary.

Note: Ideally air intakes will be located:

a) high off the ground;

b) in a shaded area;

c) on the cleanest side of the facility;

d) at least 60 cm (23.6 inches) off the ground and

e) screened to exclude insects

Intakes within 1 meter (39.4 inches) of the ground, or any other horizontal surface, must be equipped with ¼ inch rodent screen.

Intakes more than 1 meter off the ground or any other horizontal surface may be equipped with a ½ inch bird screen.

All intakes must be louvered, or so positioned, as to prevent the infiltration of rain and snow.

Air intakes, for rooms where meat and meat products are handled, or stored, (with the exception of the kill floor) will be equipped with suitable filters.

Note: It is “Common Industry Practice” to use filters that are 30% effective for particles of 2 microns. Filters are used to remove environmental contaminants such as dust particles from the air.

Screens and filters will be easy to remove for inspection and cleaning.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Air Intakes"** will be met when:

(1) Effective written **"Maintenance Procedures"** for screens and air intake filters are on file.

Note: These procedures must make reference to the frequency of inspection and contain a section for evaluating the adequacy and upkeep of screens and filters.

(2) Screens and air intake filters are maintained and cleaned on a regular basis.

Note: Maintenance and cleaning records may be shown on any of the following documents:

a) **"Sanitation Schedule"**;

b) **"Internal Premises Inspection Records"**;

c) **"Maintenance Schedules"**;

d) **"Maintenance Records"**

(3) On site observations demonstrate that all air intakes are appropriately sized, located, screened and filtered when required.

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval
02-B-02 Protection Against Pests & Environmental Contaminants
02-G-04 Air Flow & Humidity Control
02-H- 01Windows
02-H-03 Vents, Filters & Ducts
02-H-04 Air Flow - General
03-A-02 Internal Premises Inspection
03-C-04 Preventative Maintenance Procedures - Records of
03-E-04 Sanitation Schedule
12-A-02 Ventilation Requirements

SUBJECT: Vents, Filters & Ducts	02-H-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 18(1)(e) & 18(2) Meat Facility Standards (MFS) Sections A 2.3 (1 & 2)	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Ventilation is a serious potential source of contaminants that may adversely affect meat and meat products.

Improperly designed systems will distribute air borne contaminants throughout a "Licensed Meat Facility" (facility) while improper maintenance and sanitation may lead to the development of an environment that is ideal for the development of micro-organisms (bacteria, molds, fungi, etc.) that can cause disease or spoilage of meat, or meat products.

OBJECTIVE/OUTCOME

All components of the ventilation system will be designed, constructed and maintained as outlined in the following text.

Vents

All air discharge vents will be designed and located to ensure that pests cannot enter the facility.

Note: Vents less than 1 meter (39.4 inches) off the ground, or a horizontal surface, must have ¼ inch screens to prevent the entrance of rodents and birds.

Vents located more than 1 meter off the ground, or a horizontal surface, must have at least ½ inch screens to prevent the entrance, or harboring, of birds.

Vent discharges will not affect the air quality in other areas of the facility.

High volume exhaust fans will be equipped with automatic closing back draft dampers and properly screened.

Note: Dampers are required to prevent the backflow of air and the entry of insects. Screens are needed to prevent the entry of birds and rodents.

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.

All exhaust vents will have louvers, or other devices, that are designed, to prevent the entry of rain, snow, or condensation.

Direct ventilation to the outside will be provided for the following equipment and activities:

1. Smokehouses and smokehouse areas;
2. Water bath cooking facilities;
3. Singeing of carcasses;
4. Scalding tanks.

Filters

All filters will prevent contaminants, as specifically identified in the following note, from entering the facility.

Note: It is "Common Industry Practice" to use air intake filters that are 30% effective at 2 microns.

Intake and outlet filters for air compressors used to supply air for air powered hand tools, for agitation of meat products submerged in a liquid and for air used to facilitate the packaging of product should conform to the following common industry standards:

a) Air intake - 98% efficiency at 10 microns;

b) Air outlet - not less than 99.7% efficient at 0.3 microns and equipped with an activated charcoal filter that is capable of removing traces of vaporized oil;

c) 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.

All filters will be readily accessible for inspection, cleaning and replacement.

Wet format media filters and cooling cells (cell decks) will be regularly monitored, cleaned, and sanitized.

Note: Regular cleaning and sanitizing is particularly important for these types of filters.

Improper maintenance and sanitation can lead to development of an environment that is conducive to the growth of micro-organisms.

Ducts

All Ducts and diffusers will be:

1. Of adequate size;
2. Resistant to rust;
3. Easily cleaned and sanitized;
4. Located to assure functional air flow patterns.

Ducts will not promote condensation.

Insulation will be:

1. Impervious to moisture;
2. Easily cleaned and sanitized.

Diffusers will be located and sized to assure the blending of fresh air entering the room without the development of condensation on ceilings, walls, or equipment.

Heat Exchangers

All cooling and heating components will be clean and sanitary.

Note: These components must be designed and installed in a manner that facilitates frequent inspection, cleaning, and sanitizing.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Vents, Filters & Ducts"** will be met when:

1. Effective written **"Maintenance Procedures"**, for components of the ventilation system is on file.

   Note: These procedures must make reference to the frequency of inspection and contain a section for evaluating the adequacy and upkeep of vents, filters and ducts.

2. All components of the ventilation system are being maintained, cleaned and sanitized regularly.

   Note: Maintenance and cleaning records may be shown on any of the following documents:

   a) **"Sanitation Schedule"**;

   b) **"Internal Premises Inspection Records"**;

   c) **"Maintenance Schedules"**;

   d) **"Maintenance Records"**

3. On site observations demonstrate that all vents and ducts are appropriately sized, located and screened as required.

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval
02-G-04 Airflow & Humidity Control
02-H- 01 Windows
02-H-02 Air Intakes
02-H-04 Air Flow - General
03-A-02 Internal Premises Inspection
03-C-04 Preventative Maintenance Procedure - Records of
03-E-04 Sanitation Schedule
12-A-02 Ventilation Requirements

SUBJECT: Air Flow - General	02-H-04
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1, 18(1)(e) & 18(2) Meat Facility Standards (MFS) Sections A.2.3 (1 & 3)	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

The design of a "Licensed Meat Facility" (facility) should facilitate the production of wholesome, disease free product.

There are many sources of air borne contaminants, within a facility therefore, proper ventilation is critical for production of a wholesome product.

Without proper ventilation and air flow patterns, meat and meat products will be subjected to many airborne contaminants until such time as it is sealed in a package.

There is great variation in the number of air borne micro-organisms (bacteria, molds, fungi, etc.) in different parts of the facility.

Note: The greatest number of micro-organisms will be present where live animals are handled and inedible products are stored.

To reduce the chance of contamination there must be a constant movement of air through the plant from cleaner to dirtier areas.

Note: Essentially this means that the **flow of air** must be in the **opposite** direction of the **product flow.**

OBJECTIVE/OUTCOME

There will be appropriate and adequate ventilation in each part of the facility.

Note: Appropriate ventilation is defined as a system that ensures the flow of air from the cleanest parts of the facility to increasingly dirty areas.

Adequate ventilation is defined as sufficient air movement to prevent the development of excessive heat, humidity, and condensation.

General

Ideally each processing area will have an individual dedicated ventilation system with a slightly positive flow to an adjacent area that is not as clean.

Airflow will be monitored on a regular basis.

Effective corrective actions will be instituted to deal with any identified deviations.

Refrigerated Rooms and Coolers

There will be adequate positive air flow from refrigerated processing areas and coolers through to the kill floor.

Note: There should only be minimal ventilation of refrigerated rooms during processing but high volume air exchange during sanitation operations.

Forced air exchange is not required for freezers because the movement of facility personnel and product in and out of the room provides sufficient air exchange.

Kill Floor

Air will move through the kill floor in sufficient volumes and in the proper direction.

Note: Exhaust vents should be located in the sticking, scalding, and washing areas. Intake air must originate from a cleaner area of the plant. This placement will insure that air enters the cleanest part of the kill floor and exhausts from the dirtiest part.

For the kill floor, a sufficient volume of air is defined as the amount required to prevent condensation from forming on the ceiling, walls or equipment. The volume of air needed will vary from 4 to 15 room air changes per hour depending on the type of slaughter process and the number of animals being handled. Scalding operations usually require a higher rate of exchange.

Equipment producing high levels of heat and moisture (e.g. scald tanks, shrink tunnels, smoke houses, water bath cookers) should be directly vented whenever possible.

Regardless of the volume of air required a detectable positive air flow from the cleaner areas of the plant to the kill floor should be evident at all times.

Bathrooms

Bathrooms will be equipped with exhaust fans with capacities in accordance with the Alberta building code.

Note: Relying on windows for proper ventilation of bathrooms is not acceptable.

The commonly recommended minimum air movement requirement for bathrooms is 50 cubic feet per minute (cfm) for each facility unit (toilet & sink)

Air flow from the bathroom to other parts of the facility is not acceptable.

Lunch Rooms and Offices

It is recommended that lunch rooms and offices have an air flow of 20 cfm per person.

Note: This recommendation may vary between municipal authorities.

Inedible &/or Hide Rooms

There will be positive air flow from these rooms to the outside of the facility.

Note: Detectable air flow and air exchange must be evident in refrigerated inedible rooms.

Corrals

Corrals will be designed and maintained in a manner that will not compromise the quality of air entering the facility.

Note: Air coming out of the corrals must be vented away from the facility. Air intakes, for the rest of the facility, must be located well away from the corral exhaust outlets.

Passive convection air flow is a common method of achieving effective air flow in corrals.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Air Flow - General"** will be met when:

1. The facility's written **"Maintenance Procedures"** include the ventilation system.

   Note: These procedures must make reference to the frequency of maintenance and inspection.

2. All components of the ventilation system are maintained, cleaned and sanitized regularly.

   Note: Maintenance and cleaning records may be shown on any of the following documents:

   a) **"Sanitation Schedule"**;

   b) **"Internal Premises Inspection Records"**;

   c) **"Maintenance Schedules"**;

   d) **"Maintenance Records"**

3. Air flow direction is monitored and recorded.

   Note: Monitoring can be recorded in the **"Internal Premises Inspection Record"**.

4. On site observations demonstrate that:

   a) ventilation is appropriate in volume, direction of flow, location, screening, and filtering as necessary;

   b) air flow is directed from cleaner to dirtier areas.

      Note: This is particularly important in ready to eat areas.

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval
02-G-04 Air Flow & Humidity Control
02-H- 01Windows
02-H-02 Air Intakes
02-H-03 Vents, Filters & Ducts
03-A-02 Internal Premises Inspection
03-C-04 Preventative Maintenance Procedures - Records of
03-E-04 Sanitation Schedule
12-A-02 Ventilation Requirements

SUBJECT: Lighting Intensity	02-I-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18(e) & 20 Meat Facility Standards (MFS) Section A.2.2.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Proper lighting of a "Licensed Meat Facility" (facility) is essential to ensure that inspectors and facility personnel can perform their tasks efficiently, safely and with minimum stress.

Lighting intensity must be sufficient to ensure that contamination is readily visible.

Lighting in areas where meat is inspected must be free of shadows and glare and must not distort the color of the meat.

Lighting intensity should be monitored on a regular schedule to ensure that proper intensities are provided.

Note: Intensity requirements will vary from area to area in the facility.

OBJECTIVE/OUTCOME

Lighting will be provided from natural or artificial sources, or a combination of both.

Note: Natural light must be provided by means of an acceptable transparent, or semi-transparent, material.

Lighting in all areas of the facility will be adequate for the activities conducted in each area.

Note: The following "Minimum Levels of Illumination" are considered to be "Common Industry Practice". These levels are also recommended by the CFIA (Canadian Food Inspection Agency).

The lux is the international unit of illumination. One lux is the amount of illumination received by a surface at a distance of 1 meter from a light source whose intensity is taken as unity. It equals 0.0929 foot candles or 1 lumen per square meter.

540 lux

Recommended for:

a) post-mortem inspection areas;
b) returned product examination areas;
c) ante-mortem and suspect pen inspection areas

Special attention must be given to the amount and direction of lighting in inspection areas to prevent glare while providing the required maximum illumination.

220 lux

Recommended for:

a) kill floor for the dressing of carcasses;
b) meat processing, packaging and labeling areas

110 lux

Recommended for:

a) storage areas including all areas where meat products and/or ingredients are stored in dry storage, under refrigeration, or in freezers;

b) all other rooms and areas such as maintenance closets where no meat products are stored

The light should have a minimum color rendering index (CRI) value of 85 to ensure that there is no alteration of the color, or any other characteristics of animals, carcasses, meat products or ingredients.

Note: The CRI is a photometry term which describes the effect of a light source on the color appearance of objects compared to a reference source. The CRI serves as a quality distinction between light sources emitting light of the same color.

The highest possible CRI is 100. Typical cool white fluorescent lamps have a CRI of 62. Lamps with rare-earth phosphors are available with a CRI of 80 and above.

Fixtures will be properly shielded to eliminate shadows and glare.

Note: It is recommended that light shields have an angle of at least 25^0 as measured from the floor. 45^0 is the preferred angle.

Light intensity will be monitored regularly.

Note: The intensity must be measured at the lowest inspection point, lowest working surface level, or lowest level of exposed product storage (depending on the area).

Where none of the aforementioned conditions apply the intensity must be measured 700 mm (approximately 2 feet, 4 inches) from floor.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for "**Lighting Intensity"** will be met when:

1. Up-to-date written **"Lux Measurement Procedures"** are on file.

   Note: These procedures must contain but are not limited to:

   a) how lux measurements will be performed;

   b) where lux measurements will be taken;

   c) minimum acceptable lux levels for each room or area

2. Calibrated and up-to-date "**Lux Measurement Records"** are on file.

   Note: These records must demonstrate that lux deficiencies are identified and corrected in a timely manner.

3. A functional, calibrated light meter is used to make the lux measurements.
4. On site observation and observation of lux measurements demonstrate that the intensity of lighting:

   a) meets minimum recommended levels;

   b) does not distort the normal color of meat products

RELATED SECTIONS OF TIPM

02-I-02 Lights - Shatter Protection

03-A-05 Lighting Intensity Measurement Records

SUBJECT: Lights - Shatter Protection	02-I-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18(e) Meat Facility Standards (MFS) Section A.2.2.2	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

There are a number of reasons why light bulbs can get broken, in a "Licensed Meat Facility" (facility) including extremes in temperature, direct contact by personnel or equipment, etc. The presence of glass shards, from broken light fixtures, in meat, or meat products, is a significant food safety hazard.

Accumulations of dust, dirt and insects in and around lights and light fixture are also food safety issues.

Efforts must be taken to ensure that product is protected from these types of contamination at all times.

Note: Two effective ways of providing protection are to:

a) only use lights, or light fixtures, that are made of unbreakable material;

b) cover breakable lights, or fixtures, with an unbreakable material.

To provide adequate protection, of meat and meat products, protective covers must completely enclose breakable bulbs. This ensures that:

a) no broken glass will fall into meat products;

b) accumulations of dirt, or insects, don't pose a contamination hazard

Regular cleaning of lights, and light fixtures, is very important in protecting meat and meat products from contamination.

OBJECTIVE/OUTCOME

All light bulbs and light fixtures will be an unbreakable safety type or they will be enclosed in a protective cover.

Note: This is of particular importance wherever there is a risk of glass, from broken bulbs, or fixtures, getting into meat, or meat products. This hazard is greatest in rooms, or areas, where carcasses, parts of carcasses, meat products, ingredients, or packaging materials, are exposed.

Protective light covers will be solid and fully enclose any breakable light bulbs.

Note: The use of wire, or metal, cages for this purpose is not acceptable.

Protective light covers will be designed for easy and effective cleaning.

Records will show that lights and light covers are regularly scheduled for cleaning.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Lights - Shatter Protection"** will be met when:

1. The facility's written **"Internal Premises Inspection Procedures"** include lights and light fixtures.

   Note: These procedures must contain a section on evaluating the condition of lights and light covers.

2. The facility's **"Written Sanitation Procedures"** include lights and light fixtures.

   Note: These procedures should include the requirement to record when regular cleaning of lights and light fixtures took place.

3. The facility's **"Internal Premises Inspection Records"**, or **"Maintenance Records"**, include lights and light fixtures.

   Note: These records should verify that issues with lights, or light covers, have been recorded and appropriate corrective action was taken, as required, to correct any issues.

4. On site observations demonstrate that:

   a) lights and light fixtures, in processing and storage rooms are made of shatterproof material, **or**

   b) they are completely enclosed by appropriate shatterproof covers **and**

   c) all lights and light fixtures are easy to clean **and**

   d) they are being maintained in a sanitary manner.

RELATED SECTIONS OF TIPM

03-A-02 Internal Premises Inspection

03-E-03 Sanitation Procedures

03-E-04 Sanitation Schedule

SUBJECT: Drains	02-J-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections A.2.1.4, 2.4.1	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

All fluid waste from a "Licensed Meat Facility" (facility) must be disposed of in a manner that ensures that there is no threat of contamination of meat, meat products, or water used for processing meat products.

To ensure efficient removal of waste water it is essential that most rooms but particularly processing and storage areas be provided with drains to facilitate continuous disposal of dirty, or used, water.

Water disposal systems have to be properly designed to ensure that there is sufficient capacity to efficiently handle all fluid wastes produced in the plant.

Note: It is particularly important that floors slope uniformly, to drain inlets, without any low areas where liquids could collect.

OBJECTIVE/OUTCOME

Drains will be of sufficient number, size and location to ensure that drainage in all areas of the facility is adequate for the activities performed in that area.

Note: Adequate drainage means that there will be a sufficient number of appropriately sized and located drains.

While the number, size and location of drains and drain inlets depends on the nature of the operation the following general rules apply:

a) there should be one drain inlet for every 40 square meters of floor space;

b) there should be a slope of at least 2 cm per meter in all drain lines;

c) drain lines should not have an inside diameter of at least 10 cm;

d) inlets should be at least 300 X 300 mm with a minimum free area of 30% in areas where significant amounts of water is being discharged during operations or sanitation procedures

Smaller drain inlets can be used in areas such as coolers for fully packaged products, spice preparation rooms, or processing areas where water is not used for cleaning.

Floor drains are **not recommended** in areas used **for dry goods** storage, or freezers.

All floor and hub drains will be:

1. deep-seal trapped;
2. equipped with effective rodent screens **and**
3. drain lines will be properly vented to the outside **and**
4. drain cover apertures will be a minimum size of 40 square millimeters.

Where several drainage lines discharge into a common trunk line, the trunk line will be large enough to efficiently handle the fluids discharged into it.

Overhead drain lines will not pose a contamination threat to meat, meat products, packaging materials, or the processing environment.

Discharge water, from equipment, will be drained directly.

Note: This is done to prevent flooding of adjacent areas.

Ice machines and attached storage bins, and refrigeration coils require traps to prevent flow of air from the drain system into the equipment, and an air brake (gap) of 25 mm to prevent backflow, siphoning, or capillary migration, of bacteria into the units.

Sloped trench drains, if used in the facility, will be properly constructed and maintained.

Note: Trench drains should have the following characteristics:

a) it must be possible to visually inspect all surfaces of the drain without the use of any tools;

b) internal corners must be coved to a minimum radius of 6 mm (1/4 inch);

c) the **depth** of the drain **will not exceed** its **width**;

d) the width of the trench drain opening, at floor level, will be equal to, or greater than, its width at the bottom along its entire course;

e) the drain will be covered with removable grated covers that are no longer than 1,200 mm

In many instances it will be necessary to provide a continuous flow of water within the trench drain channel to remove heavier waste products.

Permanent structures or equipment will not be placed over trench drains at any point along their course.

Trench drains will not run through a wall.

Note: It is permissible for a trench drain to pass through a wall providing the opening in the wall is equivalent in size to a pedestrian door.

There will be complete separation of human waste effluent from all other waste effluent.

Note: Drainage from toilets, urinals, and hand wash sinks in washrooms must be completely separate from other sewage lines to a point outside of the facility.

Under no circumstances will toilets, urinals, or hand wash sinks be allowed to empty into a process water catch basin, or grease interceptor.

Drainage from areas such as boiler rooms, mechanical rooms, workshops, or battery rooms, may drain the human effluent system.

In new facilities, or in facilities undergoing renovations, consideration should be given to designing the sewage system so that effluent from the live animal receiving, animal holding, inedible product handling areas and evisceration rooms are also completely separate from other effluent drainage systems so that there is no risk of contaminating edible meat product handling and storage areas.

Note: Back flow valves are not recommended as a sole means of preventing contamination because they require regular cleaning and maintenance to be effective.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Drains"** will be met when:

1. The facility's written **"Internal Premises Inspection Procedures"** include drains.

   Note: These procedures must contain a section on evaluating the condition of lights and light covers.

2. The facility's **"Written Sanitation Procedures"** include drainage components.

3. The facility's **"Internal Premises Inspection Records"**, or **"Maintenance Records"** and **"Sanitation - Pre-operational Records"**, include drains.

   Note: These records should verify that issues with drains have been recorded and appropriate corrective action was taken, as required, to correct any issues.

4. On site observations demonstrate that all drains are appropriately:

   a) sized;

   b) located;

   c) screened where required

5. A copy of current blueprints is on file, at the facility, including blueprints, or schematics that reflect any proposed, current, or recently completed renovation.

   Note: This is only a requirement for new, or recently renovated, facilities.

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval
02-C-06 Construction - Floors & Walls
02-J-02 Sewage - Handling of
02-J-03 Hand Washing Facilities
03-A-02 Internal Premises Inspection
03-A-04 Plumbing Preventative Maintenance
03-C-04 Preventative Maintenance Procedures - Records of
03-E-05 Sanitation Records - Pre-operational Inspections
12-B-03 Floors - Safety of

SUBJECT: Sewage - Handling of	02-J-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 Meat Facility Standards (MFS) Section A.2.4.1	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Sewage waste must not be allowed to accumulate because of the following hazards:

1. Development of objectionable odors.
2. Attraction of insects and vermin.

A municipal sewage system is the most effective way of disposing of sewage but unfortunately not all plants have access to one.

Private sewage disposal systems can be used providing they are:

1. Approved by Alberta Environment.
2. Adequate to handle waste from the “Licensed Meat Facility” (facility).

Note: Private sewage disposal systems will be a septic or a lagoon system.

Following are a few comments on private sewage disposal systems.

Septic systems:

1. Are comprised of a septic tank and a disposal field.
2. Are generally restricted for use in facilities that kill less than 10 beef animals once or twice a week
3. Are only effective when all blood and fats are removed from the waste water.
4. Can only handle relatively small volumes of sewage in their disposal fields

Lagoons

1. Lagoons are the most effective private sewage system for the handling of large volumes of sewage.
2. All of the sewage waste can be discharged directly into the lagoon either with a “Direct Discharge System” or a “Split Discharge System”.

   Note: In a “Direct Discharge System” the sewage is discharged directly into the lagoon while in the “Split System” all human waste is fully treated in a septic tank before the effluent is discharged into the lagoon.

   Although a “Split Discharge System” is more expensive it effectively reduces the amount of non-digestible products like paper and kitchen waste that reach the lagoon.
3. A leak detection system, such as an observation well must be in place.

4. A land disposal site for spreading, or irrigating, effluent is required.

   Note: A land disposal site is required because, in most instances, evaporation won't keep up with the accumulation of waste materials in the lagoon.

5. An aeration system may also be needed.

   Note: Aeration systems aid in the digestion of solids and the reduction of odors.

Regardless of what system is used it is important that an effective method of separating organic matter from plant effluent be implemented.

Note: Common methods of separation include the use of:

a) catch basins;

b) grease traps, **or**

c) interceptors

These items, which are designed to remove solid materials and fats from fluid wastes, require constant management to prevent contamination of the plant. For example, effluent in catch basins must be skimmed regularly to remove organic matter while it is still in a fresh state.

OBJECTIVE/OUTCOME

General

The facility will be equipped to ensure prompt removal of sewage waste from the premises.

Note: Under some systems there may be intermediate storage of effluent. These systems must ensure sanitary handling and storage of sewage wastes until such time as it is entirely removed from the premises.

Effluent disposal methods will meet all municipal and provincial government requirements.

Note: The Meat Inspection Branch, of Alberta Agriculture and Rural Development, has the authority to request confirmation, by letter, that appropriate authorities (e.g. Alberta Environment) consider the existing, or proposed sewage systems to be acceptable.

Catch basins, grease traps, or interceptors will be isolated from any area where carcasses are dressed, or meat products are processed, or stored.

Note: The purpose of these devices is to separate solid matter from effluent,

Municipal Sewage Systems

If the facility is connected to a municipal sewage system operations will be designed to minimize the effect, of sewage from the facility, on the municipal system.

Note: The facility should do an effective job of collecting all animal waste materials such as blood, hair, meat scraps, fats, paunch waste, etc. to the point where most of the sewage discharged into the municipal system comes primarily from water used to wash down the facility.

There should also be a balance between the amount and types of chemicals required for effective cleaning, of the facility, versus the stress of excessive chemicals on municipal or private sewage systems. Effective use of chemicals and cleaning agents is also an economic benefit.

Private Sewage Systems

Facilities using a private sewage system will have a **permit** from **Alberta Environment**.

Note: A "Permit" signifies the approval of Alberta Environment. Permits will only be granted once there is assurance that the system meets all environmental standards.

The matter of infiltration is an example of an environmental requirement for lagoons. Under current standards infiltration must be shown to be less than 3 x 10^{-9} ft./sec (1x10^{-7} cm/sec). Designing and building a lagoon that will meet this standard requires soil testing and professional interpretation of the design.

Alberta Environment also expects the system to be able to handle anticipated peak volumes of sewage including human and animal wastes.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for "**Sewage - Handling of"** will be met when:

1. Written **"Plumbing Preventative Maintenance Procedures"** are on file.

   Note: These procedures will include but are not limited to a list of:

   a) all plumbing system components that require maintenance;

   b) maintenance procedures, or activities, required;

   c) assigned frequencies for maintenance;

   d) facility personnel responsible for maintenance

2. **"Service/Maintenance Records"** are on file at the facility.

   Note: These records must be comprehensive and contain details of all plumbing maintenance activities performed.

3. On site observation of the **"Service/Maintenance Records"**, demonstrate that plumbing deficiencies are:

   a) identified;

   b) prioritized (as required);

   c) corrected in a timely manner

4. On site observations demonstrate that sewage disposal is appropriate for the requirements of the facility.

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval
02-J-01 Drains
02-J-03 Hand-washing Facilities
03-A-04 Plumbing Preventative Maintenance
03-C-04 Preventative Maintenance Procedures – Records of

SUBJECT: Hand Washing Facilities	02-J-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section A.2.1.1	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Dirty hands, particularly those of "Licensed Meat Facility" (facility) personnel but also of others, e.g. visitors, are a significant potential source of contamination for carcasses and meat products.

Dirty hands are a **food safety hazard**.

Many micro-organisms (bacteria, molds, fungi, etc.) that are capable of causing disease, or the spoilage of meat, are present on dirty hands.

Note: Micro-organisms are living organisms thus the introduction of even small numbers can have a significant impact on food safety due to subsequent growth and multiplication.

For these reasons hand-washing facilities are a vital part of the facility's sanitation and operational hygiene procedures.

Note: These procedures are directed towards limiting the contamination of meat and meat products with micro-organisms.

Hand washing facilities must be located close to all potential sources of hand contamination.

Note: Providing convenient hand washing locations also encourages frequent hand washing.

Hand operated tap handles become highly contaminated from frequent contact with dirty hands. For this reason the source of water should be controlled remotely (e.g. foot, or knee, operated).

Note: It doesn't do any good for a person to wash their hands then re-contaminate them by turning off a dirty tap.

It is impossible to remove all micro-organisms, from hands, by washing. Ordinary soap will only remove superficial micro-organisms.

Note: Cationic detergents, which have germicidal properties, are generally required to remove, or inactivate deeper, resident microorganisms.

Individual single use towels should be provided at all hand washing stations.

Note: The use of roller and multi-use towels presents a high risk of re-contaminating and cross-contaminating clean hands.

OBJECTIVE/OUTCOME

Suitably designed and equipped hand washing facilities will be strategically located throughout the facility.

Note: To encourage their frequent use, hand washing facilities should be located where they are readily accessible to facility personnel that should be using them.

Strategic locations that require hand washing facilities include, but are not restricted to:

a) entrances into meat processing and handling rooms;

b) adjacent to toilets;

c) in positions where personnel must pass them when returning to meat handling areas

There will be sufficient hand-washing facilities to accommodate the number of people working in the facility.

Note: It is "Common Industry Practice" to have the following number of hand washing facilities, or stations:

a) one for five, or fewer, facility personnel;

b) two for 6-10 personnel;

c) three for 11-15;

d) four for 16-20 and

e) when there are more than 20 personnel there should be a minimum of four hand washing facilities, or stations plus an additional one for every 15 additional personnel (i.e. 5 basins for 21-35 personnel, etc)

Multi-station basins of circular, or rectangular, design may be provided instead of single basins.

All hand-washing facilities, or stations will:

1. Have hot and cold running water at an adequate flow rate.

   Note: To melt fat and dissolve other solids a water temperature range of 46^0 C (115^0 F) to 52^0 C (125^0 F) is required.

   The pressure contributing to the mass flow rate must be adequate for efficient cleansing.

2. Be equipped with an approved liquid or other type of dispensable soap.

   Note: **Bars** of soap are **not acceptable**.

   Chemical hand dips, when provided, will be adjacent to hand washing facilities, or stations.

3. Have adjacent paper towel dispensers and a suitable receptacle for used towels

   Note: Towel dispensers must be kept well stocked, with single service paper towels, during all times of production.

   Reusable and roller-type **cloth towels** are **unacceptable**.

   There must be a used towel receptacle for each hand washing station.

4. Directly drained.

   Note: A directly drained hand washing facility is one where the drain is connected to a pipe leading directly into a floor drain below the basin.

   This requirement applies to all meat processing areas with the exception of the kill floor.

5. Designed to be operated in a hands free manner.

There **will not** be any storage of materials in, or near, hand washing facilities, or stations.

Note: The practice of storing materials in, or near, hand washing facilities is not allowed because it may obstruct access to the station and/or introduce potentially unsanitary objects.

Hand washing notices will be posted in prominent places throughout the facility.

Note: Lunchrooms, washrooms and change rooms are examples of important places where hand washing notices should be located.

These notices should remind and instruct facility personnel that are engaged in any meat handling activities such as dressing carcasses, processing, packaging, labeling, storing, etc. about the importance of frequent hand washing.

It is **essential** for **notices** be posted in **bathrooms.**

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Hand-washing Facilities"** will be met when on site observations demonstrate that:

1. The number and placement of hand washing facilities is adequate.
2. All hand washing facilities are in good working order.
3. Appropriate supplies are on hand at all hand washing facilities.
4. All hand washing facilities have "hands free" operational capabilities.
5. Hand washing notices have been posted, in appropriate locations.
6. Hand washing facilities, in processing areas, are directly drained.

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval

03-D-03 Hand Washing & Gloves

SUBJECT: Wash Rooms	02-K-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section A.3.1 (1 & 2)	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Poor washroom (toilet) **hygiene**, by "Licensed Meat Facility" (facility) personnel, is an **extreme food safety hazard.**

There is a great potential for the transfer of human, disease causing, micro-organisms (bacteria, fungi, molds, etc.) between individual facility personnel and subsequently to meat and meat products. For this reason every effort must be made to ensure that clean, fully functional washrooms are available for the convenient use of every employee.

Washrooms must be constructed and designed so that they are completely separate from production and processing areas.

Note: Complete physical separation can be accomplished with solid, full-height walls, or partitions, and solid, self- closing doors that completely fill the opening of the doorway when closed.

Washrooms must be kept clean and well ventilated.

Note: Both the design and the materials used for construction should promote easy cleaning and sanitizing.

Washroom supplies must be readily available for facility personnel at all times.

OBJECTIVE/OUTCOME

All washrooms will be:

1. Completely separate from any processing areas;

   Note: Complete separation includes the requirement that washrooms don't open directly into a processing area.

   Doors should be solid, self-closing and should completely fill the door opening when closed. The only exception, for solid doors, is an allowance for a louvered section, in the lower panel, for ventilation purposes.

2. Separate from dressing rooms;

   Note: Bathrooms and adjacent dressing rooms should be separated by full length solid partitions and doors.

3. Sufficient in size and number;

   Note: The number of washrooms required varies with the number of personnel. Requirements will vary from province to province. In Alberta the following standards apply:

a) 1 toilet for every 1 - 9 of the same sex;

b) 2 toilets for every 10 - 24 of the same sex;

c) 3 toilets for every 25 - 49 of the same sex;

d) 5 toilets for every 50 - 100 of the same sex

Beyond 100 one additional toilet is required for every 30 additional individuals of the same sex.

In washrooms for men, a urinal may be substituted for a toilet. If this is done the total number of toilets, as specified above, cannot be reduced by more than one third.

4. Properly illuminated;

   Note: It is "Common Industry Practice" to have a minimum lighting intensity of 110 Lux.

5. Properly ventilated;

   Note: Bathrooms must be equipped with exhaust fans. Open windows are not an acceptable way to ventilate a bathroom.

   The minimum requirement for bathroom ventilation is 50 cubic feet per minute for each unit (toilet). This requirement may vary between municipal authorities.

6. Properly heated;

   Note: Bathrooms should be maintained at a minimum temperature of 18^0 C.

7. Maintained in a sanitary condition;

   Note: To facilitate sanitary maintenance, floors and walls must be made of smooth hard impervious material. This material should be used up to a height of 1200 mm on the walls. It is recommended that wall and floor junctions be coved.

   Floors must be properly drained.

8. Fully and properly equipped at all times during production;

   Note: Fully and properly equipped includes:

   a) hand washing facilities;

   b) suitable soap dispensers;

   c) approved soap;

   d) paper towel dispensers;

   e) single use paper towels;

   f) receptacles for used towels

9. Strategically located.

   Note: Bathrooms and hand washing facilities should be located so facility personnel have to walk past the facilities when returning to a meat handling area.

Washrooms will **not** be **used for** the **storage** of clean clothing, or facility clothing that is currently in use.

Showers will be available for the use of facility personnel.

Note: There must be separate shower facilities for male and female personnel.

Showers are particularly important for facility personnel that are involved in the slaughter process. They are also desirable personnel involved in meat processing.

It is acceptable for shower facilities to be located in, or adjacent to, locker rooms.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Washrooms"** will be met when:

1. Up-to-date written **"Sanitation Procedures"** have been developed for washrooms.

   Note: These procedures should be specific for the facility. They should be listed in detail and step by step.

2. The facility's written **"Internal Premises Inspection Procedures**" include washrooms.

   Note: These procedures should contain a section for evaluating the general condition and upkeep of washrooms.

3. **"Internal Premises Inspection Records"** that include washrooms are on file.

   Note: These records should show that appropriate corrective actions have been taken, as necessary, to address washroom deficiencies detected.

4. The cleanliness and functionality of washrooms is monitored and documented**.**

   Note: This could be done on the "**Sanitation Schedule"** or the **"Sanitation (Pre-Operational) Records"**.

5. On site observations demonstrate that washrooms are:

   a) sufficient in number;

   b) appropriately located;

   c) properly supplied;

   d) maintained in a good condition and

   e) hand washing notices are posted in all washrooms

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval
02-C-04 Construction - Suitability of Construction Materials - General
02-J-03 Hand Washing Facilities
03-A-01 Product, Personnel & Equipment Flow
03-A-02 Internal Premises Inspection
03-E-03 Sanitation Procedures
03-E-04 Sanitation Schedule

SUBJECT: Lunch & Locker Rooms	02-K-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section A.3.1.2	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Locker and/or change rooms and lunch rooms (collectively referred to, along with washrooms, as "Personnel Welfare Facilities"), in a "Licensed Meat Facility" (facility) are potential sources of contamination for meat and meat products.

Complete separation of these facilities from areas where meat, or meat products, are handled reduces the chance of contamination.

Note: Separation is generally accomplished by:

a) solid, full-height walls, or partitions;

b) solid, self-closing doors that fill doorway openings when closed;

c) ensuring that they don't open directly into any room, or area, where meat, or meat products, are produced, refrigerated, processed, packaged, stored or otherwise handled.

Lunch rooms may be part of the locker rooms or they may be completely separate.

Note: Lunch rooms must not be located in meat processing areas because this sets up the following hazards:

a) contamination of meat products;

b) transmission of zoonotic diseases from carcasses, or raw product, to facility personnel;

c) unnecessary exposure of facility personnel to zoonotic diseases

Showers may be located in the locker rooms or washrooms.

Note: Locker rooms with shower areas must be completely separated from lunch rooms.

Lunch and locker rooms must have adequate:

1. Lighting
2. Heating
3. Ventilation
4. Drainage
5. Waste disposal

Lockers, for clothing of facility personnel, should be located above floor level.

Note: Lockers must be supported in a manner that facilitates easy and complete cleaning underneath in order to ensure that vermin (mice, insects, etc.) don't find a suitable environment.

Soiled and contaminated protective clothing, or equipment, must not be taken into locker or lunch rooms because this practice provides too much opportunity for cross contamination.

OBJECTIVE/OUTCOME

There will be adequate and appropriate lunch and locker room facilities for facility personnel.

Note: To be considered adequate and appropriate there must be:

a) reasonable space to accommodate the number of facility personnel;

b) separate dressing room areas and showers for male and female personnel

New facilities should have separate lunch, locker and washrooms for facility personnel that handle live animals, up to and including stunning, and those that exclusively handle inedible material from other facility personnel.

Lunch and locker rooms will be:

1. Properly constructed.

   Note: While basic construction requirements need to be met greater tolerance is given in regard to materials, which may be used for lunch and locker rooms. Properly constructed walls and ceilings of cement board, cement block, gypsum board, smooth finished plywood or fiberglass-reinforced panels are acceptable.

   Unless showers are located in the locker room it is not necessary to have floor drains in locker and lunch rooms. The finish of the floor must facilitate complete and thorough cleaning particularly when there are no floor drains.

   Locker rooms will be separate from washrooms and if they are adjacent they will be divided by full walls and doors.

   Lockers will be properly ventilated and constructed of corrosion resistant materials.

   To ensure that debris doesn't accumulate and create an environment suitable for the development of vermin there should be a 45^0 slope to the top of the locker and a floor clearance of not less than 3.5 cm (1.5 inches).

   In lieu of lockers, clothes racks with overhead hat racks and suspended boot racks, constructed of corrosion resistant material and providing 3.5-4.0 cm (1.5-1.6 inches) of floor clearance can be used.

2. Separate from any meat processing area.

   Note: Separation requires that these rooms open into a hallway rather than directly into a meat processing area.

   It is also a requirement that lunch rooms not open directly to the outside.

3. Properly illuminated.

   Note: It is "Common Industry Practice" to use minimum illumination of 110 Lux.

4. Properly ventilated.

5. Properly heated.

   Note: These areas should be kept at a minimum temperature of 18^0 C.

6. Maintained in a sanitary condition.

   Note: Individual lockers must also be maintained in a sanitary condition.

Operational controls regarding proper conduct of facility personnel, in locker rooms, will be established and should include but are not restricted to the following:

1. Prohibiting the wearing of protective clothing in the lunch room including putting this type of clothing on and taking it off.
2. Prohibiting the wearing of soiled clothing, or clothing currently in use at the facility, in the lunch room.
3. Requiring the storage of clean protective clothing in an enclosed structure such as a cabinet.

Note: Operational controls must have written and implemented procedures.

Showers will be available for the use of facility personnel.

Note: There must be separate shower facilities for male and female personnel.

Showers are particularly important for facility personnel that are involved in the slaughter process. They are also desirable personnel involved in meat processing.

It is acceptable for shower facilities to be located in, or adjacent to, toilet facilities.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for "**Lunch and Locker Rooms"** will be met when:

1. Up-to-date written **"Sanitation Procedures"** have been developed for lunch and locker rooms.

   Note: These procedures should be specific for the facility. They should be listed in detail and step by step.

2. The facility's written **"Internal Premises Inspection Procedures**" include lunch and locker rooms.

   Note: These procedures should contain a section for evaluating the general condition and upkeep of lunch and locker rooms.

3. **"Internal Premises Inspection Records"** that include lunch and locker rooms are on file.

   Note: These records should show that appropriate corrective actions have been taken, as necessary, to address lunch and locker room deficiencies detected.

4. The cleanliness and functionality of lunch and locker rooms is monitored and documented**.**

   Note: This could be done on the "**Sanitation Schedule"** or the **"Sanitation (Pre-Operational) Records"**.

5. On site observations demonstrate that operational controls are in effect and written rules have been developed relating to general behavior of facility personnel and rules of hygiene for the use of lunch and locker rooms.

   Note: These could be covered in an overall **"Hygiene and Health Policy".**

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval
02-C-04 Construction - Suitability of Materials - General
02-J-03 Hand Washing Facilities
03-A-01 Product, Personnel & Equipment Flow
03-A-02 Internal Premises Inspection
03-E-03 Sanitation Procedures
03-E-04 Sanitation Schedule

SUBJECT: Hand Sanitizers & Boot Baths	02-K-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections A.2.1.8, E.1.1.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Meat and meat products must be protected from contamination, with micro-organisms (bacteria, fungi, molds, etc.), at all times.

Micro-organisms that are of particular importance, in a "Licensed Meat Facility" (facility) are those capable of causing disease or spoilage of meat, or meat products.

Two important sources of micro-organisms are the hands and footwear of facility personnel.

Note: The number of micro-organisms, on hands and boots, will increase when duties require personnel, work in, or move through, dirtier areas.

Personnel working in an area where meat, or meat products, are processed, or handled, have to maintain a high degree of personal cleanliness.

Note: Of particular importance are areas where facility personnel may come into direct contact with microbiologically sensitive meat products (ready-to-eat meat products).

Two important components of personal hygiene, that are relevant to this document, are the use of hand sanitizers and foot baths for sanitizing footwear.

Note: Footwear needs to be suitable for the work being done. When moving from dirtier to cleaner areas, of the facility, it is essential for foot wear to be washed and sanitized. Generally this requires the wearing of rubber footwear.

Chemicals used for sanitizing hands and footwear must be safe for use in the facility.

Note: Only approved hand sanitizing and boot dip chemicals can be used.

OBJECTIVE/OUTCOME

Hand sanitizing stations will be used in addition to hand washing facilities.

Note: Hand sanitizing stations are most important in areas where facility personnel come into direct contact with microbiologically sensitive products such as ready-to- eat meat products.

Only approved hand sanitizing and boot bath chemicals will be used.

Note: Information on approved hand sanitizing and boot bath chemicals can be found in "The Reference Listing of Accepted Construction Materials, Packaging Materials and Non-Food Chemical Products".

This Canadian Food Inspection Agency (CFIA) document can be accessed electronically at:
http://www.inspection.gc.ca/english/ppc/reference/cone.shtml

Hand dips, or hand sanitizing stations will be located where there is no chance of direct contamination of meat, meat products, or surfaces that come into contact with meat, or meat products.

Note: Several different types of hand sanitizers are available including dips, gels, sprays, etc.

Disposable **rubber gloves** are not sterile thus **are not a substitute for hand sanitizers**.

Rubber gloves should be treated with a sanitizer before meat products are handled.

Boot baths will be located at points where personnel have to move from cleaner to dirtier parts of the facility, then back.

Note: It is essential to have boot baths between inedible, or exterior, areas of the facilities (e.g. livestock holding facilities) and the kill floor.

It is also essential for boot baths to be located between the kill floor and meat processing areas.

Hand sanitizers and boot bath chemical solutions will be replenished frequently.

Note: This is done to ensure that these solutions don't become sources of contamination themselves.

Frequent replenishment is particularly important for boot baths because organic material, such as blood and manure, will rapidly inactivate the chemical agents.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Hand Sanitizers & Boot Baths"** will be met when on site inspections reveal:

1. Written **"Operational Sanitation Procedures"** are on file.

   Note: These procedures should detail the proper use and control of sanitizers and boot bath chemicals including concentration calculations for boot baths.

2. The facility's written **"Hygiene and Health Policy"** includes the proper use of hand sanitizers and boot baths.
3. On site observations demonstrate that:
   a) boot baths are located in areas where there is constant backtracking between dirtier and cleaner parts of the facility;
   b) only approved hand and boot sanitizing chemicals are being used;

      Note: This should be verified by having a **"Chemical Listing"** on file, which documents the approval numbers of the chemicals in use.

   c) records are on file confirming the effectiveness of hand sanitizers and boot bath chemicals

      Note: These records would have information on concentration measurements at specific times, the time of addition, or replacement, of chemicals, etc.

RELATED SECTIONS OF TIPM

02-J-03 Hand Washing Facilities
03-D-01 Health & Hygiene Policy
03-D-02 Cleanliness & Protective Clothing
03-E-03 Sanitation Procedures

SUBJECT: Inspector's Office	02-L-01
REGULATORY REFERENCE AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 18(1)(d) & 70	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Meat Inspection Branch (MIB) Inspectors require adequate facilities to conduct their duties in a timely and efficient manner.

Note: Section 18(1)(d) of AR 42/2003 makes it mandatory for the operator of the "Licensed Meat Facility" (abattoir) to provide suitable office space for MIB Inspectors.

A suitable and conveniently located office is essential for writing reports, recording data and for telecommunications.

Note: The MIB Inspector's office should be located in an area that will minimize any food safety hazards associated with repeated trips into and out of it. It is essential to ensure that the MIB Inspector doesn't have to go outside of the abattoir to gain entry to the office.

Special telecommunication needs include equipment for laptop computers and other information technology equipment.

OBJECTIVE/OUTCOME

An appropriately sized MIB Inspector's office will be in place.

Note: 10 square meters is generally accepted as the minimum requirement for one MIB Inspector.

It is recommended that an additional 1.4 square meters be provided for each additional MIB Inspector.

The office will be for the exclusive use of the MIB Inspector(s).

Note: Restricted use of this space is essential to maintain privacy and confidentiality.

The office will be suitably located.

Note: Ideally the office will be located in the same general area as the other facility offices. Locating the inspector's office in a processing, or operational, area of the facility is not satisfactory.

The office will be equipped with:

1. Appropriate lighting, heating and ventilation;
2. Dedicated phone line(s);

   Note: Sufficient lines are needed to accommodate external telephone, fax, or electronic data communications.

3. Telephone;
4. Lockable metal filing cabinet;

Note: Locked cabinets are needed to ensure the confidentiality of records that are contained within.

5. Lockable metal box;

   Note: This box must be large enough for the storage and security of the meat inspection legends, including stamps, labels, tags and any containers marked with the legend.

   Section 70(1) of AR 42/2003 requires anything with the inspection legend on it to be under control of the MIB Inspector at all times (or the operator (if authorized under section 70(2)). This includes properly securing these items when the MIB Inspector, or operator, leaves the facility.

6. Supply cupboards for items such as stationary;
7. Cabinets, or lockers

   Note: These are for the storage of the MIB Inspector's equipment and supplies. They must be suitably designed to facilitate cleaning and sanitation.

   Facilities for the storage of the MIB Inspector's clothing may be in the office or at another appropriate location in the plant.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Inspector's Office"** will be met when:

1. The facility's written **"Sanitation Procedures"**, include activities relating to the cleaning and sanitizing of the **"MIB Inspector's Office"**.
2. The **"Sanitation Schedule"** has provision for recording the dates that the **"Inspector's Office"** has been cleaned and sanitized.
3. Detailed, written **"Internal Premises Inspection Procedures"**, contain a section for evaluating the general upkeep of **"MIB Inspector's Office"**.
4. Issues related to the **"MIB Inspector's Office"** and corrective actions taken are recorded in the **"Internal Premises Inspection Records".**
5. On site observations demonstrate that an appropriate **"Inspector's Office"** is present.

   Note: An appropriate office will have all of the required elements identified in the previous section.

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval
03-A-01 Product, Personnel & Equipment Flow
03-A-02 Internal Premises Inspection
03-E-03 Sanitation Procedures
03-E-04 Sanitation Schedule

SUBJECT: Inspector's Change Area, Showers & Toilets	02-L-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18(1)(i)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Meat Inspection Branch (MIB) Inspectors require a change area and washroom that is conveniently located in the "Licensed Meat Facility (abattoir).

Note: The change area and washroom must be located so that the MIB Inspector doesn't have to go outside because this would increase the chance of introducing foreign material into the abattoir.

The requirement to provide a change area and washroom, for the MIB Inspector, is not specifically identified in AR42/2003 *Meat Inspection Regulation,* but this requirement has been deemed to have been mandated by the Director of the Regulatory Services Division (RSD) in accordance with section 18(1)(i) of AR 42/2003.

OBJECTIVE/OUTCOME

Appropriate dressing rooms, showers and toilet facilities will be available for the use of "MIB Inspectors".

Note: Newly constructed and/or licensed facilities will be required to have adjoining, separate washrooms and dressing rooms for the exclusive use of "MIB Inspectors".

These facilities will have:

1. One (1) shower for every ten (10) MIB Inspectors.
2. Corrosion resistant lockers or clothes rack(s).

   Note: There should be separate lockers, or racks, for street clothes and working apparel.

3. Appropriate containers for storing dirty work clothing.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the MIB **"Inspector's Change Area, Showers and Toilets"** will be met when:

(1) The facility's written **"Sanitation Procedures"**, include activities relating to the cleaning and sanitizing of **"Inspector Change Area, Showers and Toilets"**.

Note: Facility personnel responsible for cleaning and sanitizing must be identified.

(2) The **"Sanitation Schedule"** has provision for recording the dates that **"Inspector Change Area, Showers and Toilets"** have been cleaned.

(3) Detailed, written **"Internal Premises Inspection Procedures"**, contain a section for evaluating the upkeep of **"Inspector Change Area, Showers and Toilets"**.

(4) **"Internal Premises Inspection Procedures"**, show that issues with **"Inspector Change Area, Showers and Toilets"** are being recorded and that actions have been taken to correct them.

(5) On site observations demonstrate that appropriate showers, change rooms and toilet facilities are available for the use of "MIB Inspectors".

Note: Appropriate facilities must have all of the elements outlined in the previous section of this document.

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval
03-A-01 Product, Personnel & Equipment Flow
03-A-02 Internal Premises Inspection
03-E-03 Sanitation Procedures
03-E-04 Sanitation Schedule

SUBJECT: Inspection Station Requirements - Red Meat Animals	02-L-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 18(1)(e) & 18(1)(i)	**Initial Release** Sept 1, 2009 **Page 1 of 4**

RATIONALE

To ensure the accuracy and completeness of inspection it is essential that Meat Inspection Branch (MIB) Inspectors be provided with adequate workspace in the "Licensed Meat Facility" (abattoir).

Note: Some abattoir requirements are addressed directly by AR 42/2003 while others can be mandated by the Director of the Regulatory Services Division (RSD) in accordance with section 18(1)(i) of AR 42/2003. The requirements outlined in this document, for "Inspection Stations" are deemed to have been mandated by the Director in accordance with sections 18(1)(e) & 18(1)(i).

Adequate space and lighting are two critical elements for an inspection station to be considered suitable.

Note: Lighting is critical in making carcass abnormalities more apparent while space must be sufficient to allow inspection activities to be conducted without hindrance from contact with others, or with equipment.

Inspection station(s) must be strategically located so the MIB Inspector can observe all activities on the kill floor from a distance.

Note: This is necessary so deficiencies in procedures can be observed and corrected as required.

Inspection stations are commonly located close to the cooler entrance to allow the cleanliness of carcasses to be monitored as they enter the cooler.

There can be safety hazards with poorly located inspection stations particularly in high volume facilities.

Note: An example of a safety risk would be the positioning of head and viscera inspection stations in a manner that requires the inspector to cross the kill floor.

To minimize food safety risks adequate hand-washing facilities and sanitizers must be provided in close proximity to the inspection station.

Note: This is required so that hands and/or equipment can be sanitized immediately after coming into contact with contaminated materials.

All inspection station equipment must be made of materials that have smooth impervious surfaces that are free of pits and crevices.

Viscera inspection tables must be manufactured and positioned in a manner that facilitates maintenance and sanitation.

OBJECTIVE/OUTCOME

Facilities and equipment will be available for the exclusive use of "MIB Inspectors" to conduct post-mortem examinations and testing procedures.

Note: These facilities and the equipment in them will be designed, positioned and maintained in a manner that allows MIB Inspectors to complete all inspection and reporting activities in an efficient and accurate manner.

Inspection stations must be constructed and located in a manner that prevents abattoir personnel from impinging upon the inspection area. This can be achieved with sufficient space separation, or by installing a shield, or barrier, providing the barrier is constructed of non-corrosive material and does not interfere with the MIB Inspector's line of sight.

Shields, or barriers, must be of sufficient width and height to provide adequate protection to MIB Inspectors while performing their duties at the work station.

All red meat facilities will have:

1. A general kill floor layout that provides easy, unobstructed and safe access to the inspection station(s).

   Note: The design and layout of inspection stations must take MIB Inspector safety into consideration. Of utmost concern is secure footing. The flooring, in these areas, must not be slippery.

2. Inspection stations equipped with:

   a) conveniently located hand washing facilities;

   b) sanitizer for hands and inspection tools;

      Note: Hot water sanitizers must have a continuous supply of potable water, a continuous overflow, and be capable of maintaining a temperature of not less than 82^0 C.

   c) equipment, such as head racks, tables and trays of sufficient number and type to ensure that the identity of viscera (internal organs) and other parts of a carcass can be maintained until such time as the post-mortem examination has been completed ;

      Note: To ensure proper cleaning and sanitizing inspection station equipment must be made of impervious, smooth, rust resistant material.

      Head racks and the working surface of viscera tables must be at a height that prevents back strain. MIB Inspectors should not have to bend over to examine viscera on, or close to, the floor.

   d) adequate lighting;

      Note: 540 Lux is the minimum requirement.

   e) adequate ventilation;

   f) platforms (optional)

Note: When platforms are present they must be at least 1,220 mm (4 feet) wide. Only single level platforms can be used. Platforms must be stable at all times. Elevated platforms must be equipped with a guard rail.

3. A cooler rail or designated section of a rail, for carcasses that need to be "Held" for further examination and/or test results.

   Note: The designated rail, or section, must be at least one meter away from rails used for approved carcasses.

There will be adequate clearance between the inspection station(s), other rails and areas where equipment such as carts are being moved.

Note: Adequate clearance is required to prevent direct, or indirect, injury to MIB Inspectors, from contact with equipment moving into and through the inspection area. Barriers are an alternative solution when it is not possible to ensure sufficient space between the inspection area and other activity areas.

There will be an appropriate number of inspection stations.

Note: The number and design of facilities and equipment required for a proper post-mortem inspection will depend on the:

a) type (species and class) of food animals slaughtered in the facility;

b) number of animals to be slaughtered;

c) speed of the slaughter line;

d) design of and product flow on the kill floor;

e) type of post-mortem inspection method being used

The number of inspection stations should be kept to a minimum to permit greater efficiency of inspection.

The operator of the abattoir will assume responsibility for ensuring that:

1. The carcass and all of its parts are presented in a manner that allows an effective and efficient post-mortem inspection.
2. All inspection facilities, equipment and utensils are maintained in a sanitary condition, and in good working order.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

"Inspection Station Requirements for Red Meat Animals" will be met when:

1. On site observations demonstrate that a sufficient number of properly equipped inspection stations are present.

   Note: A "properly equipped" inspection station will meet all of the requirements outlined in the previous section.

2. The facility's written **"Sanitation Procedures"**, include activities relating to the cleaning and sanitizing of **"Inspection Stations"**.

   Note: Abattoir personnel responsible for cleaning and sanitizing should be identified.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

3. Accurate facility specific **"Pre-Operational Inspection Records"** are on file.

   Note: These records should include a section that evaluates the suitability and cleanliness of inspection stations before the start of operations each day.

4. Detailed, written **"Internal Premises Inspection Procedures"**, contain a section for evaluating the suitability of construction materials and upkeep of **"Inspection Stations"**.

5. **"Internal Premises Inspection Procedures"**, show that issues with **"Inspection Stations"** are being recorded and that actions have been taken to correct them.

RELATED SECTIONS OF TIPM

02-A-01 Blueprint Submission & Approval
02-I- 01 Lighting Intensity
03-A-01 Product, Personnel & Equipment Flow
03-A-02 Internal Premises Inspection
03-E-03 Sanitation Procedures
03-E-05 Sanitation Records – Pre-operational Inspections
12-B-03 Floors - Safety of

SUBJECT: Inspection Station Requirements - Poultry	02-L-04
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 18(1)(e), 18(1)(i), 40(1)(b) & 40(2)	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

To ensure the accuracy and completeness of inspection it is essential that Meat Inspection Branch (MIB) Inspectors be provided with adequate workspace in the "Licensed Meat Facility" (abattoir).

Note: Some abattoir requirements are addressed directly by AR 42/2003 while others can be mandated by the Director of the Regulatory Services Division (RSD) in accordance with section 18(1)(i) of AR 42/2003. The requirements outlined in this document, for "Inspection Stations" are deemed to have been mandated by the Director in accordance with sections 18(1)(e) & 18(1)(i).

Adequate space and lighting are two critical elements for an inspection station to be considered suitable.

Note: Lighting is critical in making carcass abnormalities more apparent while space must be sufficient to allow inspection activities to be conducted without hindrance from contact with others, or with equipment.

Inspection station(s) must be strategically located so the MIB Inspector can observe all activities on the kill floor from a distance.

Note: This is necessary so deficiencies in procedures can be observed and corrected as required.

To minimize food safety risks adequate hand-washing facilities and sanitizers must be provided in close proximity to the inspection station.

Note: This is required so that hands and/or equipment can be sanitized immediately after coming into contact with contaminated materials.

OBJECTIVE/OUTCOME

Facilities and equipment will be available for the exclusive use of "MIB Inspectors" to conduct post-mortem examinations and testing procedures.

Note: These facilities and the equipment in them will be designed, positioned and maintained in a manner that allows MIB Inspectors to complete all inspection and reporting activities in an efficient and accurate manner.

Inspection stations must be constructed and located in a manner that prevents abattoir personnel from impinging upon the inspection area. This can be achieved with sufficient space separation, or by installing a shield, or barrier, providing the barrier is constructed of non-corrosive material and does not interfere with the MIB Inspector's line of sight.

Shields, or barriers, must be of sufficient width and height to provide adequate protection to MIB Inspectors while performing their duties at the work station.

All poultry abattoirs will have:

1. An evisceration line that is level for the entire length of the inspection station.

2. Non-slip flooring.

   Note: Anti-fatigue mats are highly recommended. When used they must be kept in good repair and constructed of material that is readily cleaned and sanitized. They must also be continuous throughout the entire length of the inspection station to eliminate any tripping hazard.

3. Provision to allow the MIB Inspector to stop and re-start the evisceration line directly, or indirectly.
4. A conveniently located "Held Rack" for retaining carcasses requiring further inspection.

   Note: Poultry held racks are essential to facilitate the separation of condemned and contaminated carcasses. They must also be maintained in a clean and sanitary manner.

   Held racks should also be available at rabbit inspection stations.

5. A satisfactory means of handling condemned materials.

"Low Volume" poultry abattoirs will have:

1. A working space at least 2.4 meters long.

   Note: This space is for the exclusive use of the MIB Inspector and a designated trimmer.

2. Convenient access to a knife sanitizer.

   Note: Hot water sanitizers must have a continuous supply of potable water, a continuous overflow and be capable of being maintained at a temperature of not less than 82^0 C.

3. Safe platforms (if required).

   Note: Only single level platforms can be used. Platforms must be stable at all times. Elevated platforms must be equipped with a guard rail.

4. Lighting intensity of at least 540 lux.

   Note: Lighting intensity is measured at the entrance of the abdominal cavity.

   Lighting must be of sufficient intensity and direction to provide freedom from glare, shadows and color distortion.

"High Volume" poultry abattoirs will have:

1. A minimum of 2000 lux of lighting.

   Note: Light should be measured at the same location as what was recommended for low volume plants and should have the same characteristics.

2. A helper, or trimmer, to remove carcasses from the evisceration line as instructed by the "MIB Inspector".

   Note: The abattoir must supply this individual.

3. Suitable manual, or mechanical, shackle guide bars, or kick-out mechanisms as required.

   Note: This is only required in facilities that have more than one inspection station per line.

There will be an appropriate number of inspection stations.

Note: The number and design of facilities and equipment required for a proper post-mortem inspection will depend on the:

a) type (species and class) of birds being slaughtered;
b) number of birds to be slaughtered;
c) speed of the slaughter line;
d) design of kill floor;
e) product flow;
f) type of post-mortem inspection method being used.

The abattoir operator will assume responsibility for ensuring that:

1. The carcass and all of its parts are presented in a manner that allows an effective and efficient post-mortem inspection.
2. All inspection facilities, equipment and utensils are maintained in a sanitary condition, and in good working order.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

"Inspection Station Requirements for Poultry" will be met when:

1. On site observations demonstrate that a sufficient number of properly equipped inspection stations are present.

   Note: A "properly equipped" inspection station will meet all of the requirements outlined in the previous section.

2. The facility's written **"Sanitation Procedures"**, include activities relating to the cleaning and sanitizing of **"Inspection Stations"**.

   Note: Abattoir personnel responsible for cleaning and sanitizing should be identified.

3. Calibrated facility specific **"Pre-Operational Inspection Records"** are on file.

   Note: These records should include a section that evaluates the suitability and cleanliness of inspection stations before the start of operations each day.

4. Detailed, written **"Internal Premises Inspection Procedures"**, contain a section for evaluating the suitability of construction materials and upkeep of **"Inspection Stations"**.
5. **"Internal Premises Inspection Procedures"**, show that issues with **"Inspection Stations"** are being recorded and that actions have been taken to correct them.

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval
02-I-01 Lighting Intensity
03-A-01 Product, Personnel & Equipment Flow
03-A-02 Internal Premises Inspection
03-E-03 Sanitation Procedures
03-E-05 Sanitation Records – Pre-operational Inspections
12-B-03 Floors - Safety of

SUBJECT: Security of Held Product	02-L-05
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1, 18(1)(i), 46(1)(b), 46(1)(c) & 51 Meat Facility Standards (MFS) Section B.2.3.2	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

A “Licensed Meat Facility” (abattoir) has to have a system in place to identify and segregate carcasses that have been “Held” for more detailed inspection and/or diagnostic (laboratory) testing.

To ensure that there is no chance of contamination of approved carcasses it is important for “Held” carcasses to remain separated until such time as they are either approved, or condemned.

Note: Ultimate control would be achieved through the use of a lockable facility that is under the control of the Meat Inspection Branch (MIB) Inspector at all times.

This does not preclude the implementation of control procedures that are based on trusting the integrity of the facility operator to abide by the instructions of the MIB Inspector particularly in reference to respecting MIF - 2 and MIF - 7 “Held Tags”.

OBJECTIVE/OUTCOME

The abattoir will be able to identify, retain and isolate any carcasses (and all their edible parts) that are “Held” for more detailed inspection and/or diagnostic tests.

Note: Eventually a timely judgment will be made about the safety and suitability of all carcasses, or portions thereof that have been “Held”.

The identity and integrity of “Held” carcasses, or portions of carcasses and internal organs, will be under the control of the “MIB Inspector” at all times.

Note: Meat, or meat products, that require a final decision on their suitability, for human consumption will be identified with a "Held Tag" (commonly referred to as the MIF - 7 Tag). This will apply equally to meat that has never left the facility and to meat and/or meat products that have been recalled.

In accordance with section 51 of AR 42/2003 no one, other than an inspector, can remove a "Held Tag". The MIB Inspector maintains control of the application and removal of "Held Tags" by recording the application and removal of held tags on a document called the "Held Tag” (Green MIF - 7) Control Sheet.

Under ideal conditions the “MIB Inspector” would have a lockable area for “Held” carcasses, or portions thereof.

Currently AR 42/2003 does not require licensed meat facilities to have lockable facilities for "Held" carcasses but this is a recommendation in the Canadian Meat Hygiene Standard (item 6.40).

The Director of the RSD has the authority to mandate this requirement under section 18(1)(i) of AR 42/2003 either as a blanket requirement, for all abattoirs, or to deal with individual situations as they arise.

"Held" meat, or meat products, will be stored under conditions that prevent deterioration, or contamination.

Note: In most instances this requires a temperature controlled (refrigerated) area.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Security of Held Product"** will be met when on site observation demonstrate that acceptable facilities and/or procedures are in place which ensure that "Held" product is secure at all times and is under the control of the "MIB Inspector".

Note: Lockable facilities would definitely be considered as being acceptable (providing access is under the control of the "MIB Inspector" but until such time as this is mandatory, for "Held" products, acceptable procedures will be considered to be those that are in accordance with recommendations in the RSD Manual of Directives and Procedures for the use of "Held Tags" (MIF - 2 & MIF - 7) and Held Tag Logs".

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval

03-A-01 Product, Personnel & Equipment Flow

SUBJECT: Water Supply - Amount, Temperature & Pressure	02-M-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1, 18(1)(a), 18(1)(b) &18(1)(e) Meat Facility Standards (MFS) Sections A. 3.2.1, 4.1 (3 & 6), E.1.1.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

An adequate supply of potable (suitable for human consumption) water is critical for the proper operation of a “Licensed Meat Facility” (facility).

Slaughter, dressing operations and water chilling of poultry require large amounts of water.

Other essential activities requiring water include cleaning and sanitizing of the facility and equipment and meeting the personal hygiene needs of facility personnel.

In addition to having enough water, pressure is also very important.

Note: Appropriate pressure can make the difference between whether water is effective, for the intended purpose, or not. For example, a trickle of water would be totally ineffective during the pre-rinse stage of clean up. The same is true for a poultry wash.

While it is possible to use a pressure washer to boost the water pressure for a cleaning operation, the pressure used for the application of cleaners and sanitizers should not exceed 5 bars. Pressures in excess of 5 bars will create aerosols. Aerosols are small droplets of water that may contain chemicals and micro-organisms. Aerosols, depending on what is in them, may cause irritation of the respiratory tract, and re-contamination of clean meat product contact surfaces.

It is not possible to use high pressure for washing hands or conducting other operations, therefore the line pressure must be adequate for these activities.

OBJECTIVE/OUTCOME

The facility will be constructed and have the necessary equipment to ensure a sufficient supply of hot and cold potable water to meet the operational needs of the facility.

Note: The quantity of water coming into the plant must be sufficient to meet the maximum demand of all operations that are taking place at the same time.

Water pressure will be sufficient to meet the needs of the facility during all phases of operation.

Water temperature will be appropriate for the activity for which it is being used.

Note: It is "Common Industry Practice" to suggest the following:

a) pre-rinse temperatures of 43 - 50^0 C (110 - 122^0 F);

b) processing temperatures no greater then 49^0 C (120^0 F)

In order to get a temperature of approximately 49^0 C at the nozzle it is necessary to have a temperature in the range of 52 - 54^0 C in the hot water tank.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Water Supply - Amount, Temperature and Pressure"** will be met when:

1. On site observations demonstrate that the amount, temperature and pressure of water are adequate at all times during operation of the facility.
2. Issues relating to the supply, temperature, or pressure, of water and corrective actions taken are documented in the facility's "**Service Maintenance Records"**.

RELATED SECTIONS OF TIPM

02-J-03 Hand Washing Facilities

02-M-02 Potability of Water, Ice & Steam

02-M-06 Water Storage Facilities

SUBJECT: Potability of Water, Ice & Steam	02-M-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18(1)(e) Meat Facility Standards (MFS) A.4.1 (1, 3, 4 & 7)	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

An adequate supply of potable (suitable for human consumption) water is critical for the proper operation of a "Licensed Meat Facility" (facility).

Ensuring that the water remains potable requires regular testing of samples that were taken from various outlets throughout the facility, including the most "upstream" location.

Note: Testing samples at various locations will detect contamination that may be occurring in the plumbing and distribution system.

All ice, used in the facility, must be made from potable water.

Note: Ice has many uses in meat facilities including but not limited to:

a) formulating emulsified meat products;

b) formulating other comminuted meat products;

c) chilling of poultry;

d) chilling of edible organs

All equipment used to make ice must be kept clean and properly maintained to ensure that it doesn't serve as a possible source of contamination.

Note: When investigating a problem with contaminated ice it may be necessary to test the water entering the ice machine to determine whether the problem resides in the ice making equipment or not.

Ice purchased from a commercial source should be certified to ensure that it is manufactured from potable water which meets the same bacteriological quality standards as ice manufactured in the facility.

Steam that comes into contact with meat products, or meat contact surfaces, must be generated from potable water.

Note: Steam used for hot water sanitizers must also come from potable water but, steam used to heat boilers can be made from non-potable water providing it doesn't come into contact with meat products, or meat contact surfaces.

Regardless of the water source a contingency plan should be in place to quickly assess the risk posed by an adverse water event and to ensure the implementation of appropriate corrective actions.

Note: Developing a contingency plan, or implementing corrective actions, requires consultation with regulatory officials that are knowledgeable about processing operations.

OBJECTIVE/OUTCOME

The facility will be constructed and have the necessary equipment to ensure a sufficient supply of hot and cold potable water to meet the operational needs.

Note: When the facility's water comes from a private well adequate protection must be provided to the well head to ensure that contamination does not occur.

Storage tanks, if used, must be located, constructed and maintained in a manner that prevents contamination.

Regular water testing procedures, for micro-organisms (bacteria, molds, fungi, etc.) and chemicals will be developed and implemented.

Note: Under these procedures water will be taken, for sampling, from various locations in the facility and there will be a specified rotation of the sampling sites. Regardless of the rotation, samples should be regularly taken from the water lines furthest away from the source of water.

Water from municipal sources must be tested once a year for bacteria and chemicals. Bacterial tests must be conducted from a sample taken from the facility itself.

Water from wells, or other private sources, must be tested at least once a month for bacteria and once a year for chemicals.

Testing procedures must include the requirement to test ice and steam produced in the facility that comes into contact with edible meat products, or meat contact surfaces, for bacteria and chemicals at least once a year.

Water test results will be recorded and kept on file at the facility.

Note: To be considered safe bacteriological test results must show zero E. coli bacteria per 100 ml, and zero total coliforms per 100 ml.

Chemical test results must conform to the "Guidelines for Drinking Water Quality", published by Health Canada. This information can be accessed at:

www.hc-sc.gc.ca/ewh-semt/water-eau/drink-potab/guide/index-eng.php

A contingency plan will be in place that outlines procedures to be followed in the event that the water supply is deemed to be non-potable.

Note: The contingency plan must include but is not restricted to the following:

a) stopping all slaughter and processing activities until such time as a satisfactory water sample is obtained, or acceptable alternative measures are instituted;

b) holding all meat products that may have been contaminated with non-potable water, ice or steam until assurance of their safety has been confirmed by regulatory authorities, or through thorough testing;

c) discarding of all ice made in the facility since the last acceptable sample along with complete cleaning and sanitizing of the ice making equipment;

d) a thorough investigation in order to implement adequate, effective and permanent corrective actions. This is particularly important in the case of contamination of private water sources such as wells.

Other measures that should be considered for inclusion in a contingency plan include:

a) preventative water treatment systems including the use of filtration and/or disinfection chemicals;

b) alternative sources of potable water;

c) information on historical water hazards at the facility and awareness of these characteristics;

d) water testing at a greater frequency than what is mandated by regulation;

e) assessment of potable water storage capacity and alternative storage options;

f) communication protocols to ensure that proper authorities and individuals with appropriate expertise are contacted to deal with crisis situations

More information on contingency plans and guidelines for food processing during "Adverse Water Events" can be found at:

http://hc-sc.gc.ca/ahc-asc/branch-dirgen/hpfb-dgpsa/fd-da/bfriia-braaii/guide-water-eau_e.html

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Potability of Water, Ice and Steam"** will be met when:

1. **"Water Potability Procedures"**, that are specific for the facility, have been developed and implemented.

   Note: These procedures must describe the sampling methods used for testing water, ice and steam that is used in processing along with the procedures to be followed in the event that substandard test results are received.

2. Water samples are being sent, as per RSD requirements, to a laboratory approved by the Regional Health Authority (RHA).
3. Water sampling procedures have been approved by the local RHA.
4. Records of **"Water Potability Test Results"** are on file at the facility.

   Note: These records must be retained for at least 3 years.

5. **"Water Test Results"** are recorded.

   Note: These records should include deviations and corrective actions that were taken in accordance with the facility's written **"Water Potability Procedures"**.

6. Issues relating to the supply of water are documented, along with corrective actions, in the facility's **"Service/Maintenance Records"**.

RELATED SECTIONS OF TIPM

02-M-01 Water Supply - Amount, Temperature & Pressure
02-M-03 Ice Making & Storage
02-M-04 Water Treatment Systems
02-M-05 Non-potable Water - Allowance for Use
02-M-06 Water Storage Facilities
03-A-06 Potable Water - Written Program
03-A-07 Water Treatment - Written Program

SUBJECT: Ice Making & Storage	02-M-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18(1)(e) Meat Facility Standards (MFS) Sections A.4.1 (3 & 7)	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

To ensure there are no contamination problems **all ice**, made at a "Licensed Meat Facility" (facility), or purchased from an outside source must be made:

1. From **potable water**.
2. With equipment that is properly maintained, cleaned and sanitized.

Note: Potable water is defined as water that is suitable for human consumption.

Ice purchased, from a commercial source, should be certified to ensure that it is manufactured from potable water. Commercial ice must meet the same bacteriological quality standards as ice made in the facility.

Ice, regardless of source, must be stored and handled in a manner that prevents contamination.

OBJECTIVE/OUTCOME

Ice making equipment will be:

1. Constructed and maintained in a manner that doesn't pose a risk of contamination for meat products.

Note: An ice machine is considered to be a piece of processing equipment, thus is subject to the requirements of TIPM documents 02-N-01 and 02-N-02, including the requirement to be:

a) made of corrosion resistant materials;

b) designed in a manner that allows easy cleaning and inspection.

2. Placed in appropriate locations.

Note: Ice machines should be located in a packaging, or processing, area. It is not recommended that they be located on the kill floor but if this is the only option they should be located in an unused corner of the kill floor and should not be accessed on the day of slaughter, in order to prevent improper personnel traffic patterns thus reducing the risk of contamination.

It is not recommended to place ice machines in coolers because they reduce the space available in the cooler, and will interfere with proper cleaning of cooler floors and walls adjacent to the machine.

Ice machines must not be located in rooms where they will be exposed to another source of water such as in a mechanical room.

Ice machines must not be located in dry storage, or chemical storage, areas.

3. Cleaned regularly
4. Closely and carefully monitored for correct maintenance and upkeep.

    Note: Samples of ice should be tested for freedom from contamination as part of the water testing program of the facility.

5. Included as part of the water treatment system.

    Note: The intent of this requirement is to ensure that the facilities running their own water treatment systems do not forget to treat the water that is used to make ice.

"Homemade" ice will be made with potable water and in covered containers that are specifically marked and only used for making ice.

Note: "Homemade" refers to ice produced by means other than with ice making equipment.

Containers used for "Homemade" ice will be cleaned and sanitized after each use.

Equipment used to handle ice will be:

1. Constructed of approved materials.
2. Kept in a good state of repair.
3. Only be used for ice.

    Note: These pieces of equipment, e.g. shovels, pails, chutes, crushers, etc. must be **clearly identified as ice handling equipment**.

Personnel collecting and distributing ice will be trained in proper handling procedures.

Note: This is done to make facility personnel aware of the need to reduce unnecessary movement of personnel and cross-contamination risks.

Ice will be carefully examined, at frequent intervals, for the presence of foreign material.

Note: Transport vehicles bringing ice to the facility should be closely monitored and all ice must be inspected for cleanliness before being brought into and/or used in the facility.

Ice will be properly stored at all times.

Note: Ice is considered to be a processing ingredient thus it must be protected from contamination at all times during storage.

Bags used to store ice must be made from approved packaging material. **Ice bags cannot be reused**.

Packaged ice must be stored at least 10 centimeters (4 inches) off the floor. It is "Common Industry Practice" to use pallets.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Ice Making and Storage"** will be met when:

1. **"Ice Storage and Handling Procedures"**, specific for the facility, have been developed.

   Note: These procedures should ensure that bags, pallets, shelves, racks and other storage containers, used for ice, are made of an appropriate material, and that they are clean and sanitary and maintained in a good state of repair.

2. The facility's written **"Sanitation Procedures"** and **"Sanitation Schedule"** include ice machine(s) and all other equipment used to handle and store ice.
3. Written **"Preventative Maintenance Procedures"** include the ice making machine(s) and all related equipment.
4. Maintenance of the ice making machine(s) and equipment is documented in the facility's **"Preventative Maintenance Records"**.
5. On site observations demonstrate that proper **"Ice Storage and Handling Procedures"** are being followed.

RELATED SECTIONS OF TIPM

02-M-01 Water Supply - Amount, Temperature & Pressure
02-M-02 Potablility of Water, Ice & Steam
02-M-04 Water Treatment Systems
02-N-01 Equipment Construction & Installation
02-N-02 Initial Installation & Calibration of Equipment
03-A-06 Potable Water - Written Program
03-A-07 Water Treatment - Written Program
03-C-04 Preventative Maintenance Procedures - Records of
03-E-03 Sanitation Procedures
03-E-04 Sanitation Schedule

SUBJECT: Water Treatment Systems	02-M-04
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.5, 18(1)(b) & 18(1)(e) Meat Facility Standards (MFS) Sections 4.1 (1, 2 & 5)	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Many situations can make private water supplies (e.g. wells) unsuitable for use in a meat facility.

In addition to a high risk of bacterial contamination, other water quality problems such as turbidity, excessive hardness and the presence of excessive amounts of undesirable mineral elements (e.g. iron and sulfa) are common problems.

Note: The presence of certain inorganic elements (minerals) may interfere with the action of disinfectants being used.

Facilities that use private water sources may be mandated (for potability), or decide of their own accord (for quality), to use a water treatment system.

Note: The receipt of a number of unacceptable water test results would be a reason for mandating the use of a water treatment system.

This document applies to facilities that have installed, on their premises, a water treatment system.

Various treatment methods are available for ensuring that water is potable (suitable for human consumption) and/or of high quality.

Note: Selection of a water treatment system must take all the possible quality problems into consideration and should be based on appropriate testing.

Although this document is a publication of the Meat Inspection Branch (MIB), **MIB personnel are NOT the experts on water treatment**.

Following from this, **MIB personnel** cannot, and **will not, make recommendations** on the specific type of **water treatment system** a facility should use.

The primary concern of the MIB is to ensure that water used for processing meat and meat products meets the guidelines set by Health Canada.

Note: Facility operators are advised to talk to their Regional Health Authority (RHA) of Alberta Health and Wellness (AHW). The RHA has access to water quality experts capable of making recommendations on the type of water treatment system that would be best for the specific needs of a particular facility.

Water treatment systems must be capable of providing continuous disinfection while the water system is in operation.

Monitoring and the recording of treatment results are essential elements in ensuring that the water treatment system is functioning properly.

Note: It is particularly important to monitor and record levels of disinfectant(s) used thus guaranteeing that they have been applied effectively.

OBJECTIVE/OUTCOME

Approved water disinfection **equipment** will be **in use if** the facility has been **required** to use a water treatment system.

Note: Only equipment capable of meeting the standards for drinking water potability set by Health Canada, in a publication entitled “Guidelines for Drinking Water Quality”, will be approved for use.

Choosing a water treatment system must be based on a comprehensive water analysis because this is the only way of determining the type and extent of water problems that need to be addressed.

The mandated **treatment** of water also **applies to ice** produced in the facility.

Responsible facility personnel will be trained in the use and maintenance of disinfection systems and monitoring devices.

Treatment methods will provide continuous disinfection while the water system is in operation.

Note: It is recommended that the system be equipped with a means of monitoring and recording levels of the disinfectant(s) used.

Both chlorination and ozonation can be applied and monitored continuously.

Water treatment equipment will be:

1. Operated in accordance with the manufacturer's instructions.
2. Properly maintained at all times.

Note: Records of maintenance procedures must be kept.

Only approved water treatment chemicals will be used.

Note: To be approved, a water treatment chemical must be listed in the “Reference Listing of Accepted Construction Materials, Packaging Materials and Non-Food Chemical Products”, published by the Canadian Food Inspection Agency (CFIA).

A list of approved chemicals can be accessed at:

http://www.inspection.gc.ca/english/fssa/reference/refere.shtml

Chemicals not listed in this publication may be used providing a **"Letter of No Objection"** has been obtained from Health Canada.

Proper operation of the system will be verified before the start of processing activities each day.

Note: When automatic chlorinators are used the following requirements must be met:

a) a metering device capable of adding the correct concentration of chlorine, relative to the rate of flow of water and that will readily indicate any malfunction is installed in the system.

b) tests to determine the total available chlorine will be conducted at least twice per day (ideally at the start and end of production) on water **from a** specific **site** that is **remotely located from** the **chlorine application site but before the distribution site**

c) test results are recorded

Swimming pool chlorine **test kits** are **NOT recommended** because they are not accurate enough.

Water disinfected by exposure to **ultraviolet light must be filtered** because particles can protect bacteria from exposure to the radiation.

The water treatment system will be thoroughly investigated whenever substandard water test results are received.

Note: Investigation should include verification:

a) of the disinfection process (e.g. monitoring the concentration and/or temperature of the antimicrobial agent and/or the water over the time of exposure);

b) that conditions are acceptable before returning to normal operations (e.g. monitoring the concentration of the antimicrobial agent remaining in the system to ensure that it is within the food contact standards prescribed by Health Canada and monitoring the temperature to ensure that it is adequate for the intended process.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Water Treatment Systems"** will be met when:

1. A manufacturer's **"Operating Manual"**, for the water treatment system, is on file.
2. A schematic drawing of the water treatment system is on file.
   Note: This drawing must include locations of all:
   a) water intake valves;
   b) water treatment equipment;
   c) points for addition of disinfectants;
   d) filtration points
3. An up-to-date written **"Water Treatment Procedure"** is on file.
   Note: This procedure must contain but is not limited to the following:
   a) a description of the disinfectant(s) used;
   b) amount of disinfectant(s) added;
   c) frequency of addition;
   d) how treatments are conducted;
   e) responsible facility personnel
4. An up-to-date written **"Water Testing Procedure"** is on file.
   Note: This procedure must contain but is not limited to the following:
   a) how the testing is conducted;
   b) critical limits (upper and lower if applicable) for disinfectant(s);
   c) personnel responsible for conducting the tests;
   d) where test results are recorded
5. Accurate **"Water Testing Records"** are on file.
   Note: These records must include the results of all tests conducted.
6. The water treatment system is included, as a piece of equipment, in the facility's written **"Preventative Maintenance Procedures"**.
7. Maintenance activities are recorded in the **"Preventative Maintenance Records"**, or in a **"Water Treatment System Log"**.

RELATED SECTIONS OF TIPM

02-M-02 Potability of Water, Ice & Steam
02-M-03 Ice Making & Storage
03-A-06 Potable Water - Written Program
03-A-07 Water Treatment - Written Program
03-C-04 Preventative Maintenance Procedures - Records of

SUBJECT: Non-potable Water - Allowance for Use	02-M-05
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 10 & 18(1)(e)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Ensuring sufficient amounts of potable water is a major cost for some “Licensed Meat Facilities” (facilities).

Note: This is particularly true for facilities that lack access to a municipal water source. They often have to install and use water treatment systems.

Facilities are allowed to use non-potable water for activities where there is no chance of contact with meat, meat products, ingredients, or packaging.

Certain conditions must be met to have two systems operating concurrently.

This document outlines the conditions under which non-potable water can be used.

Note: Water, or ice, that has been used in the processing of a meat product becomes contaminated with bacteria from that product, therefore, this water is no longer considered to be potable thus it can’t be allowed to come into contact with any other meat, or meat products.

OBJECTIVE/OUTCOME

Non-potable water will only be used for activities that are completely separated from any meat processing activities.

Note: Examples for the use of non-potable water include but are not restricted to:

a) heating systems (boilers);

b) fire protection

The following conditions, for the use of non-potable water will be met:

1. No connections between the potable and non-potable water systems.
2. Water pipes, for the two systems (potable and non-potable) are clearly distinct from each other through the use of permanent, easily recognized markings.
3. No outlets from the non-potable water system will discharge into a:
   a) sink, or lavatory;
   b) fixture into which potable water is discharged;
   c) fixture used for any purpose relating to processing, packaging, labeling or storage of any meat, meat products, or ingredients

Ice that has been used for processing, or chilling, will not be re-used for these purposes.

Note: Left over ice, in open bags, can be repackaged for re-use. It must be discarded if it is not repackaged.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Non-Potable Water - Allowance for Use"** will be met when:

1. Schematic drawings, or blueprints, of potable and non-potable water systems are on file.

   Note: These documents must clearly show that the non-potable water system is distinctly separate from the potable water system.

   This provides assurance that there is no risk to meat, or meat products, from the use of non-potable water.

2. On site observations demonstrate that:

   a) only potable water is being used where edible products, ingredients, or packaging material are processed, handled, packaged or stored;

   b) the facility is not reusing ice for further processing of edible meat products

RELATED SECTIONS OF TIPM

02-M-02 Potability of Water, Ice & Steam

02-M-03 Ice Making & Storage

03-A-06 Potable Water - Written Program

03-A-07 Water Treatment - Written Program

SUBJECT: Water Storage Facilities	02-M-06
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18(1)(e) Meat Facility Standards (MFS) Section A.4.1.7	**Initial Release** Sept 1, 2009 **Page 1 of 1**

RATIONALE

A "Licensed Meat Facility" (facility) is allowed to store water, which will be used to process meat and meat products, providing the stored water remains potable.

Note: Potable means suitable for human consumption.

It may be necessary to store water to ensure a continuous supply of adequate amounts of potable water or to ensure that the water is properly treated.

Note: Any water that comes into contact with meat, meat products, or surfaces that contact meat, or meat products, must be potable.

Water storage facilities must be constructed, installed and maintained so that there is no risk of contamination.

OBJECTIVE/OUTCOME

Water storage facilities will be constructed of materials that pose no risk of contamination to the water stored therein.

Note: This means that materials used will be smooth, impervious and easily cleaned and/or sanitized.

Water storage tanks (inside or separate from the facility) will be suitably located.

Note: The location must be conducive to inspection, regular cleaning and sanitizing of both the inside and outside of the tank.

Water storage facilities (regardless of location) will be maintained in good repair and kept clean and sanitary at all times.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Water Storage Facilities"** will be met when:

1. Water storage tanks will be identified in the facility's written **"Sanitation Procedures"**.

   Note: These procedures must describe specific cleaning procedures and the required frequency of cleaning.

2. Cleaning of the tanks (internal and external) is recorded in the **"Sanitation Schedule"** or **"Cleaning Log"**.
3. Issues relating to the upkeep of **"Water Storage Facilities"** will be recorded in the facility's **"Service/Maintenance Records"**.

   Note: Corrective actions, if required, must also be recorded in these records.

4. On site observations demonstrate that **"Water Storage Facilities"** are properly located and maintained.

RELATED SECTIONS OF TIPM

02-M-01 Water Supply - Amount, Temperature, & Pressure
02-M-02 Potability of Water, Ice & Steam
03-A-06 Potable Water - Written Program
03-A-07 Water Treatment - Written Program

SUBJECT: Equipment Construction & Installation	02-N-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1, 18(1)(d), 18(1)(g), 18(1)(i) & 18(2) Meat Facility Standards (MFS) Sections C.1.1 (1, 2 & 3)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Equipment used in a "Licensed Meat Facility" (facility) for the processing of meat products, including the dressing of carcasses, must be designed and constructed with materials that makes the equipment easy to clean and sanitize.

Note: These characteristics are essential in ensuring that contamination of the product doesn't occur from dirty surfaces or from the leakage of lubricants, metal filings, or other contaminants.

Material used, for the construction of equipment, must be resistant to corrosion.

Note: Material that is prone to corrosion contains minute grooves, crevices and pockets which entrap micro-organisms (bacteria, molds, fungi, etc). This type of material does not lend itself to thorough and repeated cleaning and sanitizing and the cracks and crevices will worsen with time.

Materials suitable for the construction of meat processing equipment include:

1. Stainless steel
2. Galvanized metals
3. Other materials approved by the Canadian Food Inspection Agency (CFIA)

The design of meat processing equipment is also very important.

Note: The ideal design would eliminate areas where soil and organic matter becomes trapped and inaccessible to routine cleaning.

Equipment must be positioned so that cleaning, sanitizing, maintenance and servicing activities can be performed easily.

Note: It is essential that equipment be positioned far enough away from walls and ceilings, to permit easy access, or the equipment should be completely sealed to the wall and/or ceiling. Alternatively castors can be used to make the equipment readily moveable.

The location of the equipment should also facilitate a one-way flow of product, from raw to finished, without any backtracking, or cross-over.

Note: Equipment should also be located where it won't be contaminated because of proximity to another processing area.

OBJECTIVE/OUTCOME

All equipment will be:

1. Suitably designed for its intended purpose;
2. Constructed of corrosion resistant material;
3. Capable of withstanding repeated cleaning;
4. Installed in a way that provides access for cleaning, servicing and inspection or easily disassembling for these purposes.

Note: Meeting the above requirements ensures the equipment doesn't pose a risk of contamination for meat products and that it will be easy to clean, maintain and inspect.

The MIB (Meat Inspection Branch) has the authority to assess the suitability of all equipment in accordance with the above listed requirements.

Detailed information on the review and acceptance procedures as well as "Reference Listing of Accepted Construction Materials" can be found at: **http://www.inspection.gc.ca/english/ppc/reference/cone.shtml.**

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Equipment Construction & Installation"** will be met when:

1. On site observation demonstrates that all equipment, intended for use in handling, processing, packaging or storage of meat or meat products conforms to the standards listed in the previous section of this document.
2. An up-to-date written **"Equipment Approval Procedure"** is on file.

Note: This procedure should include, but is not restricted to:

a) criteria for new and used equipment and utensils;

b) how equipment will be inspected prior to and following installation

3. **"New Equipment Inspection Records"** are on file for new equipment.
4. **"Equipment Maintenance Records"** are on file.

Note: These records should demonstrate that deficiencies relating to equipment criteria have been identified, prioritized (if necessary), and corrected in a timely manner.

5. **"Operating Manuals"** for all newly purchased equipment are on file.

RELATED SECTIONS OF TIPM

03-C-01 New Equipment Approval Procedures

03-C-04 Preventative Maintenance Procedures - Records of

SUBJECT: Initial Installation & Calibration of Equipment	02-N-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections C.1.1 (1, 2 & 3), 1.2 (1 & 2)	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Failure to properly locate and install equipment, in a “Licensed Meat Facility” (facility) can lead to food safety hazards by making it difficult to clean, sanitize, service and maintain equipment.

Other food safety hazards arise when equipment isn’t strategically placed to result in a one-way flow of product, from raw to finished, without backtracking, or cross-over.

Another potential hazard is contamination of equipment, from other processing activities.

Note: This hazard is likely to develop when there isn’t enough separation between different pieces of equipment.

Failure to calibrate equipment and measuring devices can also have an impact on food safety.

Note: Calibration is essential to ensure that equipment performs the way it was intended.

Examples of equipment and measuring devices that can have an impact on food safety include, but are not limited to:

a) smokehouse temperature dials;

b) temperature probes, or guns;

c) thermometers for temperature controlled areas (i.e. areas where meat is processed and stored);

d) scales for weighing preservatives such as nitrates;

e) pH meters;

f) humidity meters, etc

Calibration must be done following initial installation and at regular time intervals thereafter.

Note: The frequency of calibration and the protocols that need to be followed must be documented (written down) to ensure that it is done properly.

OBJECTIVE/OUTCOME

Equipment will be installed in accordance with instructions from the supplier and in a manner that ensures it is easily accessible for cleaning and inspection and capable of performing, as intended, without causing any contamination of products during operations.

Note: **Commercially built new equipment** must be accompanied by the manufacturer's **"Operating Manual"** containing, among other information, detailed installation, calibration, cleaning and maintenance instructions.

The supplier of **used rebuilt, or custom-built** equipment, or the facility operator, must prepare a customized **"Operating Manual"** that contains the same information as manuals for commercially built equipment.

Examples of contamination that might occur during operation of equipment includes leakage of bearing and other lubricants from poorly located or poorly designed reservoirs, improper exhausting of steam, poor drainage, etc.

Services (air, water, and electricity) will be connected in a manner that ensures ease of cleaning, sanitation, servicing and maintenance.

Note: Installing service lines (e.g., water and drain pipes, air hoses, etc.) and equipment away from walls and ceilings is an example of how installation makes sanitation easier.

Alternatives include making these items moveable or sealing them completely to the wall or ceiling.

The use of electric cords will be based on both sanitary and safety considerations.

Note: Retractable drop cords, suspended from the ceiling, may be used to connect portable equipment providing they are properly connected to the power source and kept in a sanitary condition.

Electric cords must not be strung across the floor, even temporarily.

Provision will be made for inspecting and cleaning overhead belt conveyors without resorting to the use of ladders or mobile platforms.

Smoking, cooking and baking houses, or chambers, will be checked for the presence of cold spots at the time of the initial installation.

Note: These items should be re-checked at least twice a year following installation.

Calibration will be conducted, on all equipment that requires it, prior to use following installation and at regular designated intervals thereafter.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Initial Installation & Calibration of Equipment"** will be met when:

1. On site observation demonstrates that all equipment has been properly installed and calibrated.
2. An up-to-date, written **"Equipment Approval Procedure"** is on file.

   Note: This procedure should describe the criteria for the installation of new, or used, equipment, or utensils and how they will be inspected before and after installation, to ensure there are no contamination risks.
3. Accurate and up-to-date **"Maintenance Records"** are on file.

   Note: These records should demonstrate that deficiencies relating to equipment criteria have been identified, prioritized (if necessary) and corrected in a timely manner.
4. **"Operating Manuals"** for all new or used equipment are on file.
5. Accurate and up-to-date **"Calibration Records"** are on file.

   Note: These records will contain the following information pertaining to the initial calibration of new or used equipment:

   a) identification of the equipment that was calibrated;

   b) specification and calibration limits for the equipment;

   c) date of calibration;

   d) initials of facility personnel that did the calibration;

   e) calibration results;

   f) corrective actions taken (if required)

RELATED SECTIONS OF TIPM

02-N-01 Equipment Construction & Installation
02-N-03 Smokehouses - Design & Operations
03-C-01 New Equipment Approval Procedures
03-C-03 Calibration Procedures - Records of

SUBJECT: Smokehouses- Design & Operation	02-N-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections C.1.2 (1 & 2), 3.1, 3.3	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

In addition to the general design requirements, for food handling equipment, **smokehouses have specific design and operational requirements** that are crucial to the quality and safety of the products produced.

Smokehouses should be located so that products flow, in a single direction, from raw to cooked product.

Note: This reduces the risk of contamination of cooked meat products.

The smokehouse should be isolated from other production areas.

Note: This makes it accessible for cleaning and servicing without risk of contaminating other areas.

Heat treatment is a critical control point in the production of smoked meat products thus it is important that the product be exposed to the proper temperature for the proper length of time.

Note: Sufficient heat and time is needed to ensure the destruction of pathogenic (disease causing) micro-organisms (bacteria, fungi and molds). Properly calibrated temperature controls are an integral part of a functional smokehouse. Monitoring the temperature of the smokehouse and meat products is essential.

Required temperatures, for optimum cooking and smoking, vary for each type of product. The operator must determine the appropriate cooking and smoking schedule for each type of product. To ensure a consistent yield of uniform and safe product the cooking and smoking schedule should be recorded, maintained and followed for every batch.

It is important to identify and control cold spots and to properly space meat products to ensure equal exposure to heat and smoke.

Note: Products should be similar in size, shape and weight. They should be hung freely and without touching each other or the walls, ceiling, or floor.

Humidity control is also important for effective smokehouse operation.

Proper record keeping is an essential part of smokehouse operations. Records aid in controlling critical control points and identifying when corrective action is required.

Note: Records also allow the facility to prove that proper temperatures were reached, and that the thermometers used were accurate and calibrated. This type of information can be critical in a legal situation.

OBJECTIVE/OUTCOME

Smoke houses will be properly designed and located.

Note: Proper design and location ensures that product moves in one direction, from raw to cooked product. It also ensures that the smokehouse can be cleaned and sanitized without any danger of contamination to surrounding areas, or equipment.

It is "Common Industry Practice" to have smokehouses with their entrance and exit doors on opposite sides. This ensures the one way flow of product thus minimizing, if not eliminating, the possible contamination of cooked product by raw product.

"Common Industry Practice" also recommends that smokehouses be vented in a manner that prevents the release of smoke into surrounding production areas.

Each smokehouse chamber will be equipped with:

1. An accurate calibrated probe thermometer
2. A chamber temperature thermometer
3. Humidity controls

Note: It is "Common Industry Practice" to use self recording devices.

Smokehouses will be checked for the presence of cold spots at the time of initial installation and least twice a year thereafter.

When the smokehouse is in operation product will be properly spaced in it.

Wood chips, or other smoke producing material, will be food grade.

The smoke house and associated equipment will be maintained in a clean and sanitary manner.

Records of smokehouse operation will be kept.

Recipes for all products produced will be on file.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Smokehouse Design & Operation"** will be met when:

1. On site observations demonstrate that smokehouses are properly located in the "Licensed Meat Facility" (facility) and equipped with calibrated probe and smokehouse monitoring thermometers.
2. Up-to-date written **"Calibration Procedures"** are on file.

   Note: These procedures should include the requirements for and frequencies of smokehouse calibrations.
3. Accurate and up-to-date **"Calibration Records"** are on file.

   Note: These records must include cold spot monitoring results.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

4. Written **"Preventative Maintenance Procedures"**, for the facility includes the smokehouse.
5. Smokehouse maintenance requirements and work completed are recorded in the facility's **"Preventative Maintenance Records"**.
6. **"Operating Manuals"** are on file for all smokehouses in the facility.
7. The facility's written **"Sanitation Procedures"** include the smokehouse(s).

   Note: The cleaning frequency must be identified in these procedures.

8. Smokehouse cleaning is in the facility's **"Sanitation Schedule"**.

RELATED SECTIONS OF TIPM

02-N-01 Equipment Construction & Installation
02-N-02 Initial Installation & Calibration of Equipment
03-C-03 Calibration Procedures - Records of
03-C-04 Preventative Maintenance Procedures - Records of
03-E-03 Sanitation Procedures
03-E-04 Sanitation Schedule

SUBJECT: Scalding, Plucking & Hair Removal Equipment	02-N-04
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18(1)(a) Meat Facility Standards (MFS) Sections C.1.1 (1 & 2), 1.2 (1 & 2)	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Scalding, plucking and the removal of hair are important steps in the hygienic dressing of carcasses.

A number of issues relating to equipment used, in a “Licensed Meat Facility” (abattoir), for scalding and plucking are important for the production of safe meat products.

Scalding, plucking and hair removal equipment needs to be located a suitable distance away from other processing areas.

Note: The distance should be sufficient to reduce any chance of contamination in areas where operations such as evisceration are carried out.

Scalding tanks must be equipped with an adequate overflow system.

Note: This is required to remove debris and to prevent excessive contamination of the water.

Overflow outlets must be of sufficient size to prevent clogging and should discharge directly into, or close to, floor drains.

Scalding, plucking and hair removal equipment must be made of smooth, corrosion-resistant material that is free of any harmful elements.

Note: This type of material is required because it comes into direct contact with the carcass and it must be capable of withstanding repeated cleaning and sanitation cycles.

Immediately after scalding, poultry carcasses must be plucked and hair must be removed from hog carcasses.

Note: Hair and feathers contain large numbers of micro-organisms (bacteria, fungi, molds, etc.) that could be transferred to underlying tissues. Prompt removal of hair and feathers reduces the amount of carcass contamination.

OBJECTIVE/OUTCOME

Scalding equipment will:

1. Be constructed of smooth, corrosion resistant material.

   Note: This is particularly important for parts that contact carcasses.

2. Be of sufficient capacity.

   Note: The scalding compartment must be large enough to thoroughly scald and loosen dirt, hair, or feathers at the maximum kill rate of the abattoir.

3. Have appropriate overflow properties.

Note: The overflow capacity, of scalding vats where the carcasses are submerged in hot water, must be sufficient to prevent excessive contamination of the water.

The overflow should discharge into a nearby drain of sufficient size to accommodate the volume.

4. Be adequately vented.
5. Have metal troughs for wax recovery.

Note: This is only a requirement when carcasses (e.g. ducks and geese) are dipped in wax to facilitate feather removal.

Wax reclaiming facilities, when present, must ensure the complete removal of feathers.

Birds will be plucked and hair will be removed from hogs immediately after scalding.

Plucking and hair removal equipment will be:

1. Constructed of acceptable materials.
2. Suitably separated from other processing activities.

Note: It is “Common Industry Practice” to have scalding and hair removal equipment, for hogs, physically separated from the rest of the dressing area.

Poultry scalding and plucking equipment must be physically separated from all other processing activities including those that occur before scalding.

3. Positioned to facilitate cleaning.

Note: The removal of hair and feathers, from underneath and around the equipment, should be relatively easy to accomplish.

4. Of sufficient size.

Note: Plucking machines must not be overloaded. The manufacturer’s recommendations, for the total number of birds, must not be exceeded.

5. Adjustable

Note: This primarily applies to plucking machines. Adjustments are required to handle birds of different sizes without causing any damage to the carcass.

Singeing (or waxing in the case of ducks and geese), to complete feather and hair removal, will be done without cooking the carcass.

All scalding, plucking and hair removal equipment will be properly maintained, cleaned and sanitized.

Note: Maintenance must be adequate to ensure that equipment functions as intended (i.e. efficiently removes feathers and hair).

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Scalding, Plucking & Hair Removal Equipment"** will be met when:

1. On site observation demonstrates scalding, plucking and hair removal equipment is:
    a) constructed of acceptable materials;
    b) properly located;
    c) maintained in an acceptable condition;
    d) located near a suitable drain;
    e) properly cleaned and sanitized
2. On site observation demonstrates that scalding equipment is equipped with a properly calibrated thermometer.
3. Up-to-date written **"Calibration Procedures",** which include thermometers for scald water, are on file.

    Note: These procedures must include the parameters for and the frequency of calibration.

4. **"Calibration Records"** include the results of scalding thermometer calibrations.
5. The abattoir's written **"Preventative Maintenance Procedures"** include scalding, plucking and hair removal equipment.
6. The abattoir's **"Preventative Maintenance Records"** include scalding, plucking and hair removal equipment.

    Note: These records should contain details of maintenance work required and completed.

7. Scalding, plucking and hair removal equipment is included in the abattoir's written **"Sanitation Procedures"**.

    Note: The assigned frequency of cleaning and the name(s) of responsible abattoir personnel should be designated.

8. Cleaning of scalding, plucking and hair removal equipment is documented in the **"Pre-operational Sanitation Records"**.

RELATED SECTIONS OF TIPM

02-N-01 Equipment Construction & Installation
02-N-02 Initial Installation & Calibration of Equipment
03-C-03 Calibration Procedures - Records of
03-C-04 Preventative Maintenance Procedures -Records of
03-E-03 Sanitation Procedures
03-E-05 Sanitation Records - Pre-operational Inspections

SUBJECT: Water Baths & Kettles	02-N-05
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 AR 31/2006 *Food Regulation* Section 25(1)(b) Meat Facility Standards (MFS) Sections C.1.1 (1 & 2), C.1.2 (1 & 2), 3.1, 3.3	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Cooking of meat products, at a "Licensed Meat Facility" (facility) is a critical control point that destroys pathogenic (disease causing) micro-organisms (bacteria, fungi, molds, etc.).

To ensure that cooked meat products are safe for human consumption the following conditions must be met:

1. Appropriate temperatures have been reached in all parts of the cooked product.
2. Temperatures have been maintained for the required length of time.
3. Cooked meat products don't become contaminated after cooking.

   Note: Potential sources of contamination include contact with raw meat products, equipment, utensils and facility personnel that were in contact with raw products.

It is essential that cooking equipment be designed to:

1. Provide adequate product spacing.

   Note: Meat products should not touch each other while they are being cooked.

2. Control temperature throughout the cooking chamber.

   Note: In the case of cooking with water, the water is often re-circulated and the temperature is held at 71-77^0 C (160-170^0 F).

   In the case of steam cooking the temperature is usually maintained in the range of 77-82^0 C (170-180 °C) for 5-15 minutes.

3. Maintain a constant temperature during cooking.

   Note: To ensure uniform cooking it is important for the products being cooked to be similar in weight, size and shape. Undercooked products are a serious food safety hazard.

The operator must ensure that the specified internal temperature and time factors (end point) are met for all products.

Note: This is accomplished by monitoring temperatures with a thermocouple probe, or probe thermometer.

Both the specified temperature and time must be met to ensure the destruction of pathogenic micro-organisms.

The temperature and time requirements depend on factors such as:

a) weight of product;

b) desired degree of cooking;

c) the heating medium (steam or water)

Time and temperature measurements must be recorded.

Note: Both the internal temperature of the product and that of the water bath must be recorded.

Recording temperatures ensures that critical control points have been addressed. This information can be very valuable if legal issues arise.

OBJECTIVE/OUTCOME

Water bath and/or kettle cooking equipment will be:

1. Constructed of acceptable, approved material;
2. Properly maintained;
3. Positioned for easy accessibility for cleaning and servicing without risk of product contamination;
4. Kept in a clean and sanitary condition.

There will be adequate separation of water bath cooking areas and other incompatible activities.

Note: Water baths and kettles must not be operated in the same immediate areas, as raw products are being handled, or prepared.

Only potable water will be used for water bath, or kettle, cooking.

Condensation, in the area of the water bath cooker, or kettle, will be controlled.

Note: It is “Common Industry Practice” to use ventilation hoods and/or exhaust fans.

Cooking recipes for water bath, or kettle, cooking of meat products will be developed and followed.

Note: Recipes must include the internal temperature required and the length of time that products must be held at that temperature.

Temperatures will be monitored throughout the cooking process to ensure that required temperatures were reached and maintained for the required length of time.

Note: Properly calibrated thermometers must be used and the results must be recorded.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **“Water Baths & Kettles”** will be met when:

1. On site observation demonstrates that water bath, or kettle, equipment is:
   a) constructed of acceptable materials;
   b) suitably located;
   c) maintained in an acceptable condition

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

2. Up-to-date written **"Cooking Procedures and Recipes"** are on file.

   Note: There must be specific procedures and recipes for each type of product produced in the facility. These procedures and recipes must stipulate the time and temperature combinations and end points for all products.

3. Accurate and up-to-date **"Cooking Records"** are on file.

   Note: These records must contain the following minimum information:

   a) date;
   b) time;
   c) product name;
   d) batch number (if more than one on that day);
   e) amount of product;
   f) internal temperatures reached;
   g) time product was held at above internal temperature;
   h) initials of responsible facility personnel

4. On site observation and records demonstrate that meat products are being cooked according to the written procedures, or recipes.
5. Up-to-date, written **"Calibration Procedures"** are on file.

   Note: These procedures must include calibration requirements and frequency of calibration of water bath, or kettle, thermometers.

6. Accurate and up-to-date **"Calibration Records"** are on file.

   Note: These records must include documentation of water bath and kettle thermometer calibrations.

7. The facility's written **"Preventative Maintenance Procedures"** include water baths and kettles.
8. **"Preventative Maintenance Records"** include water baths and kettles

   Note: These records should contain details of water bath, or kettle, maintenance work required and/or completed.

9. Written **"Sanitation Procedures"** include water baths and/or kettles.

   Note: The frequency of cleaning must be included.

10. Cleaning of water baths and kettles is documented in the facility's **"Sanitation (Pre-operational Record)"** or **"Sanitation Schedule"**

    Note: The frequency of use will determine where cleaning should be recorded.

RELATED SECTIONS OF TIPM

02-N-01 Equipment Construction & Installation
03-C-03 Calibration Procedures - Records of
03-C-04 Preventative Maintenance Procedures - Records of
03-E-03 Sanitation Procedures
03-E-04 Sanitation Schedule
03-E-05 Sanitation Records - Pre-operational Inspections
03-G-06 Product Cooking

SUBJECT: Brine Making & Injection Equipment	02-N-06
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections C.1.1 (1 & 2), C.1.2 (1 & 2), 3.1, 3.3	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Curing, when done properly, in a "Licensed Meat Facility" (facility) will eliminate pathogens (disease causing) micro-organisms (bacteria, fungi, molds, etc.) in meat products.

Note: Curing also imparts its own particular flavor to the finished meat product.

It is essential that equipment used for brining, or curing, be designed for ease of cleaning, servicing and inspection including ease of dismantling.

Equipment must be properly maintained and kept in good repair to avoid contamination.

It is crucial for the facility operator to keep control over environmental conditions during processing operations.

Note: Curing processes are normally achieved by injection of the cure, which is frequently followed by immersion, of the product, in a curing brine to allow equilibration and uniform distribution.

The immersion portion of the curing process should be kept as short as possible, both for maintenance of product quality as well as safety.

Temperature and humidity control during curing are of utmost importance.

Penetration and uniformity of cure is best achieved with a high level of relative humidity, but the humidity should not be high enough to cause the growth of moulds or lead to other types of deterioration.

Meat being cured, by immersion brining, must be protected from contamination during the curing process. This requires proper storage and covering of brine and injecting solutions. Such practices will reduce the microbial load and could increase the shelf life and improve the acceptability of all meat products.

Curing solutions must not be re-used as this practice can lead to contamination of meat products.

OBJECTIVE/OUTCOME

Brining, curing and injecting equipment will meet all design, construction and installation requirements.

Recipes will be developed and kept on file for all cured meat products.

Recipes for cured meat products will be followed.

Note: This includes following careful calculation and measurement procedures for each ingredient used in the curing mix (especially bulk nitrite, or nitrates).

The **cure** will **not** be **combined with spices before addition to the brine**.

The percent (%) pump will be properly determined and controlled for each batch of cured meat.

Time and temperature will be controlled throughout the curing process.

Meat products being cured, or brined, will be protected from contamination at all times.

Curing and brining **solutions will not be reused**.

All finished meat products will be evaluated to ensure levels of nitrate, salt, water and other additives or ingredients meet standards in the *Food and Drug Act* (Canada).

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Brine Making & Injection Equipment"** will be met when:

1. On site observations demonstrate that brine making and injection equipment is:
   a) constructed with acceptable materials;
   b) suitably located;
   c) maintained in an acceptable condition
2. Up-to-date written **"Recipes and Curing/Brine Procedures"** are on file for all products produced using brines or cures.
   Note: The amount of ingredients to be added (including bulk nitrates/nitrites and Prague powder) must be stipulated in the recipes and procedures along with, time, temperature and storage requirements during curing/brining, and calculations of percentage pump, whether this is done automatically, or manually.
3. Up-to-date written **"Calibration Procedures"** are on file.
   Note: These procedures must include calibration requirements and frequency of calibration of scales used to weigh controlled ingredients, such as bulk nitrates/nitrites and Prague powders.
4. Accurate and up-to-date **"Calibration Records"** are on file.
   Note: These records must include documentation of scale calibrations.
5. The facility's written **"Preventative Maintenance Procedures"** includes injection machines.
6. **"Preventative Maintenance Records"** include injection equipment.
   Note: These records should contain details of maintenance work required and/or completed on injection equipment.
7. The facility's written **"Sanitation Procedures"** include brine making, curing and injection equipment and utensils.
   Note: The frequency of cleaning must be included.
8. Cleaning of brine making, curing and injection equipment and utensils is documented in the facility's **"Sanitation (Pre-Operational Record)"** or **"Sanitation Schedule"**
   Note: The frequency of use will determine where cleaning should be recorded.

RELATED SECTIONS OF TIPM

02-N-01 Equipment Construction & Installation
03-C-03 Calibration Procedures - Records of
03-C-04 Preventative Maintenance Procedures - Records of
03-E-03 Sanitation Procedures
03-E-04 Sanitation Schedule
03-E-05 Sanitation Records - Pre-operational Inspections
03-G-03 Nitrate & Nitrite Addition
03-G-10 Written Recipes

SUBJECT: Evisceration Line & Equipment	02-N-07
REGULATORY REFERENCES: AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections C.1.1 (1, 2 & 3), C.1.2 (1 & 2)	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Regardless of whether evisceration (removal of internal organs) is done by hand, or mechanically, there is considerable risk for internal and external contamination, of the carcass due to rupturing of the intestines.

A “Licensed Meat Facility” (abattoir) must have properly trained personnel to reduce the risk of intestinal ruptures.

Regardless of the method used, viscera must be drawn from the carcass, for post-mortem inspection, in a manner that avoids any bile or fecal (manure) contamination.

Eviscerating equipment must be:

1. Constructed of corrosion resistant material that has been approved for direct contact with food products.
2. Easy to take apart for cleaning and sanitizing.
3. Maintained in a satisfactory state of repair.

Automated evisceration equipment, for poultry, must be equipped with an effective, continuous, rinsing system to remove any build-up of organic material.

Evisceration with the carcass lying on the table (table evisceration) is not allowed because of the great potential for contamination.

OBJECTIVE/OUTCOME

Evisceration equipment will be:

1. Made of acceptable materials.
2. Effective for their intended purposes.
3. Maintained in a good state of repair.
4. Clean and sanitary.

Note: Evisceration equipment includes, but is not restricted to hoists, hooks, rollers, gambrels, rails, shackles, etc.

Automated poultry evisceration equipment must be equipped with effective, continuous, rinsing systems.

There will be adequate segregation of eviscerating equipment if carcasses, from more than one species of animal, are dressed at the same time.

Facilities that slaughter hogs will have a pre-evisceration carcass shower.

Note: The shower should be at a location following hair removal and before any incisions (other than those required for insertion of the gambrels) are made in the carcass.

The following requirements **apply to poultry** facilities:

Properly located and adequate transfer facilities will be in place between the kill and evisceration lines.

Note: The transfer point can be located immediately before, or after, the partition that separates the scalding and plucking area from the evisceration room. It is preferable to have it on the scalding and plucking area side.

Transfer facilities must be capable of being cleaned during processing in order to prevent the build up of extraneous material (e.g. feathers, blood, etc.).

The rate of slaughter must be adjusted so carcasses don't accumulate at the transfer point.

The slaughter line will not enter the evisceration room beyond the transfer location.

Adequate spray wash equipment will be located close to the beginning of the evisceration line.

Note: Carcasses should be washed within fifteen seconds of being transferred to the evisceration line. Water sprays, at this location, must deliver enough water at a high enough pressure to completely remove any visible foreign material from the surface of the poultry carcass, including the hocks and any exposed surfaces.

Evisceration rooms will be equipped to facilitate the removal of inedible portions such as offal, heads, feet, oil glands etc.

Note: After their removal these portions should be taken to the inedible facilities in a direction opposite to that of the evisceration sequence.

Shackles will be located at a proper height.

Note: Ergonomic studies have determined that a shackle height (bottom of shackle) of 1500 mm (4.92 feet) is preferable.

All product contact surfaces, on the evisceration line, will be kept visibly clean.

Cross contamination will be avoided.

Note: Heads and necks must not drag over, or along, equipment on the evisceration line.

Care will be taken to ensure that the intestines are not ruptured during the evisceration process.

Note: For manual evisceration it is essential to have well trained personnel doing the evisceration.

Automatic eviscerating equipment must be properly adjusted for the size of bird being handled.

Carcasses will be hung in a manner that allows a complete visual examination of the external surface of the carcass, the cavity and the viscera.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Evisceration Line & Equipment"** will be met when:

1. On site observations demonstrate that the evisceration line and equipment is:
    a) constructed with acceptable materials;
    b) suitably located;
    c) maintained in an acceptable condition
2. Written **"Preventative Maintenance Procedures"**, for the abattoir, includes the evisceration line and equipment.
3. **"Preventative Maintenance Records"**, for the abattoir, includes the evisceration line and equipment.

    Note: These records should have details of all maintenance work that was required and completed on the evisceration line and related equipment.
4. Written **"Sanitation Procedures"**, for the abattoir, include the evisceration line and related equipment.
5. Cleaning of the evisceration line and related equipment is documented in the abattoir's **"Sanitation (Pre-Operational) Record"**.

RELATED SECTIONS OF TIPM

02-N-01 Equipment Construction & Installation
03-C-04 Preventative Maintenance Procedures - Records of
03-E-03 Sanitation Procedures
03-E-05 Sanitation Records - Pre-operational Inspections
03-G-02 Dressing Procedures - Poultry

SUBJECT: Carcass Washing & Dressing Equipment	02-N-08
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections C.1.1 (1, 2 & 3), C.1.2 (1 & 2)	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Dressing procedures, by their very nature, present a high risk of carcass contamination.

Note: It is essential to maintain cleanliness throughout the entire dressing procedure to reduce cross contamination between carcasses.

To minimize contamination the following requirements are essential:

1. Sufficient space to avoid contact between carcasses during dressing.

   Note: This is necessary to allow the sanitary dressing of individual carcasses and to prevent cross contamination between carcasses.

2. A satisfactory layout.

   Note: All phases of the dressing operation must be conducted in the proper sequence.

3. Equipment made of corrosion resistant materials.

   Note: To keep it sanitary, dressing equipment has to be subjected to frequent rounds of washing and sanitizing. This equipment must be durable enough to withstand this activity.

4. Appropriate washing equipment.

   Note: To be effective, washing equipment has to deliver sufficient volumes of water at a high enough pressure.

In most red meat abattoirs water is applied through high pressure rinse hoses, or spray guns, while in poultry abattoirs rotating washers are used to clean carcasses.

OBJECTIVE/OUTCOME

Carcass washing and dressing equipment will be:

1. Made of acceptable materials.
2. Properly designed.

   Note: Items such as elevated platforms should be located far enough away from the dressing rail to avoid contact with skinned portions of the carcass and a rust-resistant protective guard should be in place to prevent contact between footwear and carcasses.

3. Maintained in a good state of repair.
4. Kept clean and sanitary at all times.

The dressing area will be properly equipped and laid out in a satisfactory manner.

Note: Facilities in the dressing area must allow for the sanitary separation and harvesting of edible offal and shall provide for the prompt removal of edible and inedible offal to their respective destinations.

There will be enough room to allow all phases of dressing and washing to take place as cleanly as possible and in the proper sequence.

Note: Adequate space is particularly important in ensuring that carcasses on the rail aren't subject to cross contamination from contact with adjacent carcasses.

A sufficient number of properly located and suitably equipped carcass washing facilities will be available.

Note: If the feet are left on poultry carcasses, until the post-mortem inspection has been completed, a single carcass washing station should be located right after the plucking machine.

When the feet are removed an additional washing station should be located at a site following the hock-cutting operation and transfer point.

Sprays at both washing stations should be directed to wash the hock surface and the carcass below the hock.

In red meat plants a chemical wash station may be located ahead of the location where the carcass is opened for evisceration.

A washing station must be located right after the evisceration area and there should be an additional wash following final trimming and prior to entry into the cooler.

For hogs, it is strongly recommended that a switch off rail be located just ahead of where evisceration operations are conducted to accommodate carcasses that require further cleaning.

Pressure spray-washing equipment must be available at the final carcass washing station to remove blood and bone dust.

The final washing station should be directly drained.

Hoses and nozzles will be made of suitable material that is capable of being cleaned and sanitized.

Note: Clean hoses and nozzles are necessary to ensure that water directed onto carcasses remains potable (suitable for human consumption) at all times.

Water volumes and pressure will be adequate at all carcass washing locations.

Note: The pressure must be high enough to effectively remove debris and there must be sufficient volume to allow thorough washing of the entire carcass.

Reduced bacterial contamination, good carcass bloom and keeping quality is usually achieved by washing with water at 30-35^0 C and a pressure of 100 psi with a flow rate of 10 liters per minute and a spray time of about one minute.

The performance of pressure washers is affected by spray angle and distance from the carcass as well as nozzle and orifice wear.

Hooks will be available for hanging wash hoses.

Note: The placing of wash hoses on unsanitary surfaces must be avoided.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Carcass Washing & Dressing Equipment"** will be met when:

1. On site observations demonstrate that carcass washing and dressing equipment is:
    a) constructed with acceptable materials;
    b) suitably located;
    c) maintained in an acceptable condition
2. Written **"Preventative Maintenance Procedures"**, for the abattoir, include carcass washing and dressing equipment.
3. **"Preventative Maintenance Records"**, for the abattoir, includes carcass washing and dressing equipment.

    Note: These records should have details of all maintenance work that was required and completed on the washing and dressing equipment.
4. Written **"Sanitation Procedures"**, for the abattoir, carcass washing and dressing equipment.
5. Cleaning of carcass washing and dressing equipment is documented in the facility's **"Sanitation (Pre-Operational Record)"**.

RELATED SECTIONS OF TIPM

02-N-01 Equipment Construction & Installation
03-C-04 Preventative Maintenance Procedures - Records of
03-E-03 Sanitation Procedures
03-E-05 Sanitation Records - Pre-operational Inspections

SUBJECT: Knocking Box & Restraints	02-N-09
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 21(1)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

To ensure humane slaughter, at a "Licensed Meat Facility" (abattoir) it is essential for animals to be properly restrained while they are being killed (slaughtered).

Note: Section 21(1) of AR 42/2003 specifically states that an animal must be restrained when it is being slaughtered.

The abattoir operator has a responsibility to ensure that appropriate methods of restraint (e.g. knocking boxes) are available.

Note: Restraint devices are not required for rabbits, or poultry, because of the ease with which they can be restrained by hand.

Similar to other equipment, in the abattoir, restraint devices must be:

1. Properly designed.

   Note: Proper design is necessary to ensure that animals are slaughtered in a humane manner and that chances of injury to personnel conducting the slaughter are eliminated.

   Good design features include the provision of good footing, for the animals and a sloping floor that ejects the stunned animal to the shackling area.

   The restraint mechanism must be capable of confining one animal at a time without discomfort and without excessive movement, of the animal, forward, backward, or sideways.

   To reduce animal stress restraint devices should operate with a minimal amount of noise.

2. Constructed of durable corrosion resistant material.

   Note: Construction materials must be able to withstand the rigors of frequent cleaning and sanitizing. Wood is not a suitable construction material because it is prone to breakage and is next to impossible to maintain in a sanitary condition.

OBJECTIVE/OUTCOME

The knocking box and other restraint equipment will be:

1. Made of acceptable materials.

   Note: Any corrosion and rust resistant material that is easy to clean and sanitize is acceptable.

2. Properly designed.

Note: Restraint equipment must:

a) be appropriate for handling the species and size of animal being slaughtered. It is desirable for the size of the restraint device to be adjustable;

b) be designed to keep animals calm as they enter the device and while they are in it. Adequate lighting may stimulate the forward movement of animals because they are naturally reluctant to enter dark areas;

c) provide good footing for the animal;

d) not allow the animal to turn around;

e) only hold one animal at a time;

f) safe for the operator;

g) maintained in a good state of repair;

h) kept clean and sanitary at all times

Detailed information concerning animal welfare and stunning/bleeding procedures can be found at **http://www.grandin.com/index.html**

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Knocking Box & Restraints"** will be met when:

1. On site observations demonstrate that the **"Knocking Box & Restraints"** are:
   a) constructed with acceptable materials;
   b) suitably located;
   c) maintained in an acceptable condition
2. The abattoir's written **"Sanitation Procedures"** include the knocking box and restraints.
   Note: The frequency of sanitation must be included in the procedures.
3. Cleaning of the knocking box and restraints is documented in the abattoir's **"Sanitation (Pre-Operational Record)"**.

RELATED SECTIONS OF TIPM

02-N-01 Equipment Construction & Installation
03-E-03 Sanitation Procedures
03-E-05 Sanitation Records - Pre-operational Inspections
05-A-05 Stunning & Bleeding Areas
05-B-03 Handling of Live Animals in the Abattoir
05-B-06 Stunning & Bleeding Practices
07-A-03 Ritual Slaughter

SUBJECT: Rails & Supporting Structures	02-O-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1, 18(1)(a) & 18(2) Meat Facility Standards (MFS) Section A.2.1.8	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

To ensure that carcasses don't become contaminated, rails (in all areas of the "Licensed Meat Facility" [facility]) 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.

Prevention of contamination requires that the rails, and rail support systems, be easily cleaned and constructed with corrosion resistant materials.

Note: The supporting system must be free of loose material that could contaminate carcasses and the surfaces of supporting beams must be free of crevices.

Only approved coatings and lubricants can be used on these structures.

To maintain a constant and uniform temperature and a constant flow of cold air, in coolers, adequate space, above, below and around, carcasses is required.

OBJECTIVE/OUTCOME

Rails on the kill floor and in coolers will be located a proper height above the floor and distance from walls and other structures so that no part of any carcass comes into contact with floors, walls, or other structures.

Note: The following minimum heights, from the carcass suspension contact point to the floor, (expressed in millimetres) are considered to be sufficient.

Bleeding Rails

a) Cattle	3,700 mm
b) Calves	2,700 mm
c) Sheep & Goats	2,400 mm
d) Pigs	3,100 mm

Dressing Rails

a) Cattle	3,100 mm
b) Calves	2,400 mm
c) Sheep & Goats	2,000 mm
d) Pigs	3,100 mm

Cooler Rails

a) Cattle	3,100 mm
b) Calves	2,400 mm
c) Sheep & Goats	2,000 mm
d) Pigs	2,400 to 2,700 mm

2,700 mm is the required height for pig carcasses when the heads are left on.

When a stand, or platform, is placed underneath the hanging carcasses, the top of the stand, or platform, is considered to be the "floor" for the above minimum distances.

Rails used to move carcasses, or portions of carcasses, will be high enough to keep the lowest part of the carcass at least 300 mm off of the floor.

All rails will be located a minimum distance of 600 mm from walls, pillars and other structures and carcasses, hanging on the rails shall be at least 300 mm from any building structure.

The distance between rails (from center to center) will be at least 600 mm.

All rails and supporting systems will be:

1. constructed of durable corrosion resistant material;
2. properly maintained;
3. cleaned at regular intervals

Note: Written procedures outlining the cleaning processes and records of inspections and cleaning activities must be kept on file at the facility.

Only approved coating and lubricating substances will be used on the rails and associated equipment.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Rails & Supporting Structures"** will be met when:

1. On site observation demonstrates that **"Rails & Supporting Structures"** are:
   a) constructed with acceptable materials;
   b) located a proper distance above the floor;
   c) located a proper distance away from walls and other structures

   Note: Rail heights and distances from walls must meet the minimums outlined in the previous section of this document.
2. Written **"Internal Premises Inspection Procedures"**, for the facility, contain a section for evaluating adequacy and upkeep of rails and supporting structures.
3. **"Internal Premises Inspection Records"** include rails and supporting structures.

   Note: These records should include details on any problems that were encountered and corrective actions that were taken.
4. Rails and supporting structures are in the "**Sanitation Schedule"**.
5. Written **"Sanitation Procedures"**, for the facility include the rails and supporting structures.

RELATED SECTIONS OF TIPM

02-C-05 Construction - Ceilings & Overhead Structures
03-A-02 Internal Premises Inspection
03-E-04 Sanitation Schedule
12-B-04 Overhead Equipment – Safety of

SUBJECT: Poultry Salvaging Station	02-O-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18(1)(i) Meat Facility Standards (MFS) Section C.1.1.1	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

In many instances it is possible to salvage poultry carcasses, or portions of carcasses, that have become contaminated, during processing, or that have localized pathological (disease) conditions.

Note: Operators of a "Licensed Meat Facility" (abattoir) have a choice between setting up an appropriate off-line salvaging station or of not bothering to salvage carcasses that have been accidentally contaminated or that have localized pathological conditions.

Contaminated **carcasses** will be **condemned if satisfactory** reconditioning, or **salvaging, facilities** are **not available** in the facility.

It is important to ensure that carcasses have been properly reconditioned, or that localized pathological conditions have been removed, before they are allowed to enter the chill tanks.

Adequate space is required for the efficient and safe handling of these carcasses.

Note: There must be enough space to handle the movement of carcasses into and out of the salvaging area.

The rate of entry of carcasses coming in must be controlled so that the salvaging area isn't overloaded.

Note: Carcasses must not be allowed to accumulate in the salvaging area. The rate of entry depends on the size of the salvaging area and the ability of abattoir personnel to recondition and/or remove pathological conditions.

There must be an adequate means of thoroughly washing and sanitizing the salvaging area between carcasses.

Note: Carcasses coming in, to a salvage area, are all contaminated thus pose a much greater hazard of contaminating other carcasses unless proper precautions are implemented.

OBJECTIVE/OUTCOME

The poultry salvaging station will be constructed with appropriate materials and properly located.

Note: Appropriate materials include anything that is durable and non-corrosive and capable of withstanding repeated wash and sanitation cycles.

A proper location is one where the potential for cross contamination and/or congestion is minimized.

The station must also be located so the Meat Inspection Branch (MIB) Inspector can move quickly between the post-mortem inspection area and the salvaging area.

Salvaging of carcasses will be done promptly.

Note: To minimize the growth of micro-organisms (bacteria, molds, fungi, etc.) and subsequent deterioration of the carcass, reconditioning and/or the removal of pathological conditions should be done within 15 minutes of entry into the salvaging area. Salvaging stations must not be overloaded at any time.

Cross contamination, from carcass contact, will be avoided during transfer from the evisceration line to the salvaging station.

Note: Prevention of carcass contact can be accomplished by using a:

a) rail;

b) mobile rack;

c) fixed rack by the evisceration line

Rack design and capacity, or shackle spacing, must be sufficient to prevent carcass contact.

Appropriate washing facilities will be present at the salvaging area.

Note: Appropriate facilities to accomplish a thorough outside carcass rinse, prior to salvage will include:

a) a directly drained wash cabinet with a three-sided splash shield;

b) sufficient water volume;

c) sufficient water pressure;

d) a non-splash spray nozzle

Facilities that use a shackle rail conveyor can use their automatic on line outside carcass wash prior to salvage.

The following facilities will be provided adjacent to the salvage station:

1. Knife rack or stand with a hot water sanitizer maintained at a minimum of 82^0 C.
2. Hand washing facilities including:
   a) water flow that is continuous or controlled remotely or with a timing device;
   b) soap dispenser;
   c) paper towels
3. Containers for edible and inedible material.
4. Facilities to clean and sanitize the salvage station area and all equipment.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Poultry Salvaging Station"** will be met when:

1. On site observations demonstrate that the **"Poultry Salvaging Station"** is:
    a) constructed with appropriate materials;
    b) properly located;
    c) suitably equipped;
    d) properly maintained;
    e) operated in a clean and sanitary manner
2. Written "**Sanitation Procedures"**, for the abattoir, include the poultry salvaging station(s).
3. The **"Sanitation (Pre-Operational) Record"**, for the abattoir, includes the poultry salvaging station(s).

    Note: These records should include the frequency of cleaning and identify abattoir personnel that are responsible.

RELATED SECTIONS OF TIPM

02-N-01 Equipment Construction & Installation
03-E-03 Sanitation Procedures
03-E-05 Sanitation Records - Pre-operational Inspections

SUBJECT: Giblet Salvaging Station(s)	02-O-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 & 18(1)(i) Meat Facility Standards (MFS) Section C.1.1.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Salvaging of giblets is allowed providing they are clean and free of pathological (disease) conditions and are processed in a manner that minimizes the risk of contamination.

Note: Giblets are defined as the heart, liver and gizzard.

It is essential to prevent contamination of giblets during preparation and inspection.

Note: Contamination can only be prevented through the use of suitably constructed and located “Giblet Stations” that are:

a) well equipped;

b) properly maintained;

c) kept in a clean and sanitary condition at all times

Blood vessels must be removed from the heart.

Note: This is required because they may have a number of conditions including but not restricted to:

a) calcium deposits;

b) inflammatory changes;

c) degenerative changes;

d) blood clots from internal hemorrhage

The liver must not be contaminated with bile.

Note: Contamination of the liver occurs when the gall bladder is ruptured during removal.

Gizzards must be opened immediately after inspection then emptied, flushed, and stripped without delay.

OBJECTIVE/OUTCOME

Giblet salvaging station(s) will be constructed with appropriate materials and properly located.

Note: Appropriate materials include anything that is durable, non-corrosive and capable of withstanding repeated wash and sanitation cycles.

A proper location is one where there is minimal, to no, chance of contaminating carcasses, or surrounding areas.

Giblet salvaging stations will have sufficient space to allow for the prompt and sanitary harvesting and preparation of giblets.

Note: There must be enough space to allow a continual process flow from cleaner to dirtier. Activities must be done in the following order:

a) removal of organ fat;
b) harvesting of the heart;
c) removal of the liver;
d) flushing of the gizzard and separation from the viscera;
e) peeling of the gizzard

Allowing giblets to accumulate for later preparation is not permitted.

Adequate equipment and/or facilities will be present at the giblet salvaging station(s).

Note: Equipment, or facilities, required for sanitary salvage includes:

a) a continuous flow of water;
b) an adequate slope to ensure there is no accumulation of viscera, gizzard contents, or other inedible material at the station;
c) provision for the flow of giblet station waste into inedible bins or troughs without deposition of waste on the floor

Equipment must be located in a manner that allows ease of maintenance, cleaning, sanitizing and inspection.

Giblets will be:

1. Placed in appropriate containers.

   Note: Giblet containers must be constructed with approved material and stored properly during giblet processing (e.g. off the floor).

2. Chilled and iced immediately after harvesting and preparation has been completed.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Giblet Salvaging Station(s)"** will be met when:

1. On site observations demonstrate that the **"Giblet Salvaging Station(s)"** are:
   a) constructed with appropriate materials;
   b) properly located;
   c) suitably equipped;
   d) properly maintained;
   e) operated in a clean and sanitary manner
2. Written "**Sanitation Procedures"**, for the abattoir, include the giblet salvaging station(s).
3. The **"Sanitation (Pre-Operational) Record"**, for the abattoir, includes giblet salvaging station(s).

   Note: These records should include the frequency of cleaning and identify abattoir personnel that are responsible.

RELATED SECTIONS OF TIPM

02-N-01 Equipment Construction & Installation
03-E-03 Sanitation Procedures
03-E-05 Sanitation Records - Pre-operational Inspections
07-B-10 Meat By-product Harvesting - Poultry

SUBJECT: Product, Personnel & Equipment Flow	03-A-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections A.2.1 (8 & 9), 2.5.2, 3.1.2, B.1.1 (2 & 3), 2.2.2, C.1.1.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Meat and meat products are subjected to many potential sources of contamination during handling and processing.

To minimize chances of contamination there must be a continuous flow of product, to increasingly cleaner areas, from where raw materials arrive to the finished product.

Note: The design of new facilities or plans for renovations to existing ones should enhance this one way flow.

The backtracking of product, employees, or equipment, from dirtier areas to cleaner areas, must be avoided.

Note: Backtracking is defined as the movement of product back through an area where earlier processing steps were performed. An example of backtracking would be the movement of an inspected and approved carcass, to the chill cooler, back through the area where hide removal or evisceration takes place. This practice greatly increases the chance of contamination.

Steps must be taken to reduce the chance of contamination if it is not possible to eliminate backtracking. A complete change of clothing would be an example of a step that could be taken to mitigate the chance of contamination that would be present if an employee has to move from one processing area to another.

Documenting and analyzing processing steps and the movement of personnel and equipment are important in reducing food safety hazards due to cross contamination.

Note: These activities should identify potential cross contamination sites that could result in food safety hazards.

OBJECTIVE/OUTCOME

Meat and meat products will move in one continuous direction, from receiving to shipping, without any crossing over, or backtracking.

Note: In abattoirs there shouldn't be any crossing over, or backtracking, from the point where the live animals are received all the way through the slaughtering, dressing, chilling, processing and packaging areas and into the storage area.

Blueprints, or drawings, demonstrating the proper flow of product, personnel and equipment, will be on file.

Physical or operational separations will be implemented in cases where there is a potential for the contamination of meat, or meat products.

Note: This is necessary when ideal flow patterns are not possible due to deficiencies in design or construction.

Employee movement from dirtier areas to cleaner areas will be kept to a minimum and when this occurs precautionary measures (e.g. use of footbaths) will be implemented to minimize the chance of contaminating product.

Note: Under ideal conditions employees would always move from cleaner to dirtier areas during the course of their duties.

Inedible materials will **always move away from edible products** and directly to the storage area for inedible products.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Product, Personnel & Equipment Flow"** will be met when:

1. A facility specific blueprint, or schematic drawing, is on file, showing appropriate personnel and product flow patterns.

   Note: A blueprint is required for new facilities and for facilities that have been recently modified. For older facilities a schematic drawing is the minimum requirement.

2. Written **"Physical, or Operational, Procedures"** to prevent contamination of product have been implemented.

   Note: This is essential in situations where the blueprints, schematics, or analysis of product, personnel and equipment flow reveal a sub-optimal flow pattern.

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval
02-A-02 New Facility Final Inspection Process
02-C-01 Design - Layout & Separation of Incompatible Materials
02-C-02 Design - Location of Entrances & Exits
02-C-03 Design - Product & Personnel Flow

SUBJECT: Internal Premises Inspection	03-A-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections A. 2.1 (1-8), 2.3, 2.5, 3.1,	**Initial Release** Sept 1, 2009 **Page 1 of 1**

RATIONALE

A "Licensed Meat Facility" (facility) must be maintained in a manner that ensures the production of safe wholesome meat and meat products.

Note: Regular inspections are a means of ensuring that this is being done.

A structured **"Interior Inspection Procedure and Record"** ensures that detailed inspections are conducted and that corrective actions are undertaken on a scheduled and timely basis.

Having a regular **"Interior Inspection Program"** ensures that any deficiencies that may contribute to contamination are identified without significant delay.

Note: It is the facility's responsibility to ensure that the set frequency of inspections identifies and address deficiencies in a timely manner.

OBJECTIVE/OUTCOME

A written "Internal Inspection Procedure" for the facility will be on file.

Regular inspections will be conducted in accordance with the written procedure

Maintenance issues will be identified promptly and dealt with appropriately.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Internal Premises Inspection"** will be met when:

1. An up-to-date, facility specific, written **"Internal Inspection Procedure"** is on file
2. **"Internal Inspection Records"** are on file
3. **"Internal Inspection Records"** demonstrate that deficiencies of the internal premises are identified, prioritized and, if necessary, corrected in a timely manner.

RELATED SECTIONS OF TIPM

02-A-01 New Facility Blueprint Submission & Approval
02-A-02 New Facility Final Inspection Process
02-C-01 Design - Layout & Separation of Incompatible Materials
02-C-02 Design - Location of Entrances & Exits

SUBJECT: External Premises Inspection	03-A-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections A.1.1 (1 & 2)	**Initial Release** Sept 1, 2009 **Page 1 of 1**

RATIONALE

A "Licensed Meat Facility" (facility) must be maintained in a manner that ensures the production of safe wholesome meat and meat products.

Note: Regular inspections are a means of ensuring that this is being done.

Structured **"Exterior Inspection Procedures and Records"** ensure that detailed inspections are conducted and that corrective actions are undertaken on a scheduled and timely basis.

Note: The primary food safety hazards, associated with the exterior of the facility, are those that promote the development of vermin (mice and insects). Defects in the doors, windows and walls will allow these pests to enter the facility. Regular inspections should detect potential entry points and allow corrective action to be taken before they become problems.

Having a regular **"Exterior Inspection Program"** ensures that any deficiencies that may contribute to contamination are identified without any significant delay.

Note: It is the facility's responsibility to ensure that the set frequency of inspections identifies and address deficiencies in a timely manner.

OBJECTIVE/OUTCOME

Written **"External Inspection Procedures"** be on file in the facility.

Regular inspections are conducted in accordance with the written procedure

"External Premises Inspection Records" are on file in the facility.

Note: All observed deficiencies are recorded.

Appropriate actions will be taken to address deficiencies that have been detected.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"External Premises Inspections"** will be met when:

1. Written, up-to-date, facility specific, "**External Premises Inspection Procedures"** are on file.
2. Up-to-date **"External Inspection Records"** are on file**.**
   Note: These records should demonstrate that appropriate corrective actions have been taken to deal with any detected deficiencies.
3. On site observations reveal that deficiencies with the external premises have been identified, prioritized (if necessary) and corrected in a timely manner.

RELATED SECTIONS OF TIPM

02-B-02 Protection against Pests & Environmental Contaminants

05-A-04 Livestock Yards & Holding Pens

SUBJECT: Plumbing Preventative Maintenance	03-A-04
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18(1)(e) Meat Facility Standards (MFS) Section A.2.4.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

A properly functioning plumbing system is critical for food safety. Incoming water must be protected from contamination and contamination of product from contact with waste water, or sewage must be prevented.

There are a number of hazards associated with defective plumbing, including:

1. Direct contamination of meat, or meat products, due to backing up of sewage, or waste water from plugged drains, or sinks.

2. Contamination of potable water from cross-over connections between incoming and outgoing lines, or from backflow through plumbing connections.

A written **"Plumbing Preventative Maintenance Program"** is the best way of ensuring that food safety is not compromised by defective plumbing.

Note: Elements of the plumbing program could be included in the overall **"Preventative Maintenance Program".**

OBJECTIVE/OUTCOME

Written **"Plumbing Preventative Maintenance Procedures"** will be on file.

Note: The plumbing system includes components such as: drains, fixtures, stacks, traps, vents, waste disposal facilities, filters, back-flow/back-siphoning devices, pump-out tanks, septic tanks, wells, etc.

The written procedures will be implemented

Note: This will ensure that the plumbing system works properly particularly the drainage and sewage components, which need to be equipped with traps and vents.

Records detailing preventative maintenance activities will be on file.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Plumbing Preventative Maintenance"** will be met when:

1. Up-to-date, written, plant specific, **"Plumbing Preventative Maintenance Procedures"** are on file.

   Note: These procedures should contain but are not limited to:

   a) a written list of all of components requiring maintenance;

   b) required maintenance activities and procedures;

   c) maintenance frequency;

   d) personnel responsible for maintenance

   These procedures can be included as part of the facility's **"Preventative Maintenance Program"** if so desired.

2. **"Service/Maintenance Records"** are on file

   Note: These records should provide details of all plumbing activities that have been performed.

3. On site observations reveal that all aspects of the plumbing system are functioning properly.

RELATED SECTIONS OF TIPM

02-J-01 Drains

02-J-02 Sewage - Handling of

03-B-04 Preventative Maintenance Procedures - Records of

SUBJECT: Lighting Intensity Measurement Records	03-A-05
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 5.1 & 18(1)(e) Meat Facility Standards (MFS) Sections A .2.1 (1 & 2)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Proper lighting is essential to ensure that inspectors and plant personnel can perform their tasks efficiently, safely and with minimum stress.

Note: Lighting intensity must be such that any contamination is readily visible.

Lighting intensity needs to be monitored regularly to ensure that proper intensities, which will vary from area to area, are maintained.

Note: The operator of the meat facility is responsible for keeping sufficient records, to demonstrate that they are in compliance with lighting requirements.

OBJECTIVE/OUTCOME

Lighting intensities, throughout the "Licensed Meat Facility" (facility) will meet recommended guidelines for all areas in the facility.

Lighting intensities will be monitored by measuring lux levels, at suitable frequencies, throughout the facility.

Note: The **lux** is the international **unit of illumination**. One lux is the amount of illumination received by a surface at a distance of 1 meter from a light source whose intensity is taken as unity. It equals 0.0929 foot candles or 1 lumen per square meter.

A functional, calibrated light meter must be used to take lux measurements.

Depending on compliance levels the frequency of monitoring may vary between facilities and/or areas within the same facility.

The following "Common Industry Practice" recommendations will be met.

1. 2000 lux in
   a) high volume poultry post-mortem inspection stations
   b) high volume poultry salvage stations
2. 540 lux in
   a) Post-mortem inspection areas
   b) returned product examination areas
   c) ante-mortem and suspect pen inspection areas
3. 220 lux in
   a) carcass dressing area of the kill floor
   b) meat processing, packaging and labeling areas

4. 110 lux in
    a) storage areas including all areas where meat products and/or ingredients are stored in dry storage, under refrigeration or in freezers
    b) all other rooms and areas such as maintenance closets where no meat products are stored

    Note: The preceding lux levels are also recommended by the Canadian Food Inspection Agency (CFI A).

Records will show that:

1. Proper lighting intensities have been maintained in all areas of the facility.
2. Appropriate corrective actions have been taken in instances where lighting intensity was found to be substandard.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for "**Lighting Intensity Measurement Records"** will be met when:

1. An up-to-date **"Lux Measurement Procedure"** is on file at the facility

    Note: These procedures must contain but are not limited to

    a) how lux measurements will be performed;

    b) where lux measurements will be taken;

    c) minimum acceptable lux levels for each room, or area

2. Accurate and up to date "**Lux Measurement Records"** are on file.

    Note: These records must demonstrate that lux deficiencies are identified and corrected in a timely manner.

    Lux measurement records may be incorporated as part of the facility's **"Internal Inspection Program"**

3. On site observations demonstrate that lighting intensities are suitable throughout the facility.

RELATED SECTIONS OF TIPM

02-I-01 Lighting Intensity

SUBJECT: Potable Water- Written Program	03-A-06
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18(1)(e) Meat Facility Standards (MFS) Section A. 4.1.1	**Initial Release** Sept 1, 2009 **Revision Date** Sept 1, 2011 **Page 1 of 3**

RATIONALE

Having adequate amounts of potable water is an absolutely indispensable element for a licensed meat facility.

Note: Potable means suitable for human consumption.

Potable water is required for:

1. Slaughtering and dressing operations

   Note: This includes water used to chill poultry carcasses.

2. Cleaning of facilities and equipment
3. Personal hygiene of facility personnel

Water, for the above purposes and that used to make ice, or steam, must meet the potable water requirements recommended in the latest edition of "*Guidelines for Canadian Drinking Water Quality*".

Note: This document is published by Health Canada and is available at:

http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/sum_guide-res_recom/index-eng.php

To ensure that water, used for the above purposes, remains potable it is necessary to submit samples, at regularly set intervals for testing.

Note: Laboratory testing includes microbiological testing as well as ensuring that other constituents such as minerals are at acceptable levels and that there are no toxic chemicals in the water.

OBJECTIVE/OUTCOME

Sufficient, hot and cold, potable water, which meets the requirements of the local Regional Health Authority (RHA) and/or Health Canada's publication called "Guidelines for Drinking Water Quality", is available and used as required.

Note: Potable water must be used whenever water, steam, or ice, comes into contact with edible meat products or surfaces that will contact edible meat products.

Testing is done according to the following schedules:

1. Private Water Sources (e. g. wells, dugouts, etc.)

   a) Bacterial Counts – every 30 days

b) Chemical Composition - at least once a year (a maximum of 12 months)

Note: Records of bacteria testing must be on file at the facility at a frequency of not more than 30 days from one potability record to the next. Chemical analysis records must be on file at the facility at a frequency of not more than 12 months from one chemical analysis to the next.

2. Municipal Water Supplies

a) Bacterial Counts - at least once a year

Note: These samples must be taken from taps in the facility.

b) Chemical Composition – at least once per year

Note: More frequent testing should be done if there is any indication that the municipal source is having any chemical composition problems.

3. Ice

A bacterial count on ice must be done at least once a year

Note: Samples, for this testing, must be taken from the site most likely to be contaminated, which in most instances is the ice machine.

Substandard test results [tests that reveal the presence of bacteria (total coliforms and/or E. coli) and/or chemicals] are **deemed to be non-potable** and will be dealt with as follows:

1. Water

All slaughter and processing activities will cease until such time as a satisfactory water sample has been obtained or an acceptable interim solution is instituted.

Note: The RHA is responsible for helping the facility operator make the necessary corrections. This includes “boil water advisory” situations.

2. Ice

a) Ice made since the last satisfactory test results is discarded

b) An investigation to determine the source of contamination is conducted

Note: The first step should be to test the water supply to make sure it is not the source.

c) Once the source has been determined a thorough clean-up and sanitation of all ice making equipment (e. g. ice room, chutes, ice machine etc.) is performed.

d) Newly made ice is submitted for testing

Note: The new ice must meet potable water specifications before it can be used.

3. Inadequate Test Results

   If test results come back marked "**Inadequate Test**" the water and any ice or steam made from that water must be handled as if it were **non-potable**.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS 2006)

Requirements for "**Potable Water - Written Program"** will be met when:

1. Written, plant specific **"Potable Water Testing Procedures"** are on file.

   Note: These procedures must be approved by the local RHA. They must describe the procedures used to take water, ice, or steam samples for testing.

2. The **"Potable Water Testing Procedures"** have been implemented.

3. Records show that water samples are being submitted to an approved laboratory, for testing, in accordance with the written procedures.

   Note: The laboratory used also has to be approved by the local RHA.

   A file of all **"Water Potability Reports"** is on file at the facility

   Note: This file must go back a minimum of three years.

4. **"Water Potability Reports"** demonstrate that the operator is following the written **"Potable Water Testing Procedure"**

   Note: Records should show that any deviations have been identified and that appropriate corrective actions have been taken in the event of substandard test results.

RELATED SECTIONS OF TIPM

02-M-02 Potability of Water, Ice & Steam

02-M-04 Water Treatment Systems

SUBJECT: Water Treatment - Written Program	03-A-07
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18(1)(e) Meat Facility Standards (MFS) Section 4.1 (2 & 5)	**Initial Release** Sept 1, 2009 **Page 1 of 4**

RATIONALE

Having adequate amounts of potable water is an absolutely indispensable element for a "Licensed Meat Facility" (facility).

Note: Potable means suitable for human consumption.

Potable water is required for:

1. Slaughtering and dressing operations

   Note: This includes water used to chill poultry carcasses.

2. Cleaning of facilities and equipment
3. Personal hygiene of facility personnel

Water, for the above purposes and that used to make ice, or steam, must be potable.

Municipal water supplies are the **most reliable** source of **potable water** but unfortunately this source is **not available** to **all facilities**.

Facilities without a municipal water supply have to rely on private water sources.

Note: Private water sources include wells and dugouts.

Private water sources often have problems with quality.

Note: Common quality problems include, but are not restricted to, items such as:

a) turbidity;
b) hardness;
c) high mineral content;
d) contamination with bacteria, primarily coliforms (bacteria found in manure)

There is no way to ensure that wells, or dugouts, are protected from contamination, thus water from these sources must be continuously disinfected to meet potable water standards.

Only approved methods of disinfecting can be used and continuous disinfecting requires continuous monitoring of chemicals added and results achieved.

This document **applies to facilities that have to treat their water to ensure** that it is **potable,** or **choose** to treat their water for quality purposes.

OBJECTIVE/OUTCOME

The facility will use an approved water treatment system.

Note: Normally only facilities that are using a private water source have to treat their water to make it potable but the local Regional Health Authority (RHA) have the authority to require a facility, with a municipal water source, to use a water treatment system following a number of unacceptable potable water test results.

Following treatment the water will meet the standards, for potable water, that are set out in Health Canada's publication entitled "*Guidelines for Drinking Water Quality*".

Note: This document is published by Health Canada and is available at:

http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/sum_guide-res_recom/index-eng.php

Water treatment methods will be capable of providing continuous disinfection while the water system is in operation.

Note: Approved methods for continuous disinfection include:

a) addition of chlorine;

b) addition of iodine;

c) treatment with ozone;

d) exposure to ultraviolet light

A comprehensive water analysis must be performed prior to choosing a comprehensive water treatment process.

To ensure that the water has been suitably disinfected, the system should be equipped with instruments that will monitor and record the level of disinfecting agent(s) used.

Some approved methods do not lend themselves to routine monitoring. In these cases the operator must operate and maintain the water treatment equipment according to manufacturer's recommendations then follow documented maintenance procedures and keep records proving that such maintenance has been performed.

Two approved systems that allow routine monitoring include chlorination and the use of ozone.

In both systems the operator must use an approved testing method to check for residuals on a daily basis to ensure they don't pose a chemical hazard. Daily test results must be recorded.

When **automatic chlorinators** are used, there are two requirements that are fundamental for the control of chlorine levels. These are:

a) a metering device, for the addition of the correct concentration of chlorine relative to the water flow rate, that is designed to readily indicate malfunctions and

b) twice daily testing to determine the level of totally available chlorine at a specific point remote from the chlorine application site but prior to distribution to the plant system

The facility will continue to perform regular potable water tests in accordance with TIPM document 03-A-06.

Note: A **water treatment system does not absolve** the facility **from** conducting **regular** potable **water tests**.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS 2006)

Requirements for "**Water Treatment - Written Program"** will be met when:

1. Written, plant specific **"Water Treatment Procedures"** are on file

   Note: These procedures must describe:

   a) disinfect(s) used;

   b) amounts used;

   c) frequency of addition;

   d) how treatment activities were performed;

   e) who is responsible for performing treatment activities

2. A schematic drawing of the water treatment system is on file

   Note: These drawings should show:

   a) location of water intake valves;

   b) all water treatment equipment in use at the facility;

   c) points where disinfectants are added;

   d) filter points

3. A written, detailed, plant specific **"Water Testing Procedure"** is on file**.**

   Note: These procedures must describe:

   a) how treated water is tested;

   b) critical limits (upper and lower if applicable) for all disinfectant(s) used;

   c) frequency of testing;

   d) who is responsible;

   e) where test results are recorded

   If a commercial water treatment system is being used the manufacturer's **"Operating Manual"** must be on file.

REQUIREMENTS FOR AN AUDITABLE SYSTEM MFS 2006) (continued)

4. An accurate file of **"Water Test Records"** is on file at the facility.

   Note: These records must go back a minimum of three years and must include records of all tests conducted.

5. **"Water Testing Records"** demonstrate that the operator is following the written **"Water Treatment Procedures".**

   Note: Records should show that deviations have been identified and corrective actions have been taken whenever testing reveals chemical levels beyond those specified in the **"Water Treatment Procedure"**.

RELATED SECTIONS OF TIPM

02-M-02 Potability of Water, Ice & Steam

02-M-04 Water Treatment Systems

03-A-06 Potable Water - Written Program

SUBJECT: Receiving Procedures & Records	03-B-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections B.2.1 (1 & 2), B.2.2.2	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

It is important to ensure that all incoming food products (meat and ingredients) arrive and remain wholesome and suitable for human consumption.

Note: All incoming products should come with a statement, from the supplier, indicating that the product is free of hazards and has been shipped in a clean vehicle, or other means of conveyance.

All products arriving at a "Licensed Meat Facility" (facility) must be in good condition.

Note: This means:

a) packaging materials will be clean and covered;

b) ingredient containers (e.g. spice bags) are intact without any leakage of contents.

Non-compatible materials (i.e. non-food products) must be transported in a manner that prevents the contamination of meat, meat products, or ingredients

Note: Bulkheads, or dividers, are examples of ways that food and non-food materials can be separated during shipment.

Having detailed written procedures for the receiving of food and non-food materials will go a long way in reducing any risk of contamination.

OBJECTIVE/OUTCOME

The facility will have an up-to-date written **"Receiving Procedure"**.

Facility personnel, responsible for receiving, will follow the written procedure.

There will be accurate and up-to-date **"Receiving Records"**.

Receiving areas for carcasses, meat products, ingredients, cleaning supplies, packaging supplies etc. will be maintained in an orderly and functional condition.

Note: This must be done to ensure that materials used in the preparation, packaging and labeling of meat products are received and handled in a manner that prevents their contamination.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Receiving Procedures and Records"** will be met when*:*

1. An up-to-date written **"Receiving Procedure"** has been developed and is on file.

   Note: This procedure will contain, but is not limited to, the following:

   a) a description of acceptable criteria for all incoming product (perishable and non-perishable, packaging materials, chemicals, letters of guarantee, etc) and

   b) a description of how incoming materials will be inspected, as they arrive, to ensure that they will not be a source of contamination for any meat, meat products, or ingredients while in the facility.

2. On site observation demonstrates that the **"Receiving Procedure"** is being followed.

3. Accurate and up-to-date **"Receiving Records"** are on file at the facility.

   Note: These records should verify that the temperature of all perishable products was taken upon arrival. This is done to ensure that all perishable goods were at 4^0 C, or lower, at the time they were received.

RELATED SECTIONS OF TIPM

02-E-01 Shipping & Receiving Facilities

02-E-07 Returned Products - Receiving of

SUBJECT: Storage Procedures & Records	03-B-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections B.2.1 (1 & 2), B.2.2 (2, 3 & 4), B.2.3 (1 & 2)	**Initial Release** Sept 1, 2009 **Revision Date** Sept 1, 2011 **Page 1 of 3**

RATIONALE

Improper storage of meat and non-meat products at a "Licensed Meat Facility" (facility) can lead to biological, chemical and physical contamination.

Note: Examples of unacceptable storage conditions that are likely to result in contamination include, but are not limited to:

a) improper storage temperatures;

b) damaged containers;

c) storage on the floor.

Inadequate storage temperatures allow biological agents (bacteria, molds, fungi, etc.) to multiply. These agents may cause disease or lead to deterioration of meat, or meat products.

The integrity of packaging materials is critical in minimizing any chance of contamination of meat, or meat products.

All meat products and ingredients must be kept at least 4 inches (10 cm) off of the floor.

All chemicals and non-food ingredients must be stored away from any processing areas.

In facilities where un-inspected meat is processed, or stored, there must be a system in place that ensures complete physical separation from inspected meat at all times.

OBJECTIVE/OUTCOME

The facility will have up-to-date written **"Storage Procedures"**.

Note: Proper procedures will:

a) protect meat and meat products from potential sources of contamination;

b) protect them from damage likely to render them unsuitable for human consumption;

c) provide an environment that effectively controls the growth of pathogenic (disease causing) or spoilage micro-organisms and the production of toxins by these micro-organisms.

Meat products and materials used in the preparation, packaging, or labeling of meat products will be stored in a manner consistent with the written procedures.

Note: The following minimum standards must be met for each of the following:

a) incoming materials;

b) un-inspected products;

c) finished products;

d) non-food chemicals

Incoming Materials

1. Meat, meat products, or ingredients, requiring refrigeration will be stored at 4^0 C (40^0 F) or less.
2. Frozen meat, meat products, or ingredients, will be stored at temperatures that keep them frozen (-18 °C (0 °F) or less)
3. Temperatures will be monitored.
4. Ingredients and packaging materials will be stored in a manner that prevents damage and/or contamination.

   Note: Ingredients can't be stored on the floor. They should be elevated at least 10 cm (4 inches).
5. Ingredients and packaging materials sensitive to humidity will be stored under conditions that will prevent deterioration.
6. Ingredients and packaging materials will be stored in a manner that facilitates proper rotation so that storage times are not prolonged.

Uninspected Product

Un-inspected meat and meat products will be:

1. Kept completely separated from inspected products at all stages of processing and packaging.
2. Marked as "**UN-INSPECTED - NOT FOR SALE**"

   Note: This applies to carcasses, portions of carcasses and all packaged products.

Finished Products

Finished products will be stored under conditions that:

1. Minimize deterioration and prevent contamination.

   Note: This means refrigerated or frozen as necessary.
2. Minimize any chance of damage.
3. Facilitate stock rotation.

   Note: Stock rotation is an important method of minimizing spoilage that might present a human health hazard.
4. Clearly identifies and isolates any returned defective, or suspect, meat, or meat products.

   Note: If at all possible, these products should be stored in a designated area

until they can be disposed of.

Non-Food Chemicals

Non-food chemicals will be stored in:

1. A dry, well ventilated area.
2. Designated areas.

   Note: This is done to remove the possibility of contaminating meat, meat products, or meat contact surfaces.
3. Clean and correctly labeled containers.
4. A manner that prevents contamination of meat, meat products, meat contact surfaces, or packaging materials when they have to be stored, for ongoing use, in meat, or meat product, handling areas.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Storage Procedures & Records"** will be met when*:*

1. An up-to-date, facility specific, written procedure is on file.

   Note: This procedure must describe criteria and instructions for the storage of different items such as perishable and non-perishable products, packaging materials, chemicals, etc.

   It must also state how storage will be monitored to ensure there is no contamination of edible meat, or meat products.
2. On site observations demonstrate that the written **"Storage Procedures"** are being followed.
3. Accurate and up-to-date **"Storage Records"** are on file at the facility.

   Note: These records must include:

   a) issues that have been identified;

   b) corrective actions taken;

   c) any other observations

   All entries must be signed and dated.
4. Storage facilities, including temporary facilities such as trailers, are included in the **"Sanitation Schedule"**.

   Note: The frequency of cleaning and sanitation must be documented.

RELATED SECTIONS OF TIPM

02-E-01 Shipping & Receiving Facilities
02-E-02 Dry Storage Areas
02-E-07 Returned Products - Receiving of
02-G-06 Separation of Un-inspected Meat
02-G-07 Product Protection during Freezing & Refrigeration
03-E-04 Sanitation Schedule
03-B-01 Receiving Procedures & Records

SUBJECT: Shipping Procedures & Records	03-B-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections B.1.1 (1 & 2), B.1.2 (1 & 2)	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2010 **Page 1 of 3**

RATIONALE

Improper shipment of meat and non-meat products, from a "Licensed Meat Facility" (facility) can lead to biological, chemical, or physical contamination.

Note: Examples of unacceptable transportation conditions likely to result in contamination include, but are not limited to:

a) poor shipping facilities;

b) improper shipping temperatures;

c) damaged packaging;

d) use of an unsuitable vehicle

Shipping practices must not present a potential contamination risk for finished meat products.

Note: Under ideal conditions there will be a dedicated area for the shipment of finished product.

Common shipping and receiving docks are undesirable and under no circumstances should meat, or meat products, be shipped from a dock that handles inedible materials.

Perishable products must be shipped at an appropriate temperature

Note: The standard recommended temperature, for refrigerated product, is 4^0 C (40^0 F). Shipping product above these temperatures will allow biological agents (bacteria, molds, fungi, etc.) to multiply. These agents may cause disease or lead to deterioration of meat, or meat products.

Product must be protected from contamination during shipment.

Note: The commercial carrier must be constructed and maintained in a manner that prevents contaminants from entering the cargo compartment.

The integrity of packaging materials is also critical in minimizing any chance of contamination of meat, or meat products.

OBJECTIVE/OUTCOME

The facility will have appropriate written **"Shipping Procedures"**.

Note: These procedures must ensure that all meat and meat products under the facility's control are shipped under conditions that will:

a) protect them from potential sources of contamination;

b) protect them from conditions that will render them unsuitable for human consumption;

c) provide an environment that will control the growth of pathogenic (disease causing) or meat spoiling micro-organisms

Perishable product will not be shipped until it is at, or below, the required temperature of 4^0 C (40^0 F).

Note: Shipment must be done in a manner that ensures that the mode and time of transportation will not result in temperatures rising above 4^0 C.

Operators who wish to ship meat products that are not yet at or below 4 °C to another provincially licensed facility may be permitted to follow a modified shipping process, provided the following conditions are met:

a) Refrigerated vehicles must be used to ensure that the product continues it's continuous cooing performance standard;

b) A validated and facility specific written program has been developed and implemented by both the shipper and the receiver (this includes the use of a modified shipping record), and

c) Prior written approval has been given to both the shipper and the receiver by the Area Manager (AM) of RSD

Note: The **primary** use of the modified shipping process is to allow the shipping of carcasses from a Multi-Location abattoir to a provincially licensed facility for further processing.

A shipping temperature of no more than 7 °C surface is strongly recommended.

Commercial carriers will be properly prepared before product is placed in them.

Note: Proper preparation includes:

a) a thorough inspection for potential hazards;

b) correction of any hazards that were detected;

c) cleaning as necessary

Appropriate "Shipping Records" will be kept.

Note: These records should include but are not limited to details of:

a) product temperature;

b) condition of the finished products;

c) condition of the commercial carrier;

d) corrective actions required, etc.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Shipping Procedures and Records"** will be met when*:*

1. Up-to-date, facility specific, written **"Shipping Procedures"** are on file

   Note: These procedures should:

   a) describe criteria and instructions for the shipment of perishable and non-perishable products;

   b) state how shipments will be monitored to ensure that the product remains suitable for human consumption during transportation;

   c) include the roles of responsible personnel;

   d) frequency of and instructions for proper cleaning and sanitizing of transportation vehicles

2. On site observations demonstrate that the procedures are being followed

3. Accurate and up-to-date **"Shipping Records"** are on file.

   Note: These records must include, but are not restricted to:

   a) temperature of the product;

   b) temperature of the commercial carrier (where applicable);

   c) condition of the commercial carrier;

   d) condition of the finished product;

   e) issues that have been identified;

   f) corrective actions taken;

   g) any other observations

   All entries must be signed and dated.

   Facilities using a modified shipping process must use a modified shipping record that monitors product temperatures and product cooling from the point of shipment to the point of receiving. A modified shipping record template is attached to this document.

RELATED SECTIONS OF TIPM

02-E-01 Shipping & Receiving Facilities
02-E-03 Shipping Vehicles - General Condition of
02-E-04 Shipping Vehicles - Incompatible Goods
02-E-05 Product Protection during Transportation
02-E-06 Product Temperature during Transportation
03-B-04 Custom Order Pickup

TECHNICAL INTERPRETATION POLICY MANUAL (TIPM)

ATTACHMENT-TIPM DOCUMENT 03-B-03- MODIFIED SHIPPING RECORD

Government of Alberta ■
Agriculture and Rural Development

SECTION A-SHIPPING INFORMATION								SECTION B- RECEIVING INFORMATION				SECTION C- COOLING			
Ship Date YR/MM/DD	**Time of Loading** AM/PM	**Truck Temp at Loading**	**Product Description**					**Receiving Facility Name/License Number**	**Time of Arrival**	**Truck Temp At Arrival**	**Product Temp At Arrival**	**Total Time Transit**	**Temp Change during Transit** See note below	**Initials (Ship)**	**Initials (Rec.)**
			Quantity	**Product Name/Description**	**Fresh**	**Frozen**	**Product Temp at Shipping**								

NOTE: The Shipping Facility must use an appropriate refrigerated shipping vehicle at all time. Shipments that do not show an acceptable temperature decrease during shipment must show deviations and appropriate corrective actions taken and documented on the back of this record.

Both the shipping and receiving facilities must have a written shipping program which includes the use of this record.

SUBJECT: Custom Order Pickup	03-B-04
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1	**Initial Release** Sept 1, 2009
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RATIONALE

From a food safety perspective, it is essential for a "Licensed Meat Facility" (facility) to transport carcasses, portions of carcasses and other meat products under their control in a manner that maintains their safety and suitability.

Note: Detailed transportation requirements, including the need to keep meat and meat products at a temperature of 4^0 C or less, can be found in TIPM document 03-F-03 Shipping Procedures & Records.

Often customers choose to pick-up and transport their own meat products in a manner that does not meet all of the recommended shipping and transportation protocols.

In these instances it is highly recommended that the facility operator keep records to show the safety and suitability of products upon customer pickups.

Note: **"Custom Pickup Records"** should document that the product was in a safe and suitable condition when it left the facility's control.

"Custom Pickup Records" should be signed by the customer.

Note: This will acknowledge that the products were received in an acceptable condition. This acknowledgement is required to release the facility from liability should the customer file a complaint later.

OBJECTIVE/OUTCOME

The temperature of all outgoing perishable meat products will be recorded.

The records should be signed by the person picking up the product.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Custom Order Pickup"** will be met when:

1. The facility's written **"Shipping Procedures"** include record keeping requirements for proving that custom ordered products were safe and suitable upon pickup.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

2. Accurate and up-to-date **"Custom Pickup Records"** are on file.

   Note: These records will include the condition of the product at the time of pickup, including product temperature, which should be 4^0 C, or less.

RELATED SECTIONS OF TIPM

02-E-03 Shipping Vehicles - General Condition Of

02-E-04 Shipping Vehicles - Incompatible Goods

02-E-05 Product Protection during Transportation

02-E-06 Product Temperature during Transportation

03-E-03 Shipping Procedures & Records

SUBJECT: New Equipment Approval Procedures	03-C-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections C.1.1 (1 & 2)	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Equipment surfaces that come into contact with meat, or meat products, are potential sources of contamination.

The chances for contamination increase with:

1. Improper sanitation procedures
2. Improper maintenance

Note: Contamination with micro-organisms (bacteria, fungi, molds, etc.) will occur if contact surfaces are not properly sanitized.

Poor maintenance could lead to the leakage of potentially toxic lubricants, or other materials, onto meat contact surfaces.

Equipment must be designed for easy cleaning and sanitizing and resistance to contamination.

Note: Equipment design should ensure that:

a) there are no areas that easily trap soil or organic matter;
b) all parts are readily accessible for cleaning;
c) contamination due to the leakage of lubricants, metal filings, or other substances doesn't occur

Meat contact surfaces, of equipment, must be constructed with material that is easily cleaned and sanitized.

Note: This means that material on contact surfaces should be:

a) smooth;
b) corrosion resistant;
c) non-toxic;
d) non-absorbent;
e) durable enough to withstand repeated cycles of cleaning and sanitizing

Wood is not suitable as a construction material because it:

a) can't be cleaned and disinfected properly;
b) deteriorates rapidly under moist conditions;
c) it has a porous structure;
d) provides an excellent environment for harboring large numbers of micro-organisms

Corroded metals contain small grooves, crevices and pits that trap micro-organisms. It is also impossible to properly clean pitted material.

It is also important for equipment to be properly located in the facility

Note: This includes locating equipment a sufficient distance from walls and ceilings to allow easy access for cleaning and sanitizing and to avoid niche areas where soil will tend to accumulate.

Having castors, on the equipment, is an alternative to providing sufficient space between walls and ceilings.

Equipment should also be located to ensure a one-way flow of product from raw to finished, without backtracking or crossover.

OBJECTIVE/OUTCOME

All equipment will be **designed**, **constructed** and **installed** in a manner that **minimizes** any chance of **contamination** of **meat**, **meat products**, **ingredients**, **packaging**, or the **facility** itself.

Note: "Common Industry Practice" recommends that equipment be built in accordance with international standards that have been established for the sanitary design and construction of equipment intended for slaughtering food animals and the handling of meat products.

Following are a number of information sources, from the National Sanitation Foundation (NSF), re international standards for equipment for meat facilities.

a) Hygiene Requirements for the Design of Meat and Poultry Processing Equipment - American National Standard ANSI/NSF/3A 14159-1 – (refer to **www.nsf.org**);

b) Hygiene Requirements for the Design of Hand Held Tools used in Meat and Poultry - American National Standard ANSI/NSF/3A 14159-2 (refer to **www.nsf.org**);

c) Assessment for Cleanability of Belting Materials used in Meat and Poultry Processing Equipment - American National Standard ANSI/NSF/3A 14159-3 (refer to **www.nsf.org**);

d) 3-A Sanitary Standards – (refer to **www.3-A.org**);

e) National Sanitation Foundation International Standards: (for a complete list of standards please refer to **www.nsf.org**).

For a listing of European standards, for Food Processing Machinery, refer to (**www.cenorm.be**).

All new, or used, equipment, will be monitored and documented prior to and following installation for compliance to design criteria.

Note: Appropriate design criteria will ensure that the equipment is:

a) suitable for its intended use;

b) constructed of corrosion resistant material;

c) free of any parts, or constituents, that could contaminate product;

d) capable of withstanding repeated washing and sanitation;

e) easily accessible for cleaning, sanitation and inspection;

f) readily disassembled for cleaning, sanitation and inspection

"Operating Manuals", printed by the manufacturer, will be on file at the facility for any commercially built new equipment.

Note: The manual must include, but is not restricted to, instructions for installation, cleaning and maintenance.

A customized **"Operating Manual"** will be on file for any, rebuilt or custom-built equipment.

Note: This manual, will be prepared by the supplier of the equipment, or the operator, and must contain the same information as manuals for commercially built new equipment.

Information from equipment "Operating Manual(s)" relating to cleaning, sanitation and maintenance, of equipment, will be included in the facility's written sanitation and equipment maintenance programs.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"New Equipment Approval Procedures"** will be met when*:*

1. Up-to-date, written, plant specific, **"Equipment Approval Procedures"** are on file.

   Note: These procedures will describe criteria for new and used equipment and utensils and how they will be inspected prior to and following installation to ensure that contamination risks are minimized.

2. Accurate up-to-date **"Equipment Inspection Records"** are on file.

   Note: These records must demonstrate that deficiencies relating to criteria for equipment and maintenance are identified, prioritized (if necessary) and corrected in a timely manner.

3. **"Operating Manuals**" are on file, at the facility, for all new, or used, equipment.

RELATED SECTIONS OF TIPM

02-N-01 Equipment Construction & Installation

SUBJECT: Non-food Maintenance Chemicals - Approval List	03-C-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section C.1.1.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Chemicals and other products used for the routine maintenance of equipment and utensils must be approved for use in a "Licensed Meat Facility" (facility).

Note: Approval is required because of the ever present possibility of contact between these agents and meat, or meat products.

To prevent possible mix-ups and cross contamination it is necessary to store food grade chemicals used for maintenance or sanitation of food contact surfaces, or of areas where carcasses, parts of carcasses and meat products are processed, packaged, labeled, shipped or otherwise handled separate from maintenance chemicals that are **not used** for these purposes.

Note: It is common practice for non-food chemicals to be stored in a locked cabinet separate from other food ingredients.

All chemicals must be stored properly and have proper labels attached to them at all times.

Note: This is essential in preventing the possible misuse of chemicals.

OBJECTIVE/OUTCOME

Non-food chemicals will be:

1. properly labeled;
2. of food grade;
3. used in a manner that prevents contamination of meat, meat products or other ingredients

   Note: This applies to chemicals used for maintenance where carcasses, parts of carcasses and meat products are processed, packaged, labeled, shipped or otherwise handled).

Documentation will be present to show that non-food chemicals are acceptable for use in a facility.

Note: A list of approved chemicals can be accessed at:

http://www.inspection.gc.ca/english/fssa/reference/refere.shtml

Examples of non-food chemicals in use include but are not restricted to:

a) water treatment chemicals;
b) boiler treatment chemicals;
c) chemicals for sanitation;
d) pesticides;
e) coatings;
f) paints;
g) lubricants and other materials used for food contact surfaces

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **Non-Food Maintenance Chemicals-Approval/List** will be met when an up-to-date **"List of Non-Food Chemicals"** is on file**.**

Note: This list should contain any of the following:

a) CFIA approval numbers, or letters;
b) Letters of "No Objection" from Health Canada

RELATED SECTIONS OF TIPM

03-C-01 New Equipment Approval Procedures

SUBJECT: Calibration Procedures - Records of	03-C-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section C.1.2.2	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Devices used to measure items, or factors that have an impact on food safety must be properly calibrated to ensure that all measurements are consistent and accurate. For example a serious microbiological food safety hazard could occur if a thermometer measuring refrigeration temperature was reading lower than the actual temperature. In this case the operator of the "Licensed Meat Facility" (facility) would be led to believe that the storage temperature was low enough to control bacterial growth when in fact it wasn't.

Note: Examples of equipment that need to be calibrated include, but are not limited to:

a) smokehouse temperature dials;
b) temperature probes, or guns;
c) thermometers for temperature controlled areas where meat is processed and stored;
d) scales, for weighing preservatives/nitrates etc;
e) pH meters;
f) humidity meters

Not only must thermometers be calibrated, they must be calibrated for the temperatures they are expected to function at.

Note: This means calibrating thermometers used to measure high temperatures in reference to the boiling point (100^0 C) and thermometers used to measure cold temperatures in reference to freezing (0^0 C).

Accurate calibration records must be kept in order to prove that critical equipment was properly calibrated.

OBJECTIVE/OUTCOME

An equipment and instrument calibration program will be developed and implemented.

Note: **"Calibration Programs"** provide assurance that equipment, or devices, that may impact food safety, are functioning properly.

"Process Control Instruments" will be calibrated on a regular, assigned frequency. The assigned frequency will be based on the manufacturer's manuals and may be dependant on the use of the instrument.

Note: Where not specified by the manufacturer's manual(s), examples of regularly assigned frequencies, for calibration, include, but are not restricted to calibrating:

a) scales, used to weigh nitrite, nitrates, or prague powders, at least once a year;

More frequent calibration may be required depending on the amount of product produced and the nitrite levels used. For very fine measurements the accuracy of the scale becomes more critical.

b) thermometers, used to monitor product temperature, at least once a month;

(Thermometers with an up-to-date yearly calibration certificate, on file at the facility, are exempt from the requirement for monthly calibration.)

c) temperature monitoring devices in climate controlled spaces (e.g. coolers and freezers), at least once every 6 months;

d) smoking, cooking, or baking, chambers should be checked for the presence of cold spots upon installation and at least once a year thereafter

Calibration will be done by authorized and trained personnel.

Calibration will meet acceptable standards.

Note: An example of a calibration standard is the requirement to ensure that product thermometers read accurately within a range of no more than +/- 0.6^0 C.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Calibration Procedures- Records Of"** will be met when:

1. An up-to-date, plant specific **"Calibration Procedure"** is on file at the facility.
   Note: This procedure should contain, but is not limited to:
   a) a list of equipment, or instruments, requiring regular calibration;
   b) methods of calibration;
   c) critical limits;
   d) frequencies;
   e) names of trained individuals responsible for calibrating
2. Documentation detailing equipment and instrument calibration methods and frequencies established and provided by the manufacturer is on file.
3. An up-to-date **"Training Record"** is on file.
   Note: This file should identify the training provided for all designated and formally trained personnel identified in the **"Calibration Procedures"**.
4. Up-to-date **"Calibration Records"** are on file.
   Note: Information in the "Calibration Records" includes but is not restricted to the following:
   a) equipment calibrated;
   b) date of calibration;
   c) initials of facility personnel doing the calibration;
   d) specifications and calibration limits;
   e) calibration results;
   f) corrective actions taken (if necessary)

RELATED SECTIONS OF TIPM

02-G-03 Temperature Recording Devices

03-G-03 Nitrate &Nitrite Addition

SUBJECT: Preventative Maintenance Procedures - Records of	03-C-04
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section C.1.2.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Equipment used to slaughter animals, dress carcasses and handle meat and meat products, in a "Licensed Meat Facility" (facility) must be maintained in a satisfactory operating condition. Failure to do so will lead to an increased risk of contaminating carcasses, parts of carcasses and meat products due to malfunctions or breakdowns.

Note: Examples of contamination hazards, from poorly maintained equipment, include but are not restricted to such things as:

a) leakage of lubricating fluids;
b) accumulation of metal filings;
c) dust, gases or other noxious contaminants;
d) poor sanitation because of pitting or cracking of meat contact surfaces;
e) foreign bodies, in meat products such as nuts or bolts;
f) lubricant contamination due to excessive use

A well developed **"Preventative Maintenance Program"** will minimize food safety hazards associated with defective equipment.

Note: This program should state the frequency of maintenance requirements, which in turn is largely dependant on the extent and conditions of use as well as the design and durability of the equipment.

Maintenance procedures must be performed in a manner that doesn't create any risk of contamination of meat, or meat products.

Note: The best way of reducing risk is to remove all meat and meat products from the area prior to starting maintenance procedures.

If an emergency situation makes it impossible to remove the meat products they must be suitably protected from contamination.

Scheduled preventative maintenance must be conducted at times when meat and meat products are not present.

Procedures to protect meat products must be part of the written **"Preventative Maintenance Procedures"**.

Maintenance procedures also have to be documented in order to monitor the effectiveness of the program through an examination of maintenance records and observation of the operating status of the equipment.

In addition to enhancing the production of a safe product a sound **"Preventative Maintenance Program"** saves money from reduced breakdowns which causes down time, product loss, employee overtime, etc.

OBJECTIVE/OUTCOME

An "**Preventative Maintenance Program**" will be:

1. developed;
2. implemented;

3. maintained;
4. updated (as required)

Note: This program will serve to ensure that equipment and devices with a potential impact on the safety of meat, or meat products, or that may affect the proper stunning of food animals are functioning as it should.

Meat and meat products will be protected from contamination while preventative maintenance activities are being performed.

Note: Common methods of ensuring meat, or meat products, are not contaminated is to remove them from the area during maintenance or to move the equipment, being maintained, to an area of the plant where meat is not handled, processed or stored.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for "**Preventative Maintenance Procedures - Records of"** will be met when:

1. Up-to-date, plant specific written **"Preventative Maintenance Procedures"** are on file.

   Note: These procedures should contain, but are not limited to the following:

   a) a list of equipment and their maintenance frequencies;
   b) roles and responsibilities of maintenance personnel;
   c) instructions for the proper conduct of preventative maintenance activities;
   d) methods of avoiding contamination of carcasses, parts of carcasses and meat products during maintenance and repair activities

2. **"Equipment Manuals"** provided by the manufacturer are on file.
3. Up-to-date **"Maintenance Records"** are on file.

   Note: These records, which must be **retained for** at least **one year**, should contain, but are not limited to the following:

   a) equipment serviced;
   b) date of servicing;
   c) initials of facility personnel doing the servicing;
   d) deficiencies detected;
   e) corrective actions taken

4. **"Maintenance Records"** confirm that maintenance activities are occurring according to written **"Preventative Maintenance Procedures"** and that deficiencies are followed up and repaired within a timely manner.
5. On site observations demonstrate that the premises, equipment and utensils are maintained in a constant state of general good repair.

RELATED SECTIONS OF TIPM

03-C-03 Calibration Procedures - Records of
03-D-04 Equipment Maintenance & Calibration Training
12-B-06 Mechanical Hazards

SUBJECT: Inedible Containers & Utensils - Control of	03-C-05
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section C.1.1.3	**Initial Release** Sept 1, 2009 **Page 1 of 1**

RATIONALE

Inedible meat products must be kept separate from edible meat products at all times.

Note: This is done to ensure that there is no mixing of edible and inedible materials.

To ensure separation, all containers and utensils, used for inedible product, must be clearly identified as such.

Note: The method of identifying containers and utensils used for inedible material must be permanent to ensure that these items are never used in areas where edible product is handled thus minimizing the risk of contaminating edible meat product.

OBJECTIVE/OUTCOME

Equipment, or utensils, used to collect, convey, or store, inedible meat products will be clearly identified.

Note: Identification can be accomplished by color coding or by clearly **marking** these items with the word "**INEDIBLE**".

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Inedible Containers & Utensils- Control of"** will be met when:

1. A facility specific written policy relating to the control of all containers and utensils used to handle or store inedible material has been developed.
2. Equipment, or utensils, used for inedible material, is clearly distinguishable from equipment, or utensils, used for edible material.

   Note: Labeling and/or color coding are the usual means of identifying equipment and utensils used for inedible materials.

   It is advisable to use color coding and/or labeling for items that are used for edible product as well.
3. The identification system for edible and inedible equipment:
   a) has been clearly communicated to facility personnel;
   b) is understood by all facility personnel

   Note: It is "Common Industry Practice" to put up posters that explain the identification system.
4. On site observations confirm that use of inedible and edible equipment is being controlled as described in the written policy.

RELATED SECTIONS OF TIPM

02-D-01 Inedible Facilities, Equipment & Containers
10-A-01 Inedible Material - Handling & Storage of - General
10-A-02 Inedible Material (condemned) - Handling & Storage of
10-A-03 Inedible Material (non-condemned) - Handling & Storage of
10-A-04 SRM Removal & Control Program
10-A-05 Inedible Material - Removal & Receipt of

SUBJECT: Health & Hygiene Policy	03-D-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section D.2.1 (1 & 2), D.2.2 (1, 2 & 3)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Two types of individuals are a hazard to the safety of meat and meat products:

1. Those with transmissible diseases.

   Note: A transmissible disease is one that is easily spread, either directly (person to person), or indirectly, through contamination of meat, or meat products, to the consumer of these products. Diseases of the digestive tract (e.g. diarrhea) are particularly dangerous.

2. Those who don't maintain an appropriate degree of personal cleanliness.

The operator of a "Licensed Meat Facility" (facility) must make facility personnel aware of the risk they pose of contaminating meat, or meat products with microbiological (bacteria, molds, fungi, etc.) agents particularly if they are sick or fail to practice appropriate personal hygiene.

Once they are aware of the hazards they need to be shown how to avoid contamination and be given the proper equipment to prevent contamination.

Note: A facility specific **"Health and Hygiene Policy"** is a key component of such training.

OBJECTIVE/OUTCOME

An acceptable, written, **"Health & Hygiene Policy"** will be developed and on file.

Note: The **"Health & Hygiene Policy"** must address items in D.2 of the MFS

The contents of the policy will be communicated to all facility personnel.

All staff will observe the rules set out in the **"Health & Hygiene Policy"**.

Note: It is critical that personnel working in meat processing, or storage areas, abide by this policy. The policy also applies to personnel working in ingredient and packaging material storage areas.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Health & Hygiene Policy"** will be met when*:*

1. An up-to-date written **"Health & Hygiene Policy"**, which addresses all of the criteria in section D.2 of the MFS, is on file at the facility.

   Note: The policy must be signed yearly, by the owner of the facility, or the highest ranking employee otherwise it won't be considered to be up-to-date.

2. The policy is posted in a prominent location.

   Note: The posting must be located so that it is visible to all personnel, inspectors, visitors and contractors.

3. Inspections confirm that the policy is being implemented by all personnel.
4. Training records reveal that all personnel have received training in matters pertaining to health and personal hygiene.

RELATED SECTIONS OF TIPM

03-D-02 Cleanliness & Protective Clothing
03-D-03 Hand Washing & Gloves
03-D-04 Non-hygienic Behavior - Avoidance of
03-D-05 Hygienic Behavior for Inspectors
03-D-06 Hygienic Behavior for Visitors & Contractors
03-D-07 Hygiene Training

SUBJECT: Cleanliness & Protective Clothing	03-D-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section D.2.1.1	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2011 **Page 1 of 4**

RATIONALE

To ensure that personnel handling meat and meat products, in a "Licensed Meat Facility" (facility) are not a source of contamination suitably washed and maintained work clothing must be available to replace, or completely cover, any outerwear that may come into contact with meat, or meat products.

Jewellery (including wrist watches, badges, buttons, etc) in addition to being a food safety hazard, are also a risk to the safety of personnel, particularly those that have to work near moving equipment.

Note: For this reason the wearing of **exposed jewellery** is **prohibited** in **food processing areas**.

Items of jewellery that cannot be removed such as tight fitting weddings bands, medic alert bracelets, or necklaces, etc. must be properly covered. Using a "band-aid", or tape, to cover a wedding band is not acceptable. Band-aids and tape can't be cleaned and may become dislodged contributing further to product contamination. The only acceptable means of covering is to wear a glove.

Facial adornments that cannot be removed, or are normally not removed for any reason (e.g. religious, cultural, etc.), must be adequately covered when worn where meat, or meat products are handled.

In addition to jewellery, items such as pens, pencils, thermometers, etc. are also hazards because they may accidentally fall into meat products. These types of items must not be carried in coat, or shirt, pockets.

Employees should attempt to keep their outer garments as clean as possible during operation. For example aprons should be cleaned continuously during operations and when not in use they should be kept in the place provided for them.

Note: Putting aprons, or other items, on the floor, for cleaning, is not acceptable. This practice leads to re-contamination.

Dirty boots are particularly hazardous in transferring contamination, including filth and micro-organisms, between different areas of a meat plant.

Note: To prevent contamination boots must be kept clean at all times and they should be washed before leaving areas like the kill floor.

Foot baths should be strategically located and used at entrance and exit areas of different parts of the plant.

Work clothing and equipment such as knives, hooks, steels, mesh gloves, etc. should be

stored in a central location, at or near the workstation.

Note: At the end of operations, all such equipment should be cleaned, sanitized and placed where they can be seen during the pre-operational inspection.

Cleanliness is jeopardized if these types of equipment are stored in the employee's locker. When security is an issue separate equipment storage lockers are preferable.

Falling hair is another contamination hazard therefore personnel working in, or entering into, areas where meats, or meat products, are exposed must wear appropriate head covering.

Note: To be effective coverings **must cover** all exposed **hair.**

OBJECTIVE/OUTCOME

Facility personnel will meet the minimum requirements that are outlined in this document for:

1. Jewellery
2. Work clothing
3. Footwear
4. Protective gear
5. Hair covering

Note: In this document the word **personnel applies to plant employees, inspectors, visitors, contractors**, or anyone else entering areas where meat, or meat products, are handled, processed or packaged.

Jewellery

All exposed, or visible, jewellery such as, but not restricted to, watches, rings, earrings, bracelets, etc. will be removed.

Note: Plain wedding bands, or rings that are too tight for removal, must be covered with a glove.

Work Clothing

All work clothing will be clean (i.e. suitably washed and maintained) at the start of operations.

Note: The word clothing applies to all facility apparel including, but not restricted to: aprons, shirts, pants, smocks, coveralls, etc.

Meat Inspection Branch (MIB) Inspectors have the authority to declare work clothes unsuitable at any time and can require that clothing be changed, or washed.

"Common Industry Practice" suggests that durable, neat-fitting clothing be worn.

Note: Loose fitting clothing is more dangerous around moving equipment, or machinery.

Smocks, or aprons, must completely cover outerwear.

Note: The use of smocks over coveralls should be encouraged, even on the kill floor.

Coveralls are not as sanitary because they are more difficult to remove when

they are being put on or removed.

"Common Industry Practice" suggests that shirts and smocks shouldn't have pockets.

Note: If pockets are essential, personnel must be aware of items likely to fall into meat and restrict these items to pockets that are located below the waist.

Waterproof smocks and aprons will be washed frequently during operations and before leaving and returning to the kill floor.

Work clothes will not be worn, or stored, in incompatible areas such as outside of the plant or in washrooms, lunchrooms, lockers, used for street clothing, etc.

Footwear

Footwear will be:

1. Dedicated to and not removed from the facility.
2. Designed for the workplace
3. Made of suitable material

   Note: Footwear for the kill floor must be waterproof.
4. Capable of being cleaned and placed in footbaths and
5. Have steel toes and
6. Good grips on the sole

   Note: The last two items on this list are important safety issues.

Boots will be dipped in an approved sanitizer when personnel move to a cleaner area.

Protective Gear

Protective gear such as helmets, wrist guards, aprons, steel-meshed gloves, scabbards, etc. must be of made of materials that can be cleaned and kept in a clean condition.

Note: If a "Wizard Glove" is used it must be covered with a rubber glove to reduce contamination and maintain cleanliness during processing.

All protective gear and other personal equipment that becomes grossly contaminated during operations (e.g., contact with fluid from a ruptured abscess) will be cleaned and sanitized immediately.

Hair coverings

Hairnets will be worn in all processing areas.

Note: The mesh must be small enough to prevent the escape of loose hair.

On the kill floor a suitable hair covering (e.g. hard hat, clean baseball cap, etc) may be worn instead of a hairnet providing the person's hair is no longer than shoulder length. If the **hair** is **longer than shoulder length a hairnet must be worn**.

Religious hair coverings are acceptable providing they are clean and all the hair is covered.

Beard nets (snoods) will be used to cover all exposed facial hair in processing areas.

Note: Other body hair (e.g. arm hair) must be kept under control.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Cleanliness & Protective Clothing"** will be met when*:*

1. A **written**, up-to-date **"Health & Hygiene Policy"** is on file at the facility.

   Note: This policy will include the requirements for cleanliness and appropriate dress for all plant personnel, visitors and contractors.

2. The policy is fully implemented.
3. On site observations demonstrate that all facility personnel, visitors and contractors are appropriately dressed and maintain an appropriate degree of cleanliness while the facility is in operation.

RELATED SECTIONS OF TIPM

03-D-01 Health & Hygiene Policy
03-D-03 Hand Washing & Gloves
03-D-04 Non-hygienic Behavior - Avoidance of
03-D-05 Hygienic Behavior for Inspectors
03-D-06 Hygienic Behavior for Visitors & Contractors
03-D-07 Hygiene Training

SUBJECT: Hand Washing & Gloves	03-D-03
REGULATORY REFERENCES: AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 AR 31/2006 *Food Regulation* Sections 30(1), (2), (3) & (4) Meat Facility Standards (MFS) Sections D.2.1 (1 & 2), 2.2.3	**Initial Release** Sept 1, 2009 **Page 1 of 4**

RATIONALE

In a "Licensed Meat Facility" (facility) the hands of plant personnel, inspectors, contractors and visitors are serious potential sources of contamination for meat and meat products.

To minimize the chance of contamination anyone entering into, or working in, a facility must wash their hands frequently and thoroughly using an approved liquid soap under running warm water.

Note: Instruction on how to properly clean hands and protect them afterwards must be provided.

If used properly, gloves will protect against contamination of meat and meat products. They also protect personnel from contacting disease causing organisms in the meat.

Note: When gloves are used they must be intact, clean and sanitized.

Gloves must be washed any time that the hands would normally be washed.

Note: Additional training of personnel is required to ensure that they know how to use gloves properly. This training should include prohibitions on touching any contaminated items such as equipment handles, doors knobs, wooden pallets, etc.

The use of cloth gloves should be discouraged because they soil quickly and subsequently contaminate meat products.

OBJECTIVE/OUTCOME

Facility personnel will meet the minimum requirements set out in this document for hand washing and the wearing of gloves.

Note: The word **personnel** applies to **plant employees, inspectors, visitors, contractors**, or anyone else entering areas where meat, or meat products, are handled, processed or packaged.

Hand Washing

Facility personnel will:

1. be adequately trained in proper hand washing procedures

   Note: Hands must be washed as follows:

   a) rinse with warm water;

   b) apply an approved liquid soap;

   c) scrub for 15-20 seconds;

   d) rinse soap off with warm water;

   e) thoroughly dry with a single service paper towel

   The flow of hot and cold water should be controlled with a remote device, (e.g. knee, or foot, controls).

   Proper hand washing has been shown to decrease bacterial counts by 90% providing the hands are thoroughly dried. Wet hands are more likely to spread germs than dry ones.

   Alcohol based cleansers and "no water" hand sanitizers do not destroy all bacteria, therefore **CANNOT BE RELIED ON as the only hand cleaner** in the facility.

   Following washing personnel must not touch their head, face, other parts of the body, etc., or place their fingers in, or around, the mouth or nose. If this is done the hands must be washed again.

2. wash their hands after the following activities:

   a) entering and leaving the kill floor

   b) **immediately before handling** any **meat**, or meat products

   c) between different in-facility activities

   d) after handling raw, or contaminated material

   e) immediately after using the washroom

   f) after sneezing or coughing

   g) after all breaks

   h) after smoking

   i) after any other event that may contaminate the hands

3. be supervised and/or monitored during hand washing procedures

   Note: Supervision and monitoring is essential to ensure that personnel follow appropriate sanitary hand washing procedures.

Hand washing facilities will be located at the entrance of all production areas.

Hand washing notices will be posted in prominent places throughout the facility.

Note: Hand washing notices must give instructions on when and how to properly wash hands.

Gloves

Gloves used to handle food will be:

1. Completely intact
2. Clean and sanitary at the start of the shift
3. Washed any time that hands would normally be washed

Note: Facility personnel must be aware that they must not touch anything with their gloved hands other than the meat products they are working on.

They must be aware that gloves have to be washed and sanitized if they touch anything other than meat, or meat products, including equipment handles, door knobs, wooden pallets, etc.

The routine **use of cloth gloves** will be **discouraged**.

Note: Cloth gloves soil quickly and can subsequently contaminate meat products.

"Common Industry Practice" suggests that when cloth gloves are used they should be covered with a disposable plastic or rubber glove.

Uncovered cloth gloves may be permitted in boning and cutting, or similar operations, where safety may be a factor. However, such use should be minimized and, preferably, the gloves should be covered by an accepted impervious material.

When used without a covering, cloth gloves must be changed regularly to prevent excessive soiling thus reducing the chances of cross contamination. .

Cloth gloves will **NOT BE USED to handle** exposed, **ready-to-eat** (RTE) meat **products**.

Note: Employees handling RTE products should wear disposable gloves that are:

a) sanitized before use;

b) changed frequently;

c) changed between products;

d) changed any time there are incompatible contacts, or activities

All protective gloves (e.g. "Wizard Gloves") with the exception of mesh gloves (metal) will be covered with an impervious material (e.g. rubber glove).

Note: This is done to prevent the buildup of contaminating material in the cracks and crevices of these types of gloves.

Personnel with bandages on cuts, burns, or abrasions, can wear disposable gloves providing they completely cover the bandaged area and are cleaned regularly during use.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Hand Washing & Gloves"** will be met when*:*

1. The facility's written **"Health & Hygiene Policy"** includes instructions on hand washing and the proper use of gloves.

   Note: These requirements apply to all plant personnel, visitors and contractors.

2. On site observations confirm that all facility personnel, visitors and contractors wash their hands properly and appropriately use the proper type of gloves.

RELATED SECTIONS OF TIPM

03-D-01 Health & Hygiene Policy
03-D-02 Cleanliness & Protective Clothing
03-D-04 Non-hygienic Behavior - Avoidance of
03-D-05 Hygienic Behavior for Inspectors
03-D-06 Hygienic Behavior for Visitors & Contractors
03-D-07 Hygiene Training

SUBJECT: Non-hygienic Behavior - Avoidance of	03-D-04
REGULATORY REFERENCES: AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section D.2.1 (1 & 2)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

The activities, or in some cases the lack thereof, of personnel, in a "Licensed Meat Facility" (facility) can be a significant source of contamination for meat and meat products.

Note: Personnel that come into direct contact with meat and meat products present the greatest risk.

Many aspects of personal hygienic behavior (e. g. use of tobacco, spitting, unprotected sneezing, etc.) can cause contamination of meat, or meat products.

Note: Non-hygienic behavior must be prohibited where meat, or meat products, are handled, processed, packaged, labeled, stored, or transported.

Personnel must be closely monitored for non-hygienic behavior.

Note: The operator of the facility is responsible for establishing a program to monitor the health and behavior of facility personnel.

OBJECTIVE/OUTCOME

Preventative measures will be in place to ensure that personnel avoid behaviors that could result in the contamination of meat, or meat products.

Note The word **personnel** applies to **plant employees, inspectors, visitors, contractors**, or anyone else entering areas where meat, or meat products, are handled, processed or packaged.

Examples of behaviors that could result in the contamination include, but are not limited to:

a) eating;
b) smoking;
c) chewing tobacco;
d) chewing gum;
e) spitting;
f) scratching the head, face, etc;
g) placing fingers in the nose, or mouth;
h) unprotected coughing;
i) unprotected sneezing;
j) placing objects (e.g. tags, pins, cords) in the mouth that will directly contact meat, or meat products

Personnel that scratch or place their fingers in their nose, or mouth, must be required to wash their hands after each occurrence.

Sneezing, when unavoidable, must be directed into the individual's arm or shoulder.

Eating and drinking will be confined to designated lunchroom areas.

Note: An exception to this requirement is the drinking of water from fountains, or water dispensers (plastic bottles), that are used in place of fountains.

Hand care will include the treatment and appropriate covering of all cuts and sores.

Note: Nail polish should not be worn by personnel that handle meat, or meat products.

Personnel with infected wounds, infections and sores will not be allowed to handle meat, or meat products.

Note: They can be reassigned to other duties in the facility.

Personnel handling inedible materials will wash their hands and change their clothing before handling meat, or meat products.

The movement of personnel between incompatible areas will be controlled.

Note: Incompatible areas include, but are not restricted to: raw vs. cooked product areas, dirty areas vs. clean areas, etc.

Personnel that have, or are suspected of having, a communicable disease will not be allowed to handle any meat, or meat products, at any stage of processing, packaging, or storage.

Note: The facility's **"Health & Hygiene Policy"** must include a requirement for personnel to report any illness, or condition, which may lead to the contamination of meat, or meat products.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Non-hygienic Behavior- Avoidance of"** will be met when*:*

1. The facility's **"Health & Hygiene Policy"** includes a section on hygienic behavior.

   Note: The requirements, for hygienic behavior, apply to all plant personnel, visitors and contractors.

2. On site observations demonstrate that personnel are observing appropriate hygienic practices.

RELATED SECTIONS OF TIPM

03-D-01 Health & Hygiene Policy
03-D-02 Cleanliness & Protective Clothing
03-D-03 Hand Washing & Gloves
03-D-05 Hygienic Behavior for Inspectors
03-D-06 Hygienic Behavior for Visitors & Contractors
03-D-07 Hygiene Training

SUBJECT: Hygienic Behavior for Inspectors	03-D-05
REGULATORY REFERENCES: AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section D. 2.1 (1 & 2)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Anyone that works in, or enters, a "Licensed Meat Facility" (facility), including inspectors, is a potential source of contamination.

Note: For the purpose of this document the term inspector refers to any individual employed by Alberta Agriculture and Rural Development (ARD) (e.g. meat inspectors, auditors, administrative personnel, etc.) or the Canadian Food Inspection Agency (CFIA).

Inspectors are bound by all of the rules of hygienic behavior including, but not restricted to:

1. Appropriate clean clothing
2. Hair covering
3. Sanitary footwear
4. Good personal hygiene, etc.

The intent of this document is to re-enforce that all inspectors are subject to the same rules of hygiene that apply to facility personnel, contractors and visitors, plus some additional ones.

OBJECTIVE/OUTCOME

Inspectors will abide by the **"Health & Hygiene Policy"** established by the facility and specifically with all of the requirements of TIPM documents 03-D-02, 03-D-03 & 03-D-04 without exception.

Inspectors are expected to set a good example, for other personnel, thus they are also bound by the following **special requirements**.

Note: The following requirements apply primarily to meat inspectors. Other government employees do not have to abide by all of the following (e.g. the requirement to wear white shirts and pants) but the general principals of cleanliness and clothing that is appropriate apply to these individuals.

All MIB Inspectors will:

1. Wear white shirts and pants at all times while on duty

   Note: Long sleeved shirts will be issued during the winter months to provide appropriate covering for under garments.

TIPM – 03-D-05 Page 2 of 2 – OBJECTIVE/OUTCOME (continued)

2. Be properly groomed and dressed in a manner that gives them a professional appearance

   Note: Dirty, worn, or torn, clothing is not acceptable and inspectors must not wear their facility clothing while travelling to and from the facility.

3. Wear a blue smock in live animal areas and a white smock in processing areas

   Note: A suitable place must be provided, close to the entrance to the live animal and processing area, where the smocks can be hung

   It is recommended that the facility adopt the same requirements, including the use of the same color, for facility personnel that have to move from one area to another.

4. Disinfect and sanitize their boots between each kill and between facilities
5. Keep their protective gear and other equipment clean and hygienic throughout operations
6. **NEVER use clothes** that were **used in another facility** unless they have been laundered between.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Hygienic Behavior for Inspectors"** will be met when*:*

1. The facility's **"Health & Hygiene Policy"** specifically states that inspectors are subject to the policy.
2. On site observation confirms that inspectors are observing the facility's hygiene requirements while conducting their duties.

RELATED SECTIONS OF TIPM

03-D-01 Health & Hygiene Policy
03-D-02 Cleanliness & Protective Clothing
03-D-03 Hand Washing & Gloves
03-D-04 Non-hygienic Behavior - Avoidance of

SUBJECT: Hygienic Behavior for Visitors & Contractors	03-D-06
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section D.2.1.2	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Anyone that works in, or enters, a "Licensed Meat Facility" (facility) is a potential source of contamination.

Note: This is particularly true of those that enter parts of the facility where meat is handled, processed, packaged, or stored, or where ingredients are present.

Visitors and contractors must abide by all of the rules of hygienic behavior including, but not restricted to:

1. Appropriate clean clothing
2. Hair covering
3. Sanitary footwear
4. Good personal hygiene, etc.

Note: Entrance must be denied to anyone not willing to comply with facility policies.

The entry of visitors and contractors into processing or storage areas should be discouraged.

Note: If entry to these areas is essential the facility operator must monitor and control both the access and subsequent behavior of all visitors and contractors.

The intent of this document is to re-enforce that all visitors and contractors are subject to the same rules of hygiene that apply to facility personnel.

OBJECTIVE/OUTCOME

Access of visitors and contractors, to the facility, will be strictly controlled.

Note: The entry of visitors and contractors into processing or storage areas should be discouraged unless absolutely necessary.

Visitors and contractors will be made aware of the **"Health & Hygiene Policy"** established by the facility. They will also be advised that they are expected to abide by the policy including specific requirements covered in TIPM documents 03-D-02, 03-D-03 & 03-D-04.

Note: "Common Industry Practice" suggests that visitors and contractors sign a log book when they enter and exit the facility and sign a document indicating that they have been informed of the **"Health & Hygiene Policy"** of the facility and that they agree to abide by all aspects of the policy.

Notices outlining the facility's visitor policy should be posted in a conspicuous location near the entrance to the facility.

TIPM – 03-D-06 Page 2 of 2 – OBJECTIVE/OUTCOME (continued)

Appropriate clothing and protective equipment will be provided to visitors and contractors that need it.

Note: Admission must be refused to anyone that does not agree to wear appropriate clothing.

Visitors and contractors will be monitored by designated facility personnel.

Note: This is done to ensure that all of the rules of hygiene are followed without exception.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Hygienic Behavior for Visitors & Contractors"** will be met when*:*

1. The facility's **"Health & Hygiene Policy"** specifically states that visitors and contractors are subject to the policy.

2. On site observation demonstrates that visitors and contractors, in meat processing, packaging or storage areas, are properly dressed and observe the facility's hygiene requirements while conducting their duties.

3. On site observation confirms that visitors and contractors are accompanied and monitored by facility personnel.

4. Visitors and contractors, where appropriate, sign in and out when they enter and exit the facility and acknowledge that they will abide by **"Health &Hygiene Policy"** of the facility.

RELATED SECTIONS OF TIPM

03-D-01 Health & Hygiene Policy
03-D-02 Cleanliness & Protective Clothing
03-D-03 Hand Washing & Gloves
03-D-04 Non-hygienic Behavior - Avoidance of

SUBJECT: Hygiene Training	03-D-07
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section D.1.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Training in personal hygiene and food handling practices is essential for "Licensed Meat Facility" (facility) personnel to understand what is required to prevent contamination of meat, or meat products from poor hygiene and food handling practices.

Basic sanitation and handling procedures, including the prevention of contamination and the importance of temperature control are essential topics.

Note: Other topics that need to be covered include:

a) the importance of meat hygiene to public health;

b) personal hygiene practices such as hand washing;

c) use of protective clothing;

d) sanitation and proper use of equipment;

e) personnel health requirements;

f) legislated requirements relating to hygiene

OBJECTIVE/OUTCOME

The facility will have a written **"Hygiene Training Program"** that **all personnel** will be required to **complete**.

Note: This program will include but is not restricted to:

a) examining, handling and slaughter of food animals;

b) examining, processing, or handling meat products, ingredients, packaging and labeling materials;

c) maintenance of equipment;

d) handling of chemical cleaning products;

e) cleaning and sanitizing equipment and the facility;

f) developing, implementing, maintaining and supervising prerequisite programs, HACCP (Hazard Analysis Critical Control Point) plans and other control programs, where applicable.

The **"Hygiene Training Program"** will ensure that personnel receive training in:

1. Basic hygienic practices.
2. Personal hygiene.
3. How to perform their assigned activities effectively and hygienically.

Note: "Common Industry Practice" suggests that personnel be required to demonstrate their knowledge before being signed off as adequately trained.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Hygiene Training"** will be met when*:*

1. An appropriate written **"Hygiene Training Program"** has been developed.

   Note: An appropriate training program includes, but is not restricted to, the following:

   a) personal hygiene;
   b) hygienic handling of meat and meat products;
   c) a review of the facility's **"Health & Hygiene Policy"**

2. Training is delivered in an appropriate manner

   Note: Appropriate delivery includes:

   a) training at the beginning of employment;
   b) reinforcement and updating at appropriate intervals, or as required

   Examples of when additional training is required include personnel showing repeated non-compliance or a change in duties.

3. **"Hygiene Training Records"** are on file at the facility:

   Note: As a minimum these records should:

   a) identify personnel that received the training;
   b) identify the type of training received;
   c) contain documentation that the trainees understood the training;
   d) be updated at least once a year.

4. On site observations demonstrate that facility personnel are knowledgeable of and are abiding by the **"Health & Hygiene Policy"** of the facility.

RELATED SECTIONS OF TIPM

03-D-01 Health & Hygiene Policy
03-D-02 Cleanliness & Protective Clothing
03-D-03 Hand Washing & Gloves
03-D-04 Non-hygienic Behavior - Avoidance of
03-D-05 Hygienic Behavior for Inspectors
03-D-06 Hygienic Behavior for Visitors & Contractors

SUBJECT: Sanitation Training	03-D-08
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section D.1.2 (3 & 4)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Cleaning and sanitation practices have two inherent food safety hazards:

1. Failure to eliminate microbiological agents (bacteria, molds, fungi, etc.) if not done properly.
2. Contamination of meat, or meat products, from:
    a) direct contact with cleaning, or sanitizing, agents;
    b) contact with surfaces contaminated with cleaning, or sanitizing, agents

Personnel responsible for cleaning and sanitation, and those responsible for conducting **"Pre-Operational Inspections"** and the completion of **"Sanitation Records"** must have appropriate training.

Note: Training is required to ensure that all personnel understand what is expected of them and to ensure that their tasks are completed properly without contamination of meat, or meat products.

OBJECTIVE/OUTCOME

There will be a written **"Sanitation Training Program"**.

ALL personnel involved in the development, implementation, maintenance and supervision of cleaning and sanitation activities **will complete this program**.

Note: Personnel required to take this training include those that perform "Pre-Operational Inspections", those that monitor personnel doing the cleaning and sanitizing, those completing the "Pre-Operational (Sanitation) Record" and those that actually do the cleaning and sanitizing.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Sanitation Training Program"** will be met when*:*

1. An appropriate written program has been developed.

    Note: An appropriate program includes, but is not restricted to, the following:

    a) handling of cleaning and sanitation chemicals;
    b) cleaning and disinfecting principles and methods;
    c) details on the cleaning and sanitizing of specific pieces of equipment;
    d) proper monitoring and recording of cleaning effectiveness.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

2. Training is delivered in an appropriate manner

   Note: Appropriate delivery includes:

   a) delivery to all personnel involved with cleaning and sanitation in any way including those who perform the "Pre-operational Inspection" or maintain "Cleaning and Sanitation Records";

   b) training at the beginning of employment;

   c) reinforcement and updating at appropriate intervals, or as required.

      Examples of when additional training is required include personnel showing repeated non-compliance or a change in duties.

3. **"Sanitation Training Records"** are on file at the facility:

   Note: These records should:

   a) identify personnel that received training;

   b) identify the type of training received;

   c) contain documentation that trainees understood the training; be updated at least once a year

4. On site observations demonstrate that facility personnel are knowledgeable of proper sanitation and that they are cleaning, sanitizing and completing the "**Pre-Operational Sanitation Record"** in a satisfactory manner.

RELATED SECTIONS OF TIPM

03-E-02 Approved Chemicals & Chemical Listing

03-E-03 Sanitation Procedures

03-E-04 Sanitation Schedule

03-E-05 Sanitation Records - Pre-Operational Inspections

SUBJECT: Manufacturing Control Training	03-D-09
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section D.1.2 (1 & 4)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

"Manufacturing Controls", or critical control points, are points in the process where control must be applied in order to ensure the production of meat and meat products that are safe for human consumption.

Training is the only way to ensure that "Licensed Meat Facility" (facility) personnel understand **"Manufacturing Controls"** and have the necessary skills to ensure that control points are effective.

Note: Training is particularly important for personnel that are monitoring, verifying and supervising activities relating to critical control points.

Knowledgeable personnel will ensure that immediate and appropriate action is taken if the manufacturing control process does not function as intended.

It is essential that proof of personnel training be available.

Note: Records need to be kept verifying what training was offered, when it was offered and to whom it was offered.

It is also important to verify that facility personnel have learned enough from the training program to perform their jobs properly

Note: Two common ways of verifying what participants have learned are written examinations and first hand observation as they perform new tasks.

OBJECTIVE/OUTCOME

A written **"Manufacturing Control Training Program"** will be developed.

This program will be presented to **all** personnel **involved** with manufacturing controls.

Note: Involved personnel include those that develop, monitor, supervise, verify and record manufacturing control activities as well as those actually implementing the controls.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Manufacturing Control Training"** will be met when*:*

1. An appropriate written **"Manufacturing Control Training Program"** has been developed.

   Note: An appropriate training program includes, but is not restricted to, the following:

   a) explanation of the importance of manufacturing controls;

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

b) critical limits;

c) monitoring procedures;

d) actions to be taken when limits are not met;

e) records that must be kept

2. Training is delivered in an appropriate manner

   Note: Appropriate delivery includes:

   a) delivery to all personnel with job responsibilities for manufacturing controls including personnel that monitor, verify, supervise and those that maintain **"Manufacturing Control Records"**;

   b) training at the beginning of employment;

   c) reinforcement and updating at appropriate intervals, or as required

      Examples of when additional training is required include personnel showing repeated non-compliance, or a change in duties.

3. **"Manufacturing Control Training Records"** are on file at the facility:

   Note: These records should:

   a) identify personnel that received training;

   b) identify the type of training received;

   c) contain documentation that the training was understood;

   d) be updated at least once a year.

4. On site observations and records confirm that facility personnel are knowledgeable about manufacturing control principles and are following them properly.

RELATED SECTIONS OF TIPM

03-G-01 Dressing Procedures - Red Meat Animals
03-G-02 Evisceration Procedures - Poultry
03-G-03 Nitrate & Nitrite Addition
03-G-04 Fermented Meats
03-G-05 Dried - Dehydrated Products
03-G-06 Product Cooking
03-G-07 Cooked Product Cooling
03-G-08 Carcass Cooling - Red Meat
03-G-09 Carcass Cooling - Poultry
03-G-10 Written Recipes
03-G-11 Ready to Eat (RTE) Storage & Handling
03-G-12 Allergen Control Program
03-G-13 Grinding Procedures

SUBJECT: Equipment Maintenance & Calibration Training	03-D-10
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections D.1.2 (2 & 4)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

All equipment in a "Licensed Meat Facility" (facility) must be maintained in peak operating condition. This is particularly important for equipment used in a manufacturing control process. Often these pieces of equipment require calibration in addition to maintenance.

Note: A cooker would be an example of a piece of equipment involved in a control process. Cookers must be maintained and calibrated to ensure and verify that proper cooking temperatures were reached. Proper cooking is essential to kill micro-organisms (bacteria, molds, fungi, etc.) that can cause disease or spoilage of meat and meat products.

Personnel responsible for maintenance and calibration must receive appropriate training to ensure that equipment is properly maintained and calibrated.

Note: It is important to verify, or prove that personnel have received appropriate training. There should be records showing:

a) what training was offered;

b) when it was offered;

c) who received the training

It is also important to verify that facility personnel have learned enough from the training program to perform their jobs properly.

Note: Two common ways of verifying what participants have learned are written examinations and first hand observation as they perform their new tasks.

OBJECTIVE/OUTCOME

A written **"Equipment Maintenance & Calibration Training Program"** will be developed.

This program will be presented to **all** personnel **involved** with equipment maintenance and calibration manufacturing controls.

Note: Involved personnel include those that develop, monitor, supervise, verify and record equipment maintenance and calibration activities as well as those actually performing the tasks.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Equipment Maintenance & Calibration Training"** will be met when*:*

1. An appropriate written **"Equipment Maintenance and Calibration Training Program"** has been developed.

   Note: An appropriate training program includes, but is not restricted to, information relating to the proper methods of maintaining and calibrating equipment that may impact the safety of meat and meat products.

2. Training is delivered in an appropriate manner

   Note: Appropriate delivery includes:

   a) delivery to all personnel with job responsibilities for equipment maintenance and calibration including those who monitor, verify and supervise those that perform equipment maintenance and calibration;

   b) training at the beginning of employment;

   c) reinforcement and updating at appropriate intervals, or as required

   Examples of when additional training is required include personnel showing repeated non-compliance or a change in duties.

3. **"Equipment Maintenance & Calibration Training Records"** are on file:

   Note: These records should:

   a) identify personnel that received training;

   b) identify the type of training received;

   c) contain documentation that trainees understood the training;

   d) be updated at least once a year.

4. On site observations and records confirm that facility personnel have sufficient knowledge to properly maintain and calibrate equipment.

RELATED SECTIONS OF TIPM

03-C-03 Calibration Procedures - Records of

03-C-04 Preventative Maintenance Procedures - Records of

SUBJECT: Role of the Inspector - re Sanitation	03-E-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1, 39(1), (2) & (3) Meat Facility Standards (MFS) Section E.1.1 (2 & 3)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Unsanitary or dirty equipment and/or facilities are significant food safety hazards because they contribute directly to the contamination of meat products.

To eliminate this food safety risk a **"Sanitation Program"** must be put into place.

Meat Inspection Branch (MIB) Inspectors will verify that equipment has been properly cleaned and sanitized by conducting a **"Pre-operational Inspection"**.

Note: It is not the role of the inspector to develop or carry out the "Sanitation Program". His/her responsibility is to verify that the operator of the "Licensed Meat Facility" (abattoir) is performing sanitation in accordance with the facility's written **"Sanitation Program"**.

The inspector's verification role doesn't absolve abattoir operator from conducting their own regular **"Preoperational Inspection"**, nor is the inspector responsible for the completion of the facility's "Pre-Operational (Sanitation) Record".

A spirit of cooperation, between the abattoir operator and the "MIB Inspector" enhances the ability of the inspector to verify implementation of any portion of the facility's documented **"Sanitation Program"**.

OBJECTIVE/OUTCOME

A written **"Sanitation Program"** will be developed and implemented

Note: Strict adherence to this program will ensure that the premises and facility are properly cleaned and sanitized.

Note: The facility's "Sanitation Program" must function independently from the presence of and/or aid of an inspector therefore it is not appropriate to give the meat inspector a formally assigned position in the program.

The MIB Inspector, assigned to the abattoir will, as part of their regular duties:

1. Conduct a **"Pre-operational Inspection"**

   Note: The kill will not be allowed to start until the inspector is satisfied that facilities and all equipment display an appropriate level of sanitation.

2. Initiate action whenever facility and/or equipment sanitation is deemed to be unsatisfactory.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Role of the Inspector"** will be met when:

1. A pre-operational inspection protocol has been developed for the facility.
2. Requirements for satisfactory cleaning and sanitizing are communicated to plant management.
3. Plant management is immediately advised about any deficiencies that are serious enough to result in suspension of the kill.
4. Plant management understands the consequences of non-compliance.

   Note: In increasing severity, consequences of non-compliance include:

   a) delay of the kill while sanitation deficiencies are corrected;

   b) written warnings for habitual deficiencies;

   c) suspension of inspection services for refusal to comply
5. The inspector is given sufficient time to conduct a thorough and complete **"Pre-operational Inspection"**.

   Note: In most facilities 10-15 minutes should be sufficient.

RELATED SECTIONS OF TIPM

02-F-01 Facilities & Equipment - Adequacy of

03-E-03 Sanitation Procedures

03-E-05 Sanitation Records – Pre-operational Inspections

SUBJECT: Approved Chemicals & Chemical Listing	03-E-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 AR 31/2006 *Food Regulation* Sections 20(2) & 29 Meat Facility Standards (MFS) Section E.1.1.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

The use of chemicals that have not been approved by the Canadian Food Inspection Agency (CFIA) and/or the Health Protection Branch of Health Canada could result in serious food safety hazards should these products contaminate any meat, or meat products.

Note: Only approved cleaners, disinfectants, sanitizers and other chemicals can be used in a "Licensed Meat Facility" (facility)

Approved chemicals must also be used and stored in accordance with specific recommendations.

Note: Direct, or indirect, contamination, of meat and meat products, may occur when chemicals are used at improper concentrations or through accidental contact due to improper storage.

Approved chemicals are effective, for their stated purpose, at the concentration indicated on the label and should only be used at that level.

Failure to meter, or measure chemicals, to ensure proper concentration is a common cause of chemical contamination.

Detailed information about non-food chemical agents can be found in a publication entitled the "*Reference Listing of Accepted Construction Materials, Packaging Materials and Non-Food Chemical Products*".

Note: This document can be accessed at:

http://www.inspection.gc.ca/english/ppc/reference/cone.shtml

OBJECTIVE/OUTCOME

Only CFIA or Health Canada approved non-food chemicals will be used at the facility.

Non-food chemicals will be:

1. Transported, stored, labeled and used in a manner that prevents the accidental contamination of meat, meat products and other materials that may contact meat or meat contact surfaces.
2. Used in accordance with the manufacturer's directions.

   Note: Strict adherence to the manufacturer's recommendations for the transportation, application and storage of non-food chemicals is the best assurance against accidental contamination of carcasses, parts of carcasses, meat products, or ingredients.

The facility will have:

1. A list of all non-food chemicals in use, or stored, at the facility.
2. CFIA approval numbers for all chemicals, or a "letter of no objection" from Health Canada.
3. Written "Sanitation Procedures".
4. "Mixing Logs".
5. "Service Records" for any automatic dispensing machines that are used.

Only properly trained facility personnel will use non-food chemicals.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Approved Chemicals & Chemical Listing"** will be met when:

1. An up-to-date **list of** all **non-food chemicals** is on file.

   Note: This list applies to chemical agents used for cleaning and sanitizing, in parts of the facility where carcasses, parts of carcasses and other meat products are processed, packaged, labeled, shipped or otherwise handled. There must be evidence, on the list, that all agents are CFIA or Health Canada approved.

2. All non-food chemicals, used for cleaning and sanitizing, are properly described and used according to the manufacturer's instructions.
3. **Written "Sanitation Procedures"** have been developed and are in use for all cleaning and sanitizing chemicals.

   Note: These procedures will include, but are not restricted to, instructions for mixing, storing and use, as well as instructions on monitoring chemical concentrations to ensure that they are in conformity with the manufacturer's recommendations.

4. All non-food chemical agents are stored in accurately labeled containers.
5. A "**Mixing Log"** will be on file if the facility manually mixes cleaners and sanitizers.

   Note: Log entries should:

   a) be made at least once a week;

   b) verify the concentration of chemicals, sanitizers, or boot dips, that have been used

6. "**Service Records"** will be on file if the facility uses equipment that automatically dispenses predetermined concentrations of non-food chemicals.

   Note: These records must demonstrate that tips of all dispensing devices are regularly serviced and checked by a qualified, trained person (e.g. a representative of the company that made the dispensing device).

RELATED SECTIONS OF TIPM

02-F-04 Non-Food Chemicals - Storage of

03-C-03 Sanitation Procedures

12-A-03 WHMIS Program for Chemicals

SUBJECT: Sanitation Procedures	03-E-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 AR 31/2006 *Food Regulation* Sections 29 (1) & (2) Meat Facility Standards (MFS) Sections E.1.1 (1 & 2)	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE:

A sound "Sanitation Program" is essential for the prevention of food safety hazards due to the contamination of meat products with waste organic and inorganic materials.

Note: Common organic waste materials encountered, in a "Licensed Meat Facility" (facility), include fats, greases, oils, protein from blood and meat, carbohydrates from binding ingredients, etc.

Scale, from hard water, is a common inorganic material that has to be dealt with.

These wastes pose a significant food safety risk because they are commonly contaminated with micro-organisms (bacteria, fungi, molds, etc.).

An effective "Sanitation Program" will ensure the removal of all organic matter and a significant number of micro-organisms.

To ensure consistency, sanitation practices must be documented (recorded).

Note: Without documentation, procedures will not be performed, in a consistent manner, when there are changes in personnel or supervisory personnel.

OBJECTIVE/OUTCOME:

Comprehensive, written "**Sanitation Procedures**" will be developed and implemented.

Note: These procedures will include cleaning schedules and methods that will minimize, or prevent, contamination of the premises, facilities, equipment, meat products, ingredients, packaging materials and other materials.

The **"Sanitation Program"** will include:

1. Preliminary preparation.

Note: This includes:

a) removal of edible meat products;

b) removal of garbage;

c) removal of materials that must not get wet (e.g. packaging materials);

d) review of instructions for the dismantling of equipment to be cleaned;

e) protection of water sensitive equipment (e.g. non-water resistant motors, electrical boxes, etc.)

2. A dry clean up process.

   Note: During this phase brooms, squeegees, shovels, etc. are used to remove all loose debris on tables, equipment surfaces and floors.

3. A "Pre-Rinse" phase.

   Note: Water that is hot enough to melt fats and grease but not enough to coagulate proteins should be used.

   Although not essential, water under pressure will make this process more effective.

   It is important to remove all pieces of meat, fat and other debris from floors, walls, equipment, etc. Detergents are not effective on dirty surfaces.

4. Application of the cleaning compound.

   Note: Application methods that increase contact time between the detergent and soiled surfaces are the most successful. The use of a foaming agent is a good way of increasing contact time.

5. Sanitizing.

   Note: The purpose of sanitizing is to significantly reduce the number of micro-organisms on surfaces. It is particularly important that the vegetative (active growth stages) forms, of common disease causing micro-organisms are killed during sanitizing.

   Cleaning gets rid of visible contaminants but **only** the **sanitizers get rid of micro-organisms**.

   It may be necessary to repeat the sanitizing step. A good example where this is needed would be the case of a kill room that is only used once a week. An effective cleaning and sanitizing program, in this instance, would involve cleaning and sanitizing immediately after use followed by flood sanitizing immediately before to the next use in order to destroy any micro-organisms that have been deposited on surfaces in the interim through dust and air movement, etc.

Equipment will be cleaned and sanitized between species.

In addition to written "**Sanitation Procedures**" the following documents will be on file, at the facility:

1. Operational Sanitation and Housekeeping Procedures
2. Sanitation Training Records

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for "**Sanitation Procedures"** will be met when:

1. Up-to-date **written**, plant specific **"Sanitation Procedures"** are on file.

   Note: These procedures must have detailed step-by-step procedures, for all rooms and equipment, which include:

   a) cleaning and sanitizing methods;

   b) the person responsible;

   c) the frequency of cleaning;

   d) a description of sanitation equipment;

   e) chemical agents to be used;

   f) concentrations, temperatures and other specifications for the cleaning chemicals;

   g) applicable disassembly and assembly instructions;

   h) monitoring activities to demonstrate the effectiveness of sanitation (e.g. swabbing to culture micro-organisms);

   i) special cleaning and sanitation procedures, e. g. mid-shift cleanup for processing rooms that operate in excess of 10^0 C (50^0 F), control of chemical sanitizers, additions to and concentrations of boot baths, removal of inedible waste, clean-up after hitting a cyst or abscess, clean up of human blood, etc.).

2. On site observations demonstrate that the facility, equipment and utensils are cleaned and sanitized in accordance with the written **"Sanitation Procedures"**.

3. "**Sanitation Training Records"** are on file at the facility.

   Note: These records should demonstrate that personnel involved with cleaning and sanitizing activities have been properly trained.

RELATED SECTIONS OF TIPM
03-D-08 Sanitation Training
03-E-02 Approved Chemicals & Chemical Listing
03-E-04 Sanitation Schedule
03-E-05 Sanitation Records - Pre-operational Inspections

SUBJECT: Sanitation Schedule	03-E-04
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 AR 31/2006 *Food Regulation* Sections 29 (1) & (2) Meat Facility Standards (MFS) Section E.1.1 (1 & 2)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

All areas of a "Licensed Meat Facility" (facility) and the equipment used in it must be thoroughly cleaned and, where appropriate, sanitized in order to maintain a hygienic (clean) environment and prevent the contamination of meat products.

The degree and type of use, of individual areas and pieces of equipment, varies greatly in the facility. This means that one cleaning schedule cannot apply to all areas and/or to all pieces of equipment.

Note: Examples of variable needs for sanitation include:

a) kill floors which require immediate sanitation after each use;

b) coolers which may only need to be cleaned once a week;

c) freezers which may only need to be cleaned twice a year

Because of this variability, separate schedules may be needed to ensure that each area and/or item receives appropriate attention at appropriate times.

A **"Sanitation Schedule"** may be required to keep track of and record the implementation of the various schedules needed for the cleaning of rooms, areas and equipment that are not cleaned every day (e.g. smokehouses, coolers, cooling units, screens, water storage facilities, spice rooms, storage areas, delivery vehicles, etc.).

OBJECTIVE/OUTCOME

The facility will have a fully developed **"Sanitation Schedule",** if required.

Note: The "Sanitation Schedule" must clearly identify sanitation schedules for all rooms and/or items that are not cleaned and/or sanitized on a daily basis.

The **"Sanitation Schedule"** will be.

1. Fully implemented
2. Continuously updated

The **"Sanitation Schedule"** will be used as a record of the cleaning of any area and/or equipment not included on the "Daily Pre-Operational Inspection Record".

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for a "**Sanitation Schedule"** will be met when a **written**, facility specific, "**Sanitation Schedule"** is on file which:

1. Contains detailed **written "Sanitation Procedures"**

   Note: These procedures will include the following details for all equipment, rooms and areas in the facility:

   a) frequency of sanitation;

   b) personnel responsible;

   c) methods;

   d) tools;

   e) chemicals

2. Demonstrates that all sanitation activities have been recorded.
3. Shows evidence of continuous up-dates as required.

RELATED SECTIONS OF TIPM

03-E-02 Approved Chemicals & Chemical Listing

03-E-03 Sanitation Procedures

03-E-05 Sanitation Records - Pre-operational Inspections

SUBJECT: Sanitation Records - Pre-operational Inspection	03-E-05
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 AR 31/2006 *Food Regulation* Sections 29 (1) & (2) Meat Facility Standards (MFS) Section E.1.1(2 & 3)	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

"Licensed Meat Facility" (facility) sanitation practices have a direct impact on the safety and quality of meat and meat products.

The production of safe meat and meat products requires the processing environment to be free from environmental and microbiological contamination.

Sanitation of equipment surfaces that come into direct contact with meat products is of primary importance.

Note: Items in this category include table tops, saws and the interior surfaces of most processing equipment.

Equipment used to process meat products must be dismantled to facilitate effective cleaning and sanitation.

It is **important** for these pieces of equipment **to remain disassembled until completion of** the "Pre-operational Inspection".

Next in order of importance are room surfaces such as floors, walls, ceilings and overhead fixtures.

Note: In addition to normal cleaning these surfaces must be kept free of cracks, dust, rust, and other extraneous material.

Allowing condensation to form above product processing areas is not acceptable. Condensation must be consciously looked for in every daily "Pre-operational Inspection".

Although of a lower level of importance **the external and under-surfaces of equipment**, such as product trucks, emulsifiers, mixers, etc., **must be kept clean**.

Note: Although these items do not come into direct contact with product, contamination can be transferred to product contact areas by hands, clothing and equipment.

The sanitation of employees' equipment, including knives, steels, hooks, mesh gloves, aprons, etc., is also a component of the "Sanitation (Pre-Operational) Record".

To ensure an effective program, sanitizers must be checked, regularly, to ensure that they have the ability to function correctly and are applied at the required temperature.

Periodic swabbing of production areas, to determine whether micro-organisms (bacteria, fungi, molds, etc.) are present or not, is an excellent way to verify that the cleaning processes and the chemicals/sanitizers are effectively eliminating micro-organisms as well as visual debris.

OBJECTIVE/OUTCOME

Detailed written records of all "Pre-operational Inspections" will be kept on file, at the facility, for at least one year.

Note: These records must contain any corrective actions implemented to ensure that the premises, utensils and equipment are properly cleaned.

The records will demonstrate that:

1. A thorough "Pre-operational Inspection" of all production areas was conducted each time the facility was put into operation.

   Note: This inspection is necessary to ensure that sanitary standards have been met prior to the start of operations.

2. All areas of the facility and equipment was properly cleaned and sanitized sufficient to maintain a clean environment and prevent contamination of meat products.

All personnel designated to carry out sanitation procedures must have appropriate training and records of personnel training are kept on file, at the facility.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Sanitation Records – Pre-operational Inspection"** will be met when:

1. An up-to-date, **written**, facility specific **"Pre-Operational Inspection Procedure"** is on file.

   Note: This document must describe how the "Pre-operational Inspection" will be performed and identify all of the records associated with "Pre-operational Inspections".

2. "**Pre-Operational Records**" are completed during and as part of the onsite "Pre-Operational Inspection".

3. Accurate and up-to-date, facility specific "**Pre-Operational Inspection Records**", are on file.

   Note: These records, which must be kept for at least a year, may include, but is not limited to:

   a) date of inspection;

   b) areas inspected;

   c) statement of satisfactory sanitation or, **if** they have **not** been **cleaned to satisfaction;**

   d) an explanation of the deficiencies;

   e) corrective actions taken;

   f) initials of the person that performed the inspection and the person verifying that the inspection took place.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

1. "**Pre-Operational Inspection Records**" demonstrate that the sanitation program is effective and includes effective monitoring and control of sanitation activities.
2. **"Sanitation Training Records"** are on file.

   Note: These records should demonstrate that the individuals conducting the "Pre-operational Inspections" and maintaining the "Pre-operational Inspection Records" have received appropriate training.

RELATED SECTIONS OF TIPM

03-D-08 Sanitation Training

03-E-03 Sanitation Procedures

03-E-04 Sanitation Schedule

SUBJECT: Pest Control Procedures	03-E-06
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 20 AR 31/2006 *Food Regulation* Section 21 Meat Facility Standards (MFS) Section E. 2.1.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

The presence of pests in a "Licensed Meat Facility" (facility) can cause serious food safety problems therefore every effort needs to be made to keep them out of the facility.

Note: Pests include mice, birds and other vermin as well as flying and crawling insects.

The issue of pest control is serious enough that specific legislation has been developed to deal with this issue. Both the Alberta *Meat Inspection Regulation* (AR 42/2003) and the Alberta *Food Regulation* (AR 31/2006) speak to this issue.

Section 15.1 of AR 42/2003 gives legal authority to the MFS which in turn has specific requirements relating to pest control

Section 21(1) of AR 31/2006 states that commercial food establishments and any surrounding area, premises, or facilities supporting the commercial food establishment must be kept free of pests and of conditions that lead to the harbouring or breeding of pests.

Section 21(2) of AR 31/2006 requires that a written record of all pest control measures used in the commercial food establishment and surrounding area, premises and facilities referred to in subsection (1) must be maintained.

Pest prevention and control requires:

1. Adequate construction and maintenance.
   Note: Adequate construction includes using a variety of screens, or other protection devices, designed to keep pests out of the facility.
2. Effective housekeeping practices to ensure cleanliness of the facility and surrounding premises
   Note: The absence of food scraps, in the facility, reduces the attraction to pests while cleanliness of the surrounding grounds will eliminate, or reduce, ideal breeding conditions for pests.
3. Regular inspections to determine whether pests are present.
   Note: Regular inspections serve to identify evidence of pest infestation before damage and contamination has occurred.
4. Regular monitoring of pest control devices.
   Note: The presence of pests should be recorded.

It may be advantageous to hire an outside agency, or company, to look after pest control.

Note: Whether pest control is looked after in house, or contracted out, the requirements are the same for inspections, documentation, etc.

OBJECTIVE/OUTCOME

There will be written **"Pest Control Procedures".**

The program will be:

1. Implemented;
2. Documented;
3. Maintained;
4. Updated as required;
5. Effective in covering the requirements of sections 5-6 (a) to (e) of the MFS.

The program will include effective and safe, schedules and methods for the prevention of contamination of the premises, equipment, utensils, meat products and ingredients.

Regular inspections, for the presence of pests, will be conducted by the individual(s) person(s) identified in the written **"Pest Control Procedures"**.

Note: "Common Industry Practice" indicates that inspections should be conducted at least once a week.

Results of the **"Pest Control Procedures"** will be monitored and recorded regularly.

Note: Records should include the details of any short, or long, term corrective actions that were required and/or undertaken.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **Pest Control Procedures** will be met when*:*

1. There is up-to-date **written**, plant specific, **"Pest Control Procedures"**.

   Note: The activities and responsibilities, of any outside individual, or company, contracted for pest management and control, must be documented in the written program.

2. The procedures are fully implemented as written, including the documentation of findings.
3. Inspection frequencies, in the written procedures, are determined to be effective in the prevention of pest issues.
4. On site observation demonstrates that there is no evidence of pests in the facility.
5. Potential pest entry sites are regularly monitored and maintained for effectiveness as part of the "**Interior and Exterior, Inspection Procedures and Records"**.

RELATED SECTIONS OF TIPM

03-A-02 Internal Premises Inspection
03-A-03 External Premises Inspection
03-E-07 Pest Control Devices
03-E-08 Pest Control Records
03-E-09 Pesticide Use & Listing

SUBJECT: Pest Control Devices	03-E-07
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 20 AR 31/2006 *Food Regulation* Section 21 Meat Facility Standards (MFS) Section E.2.1.1	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Many pests carry disease causing micro-organisms (bacteria, fungi, molds, etc.) and parasites.

Note: Pests include mice, birds and other vermin as well as flying and crawling insects.

Micro-organisms are present in the urine, manure and other bodily secretions of pests. When these agents come into contact with meat, or meat products, serious food safety hazards can develop thus it is imperative that appropriate pest control measures be put in place.

In general pest control is achieved through:

1. Proper construction.
2. Maintaining the “Licensed Meat Facility” (facility) in a good state of repair.
3. Using housekeeping practices that keeping the facility clean and ensure that no food scraps are left out.
4. Using screens, or other protection devices, on entrances.
5. Elimination of nearby pest breeding grounds by ensuring cleanliness of the outside premises.
6. Using pest control companies
7. Using traps or other pest control devices.
8. Regular inspections of the premises and pest control devices

   Note: Inspections are needed to identify evidence of pest infestation before damage and contamination occur and to monitor the effectiveness of control measures.

The improper use and/or storage of chemicals, or biological, agents, intended for pest control, introduce their own a potential food safety hazards. These products must be used in a manner that minimizes any risk.

OBJECTIVE/OUTCOME

The facility will:

1. Develop written **"Pest Control Procedures"** that effectively prevent the entry of pests into the facility and effectively eliminate them should they gain access.

   Note: These procedures must include:

   i) location of exterior traps;

   ii) location of interior traps;

   iii) details of baits that are used;

   iv) inspection schedules

2. Implement all of the measures in the written **"Pest Control Procedures"**.
3. Conduct regular inspections to ensure that the control procedures are effective.
4. Document inspection findings and any mitigation steps required.
5. Have on file a map indicating the location of all internal and external pest control devices.

   Note: Pest control devices include:

   a) interior pest traps;

   b) exterior bait stations;

   c) devices designed to electrocute insects;

   d) traps that lure insects with light

   These devices may be purchased and installed by the facility or provided by an outside pest management company.

   General Recommendations for Internal Pest Control

   All traps must be accessible to pests, at all times, and maintained in proper working order.

   Any type of **open**, or **snap trap** (with or without bait) is **not acceptable for use** inside the facility.

   Exposed glue boards and/or sticky tapes are not acceptable for use in the facility. When these devices are used inside they must be placed in an easily viewable container, and changed frequently to ensure that the surface remains shiny and sticky, with no build up of dust, or debris.

   "Common Industry Practice" suggests that internal pest control devices should be placed in close proximity to every outside opening (one on each side of the entrance, if possible) and every 25 feet along interior perimeter walls and along the walls of all enclosed dry food and packing storage areas. At least one device should be placed along walls that are less than 25 feet long.

It is not necessary to place devices in office areas and they don't have to be placed in wet areas, or areas of high traffic, providing devices are present on either side of the closest exterior door(s).

All traps should be on the floor and placed so that the opening is flush to the wall. Access to the trap should not be blocked by any boxes or other materials.

When devices designed to electrocute, or trap, insects are used in processing rooms; they must be positioned at least 10 feet from covered/protected product, or packaging material, and at least 30 feet from exposed meat products, equipment, or packing material.

General Recommendations for External Pest Control

"Common Industry Practice" suggests that outside bait stations, or trapping devices, should be in close proximity to secured doorways, or other openings. The use of outside trapping devices is most important where there is vegetation around, or in close proximity to, the facility.

Poisonous bait stations consist of an enclosed device (sometimes a plastic housing) with poison bait inside. Openings must be small enough to prevent the entry of any animal only than pests.

The **use of bait stations is prohibited inside the facility**. **Only approved baits may be used on the exterior.**

All baits stored in the facility must be properly labeled, stored under controlled access and handled only by designated and trained personnel. Chemical and **approval numbers** must be kept on file, at the facility.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **Pest Control Devices** will be met when:

1. An up-to-date, **written** plant specific **"Pest Control Procedure"** is on file.
2. An up-to-date **map of** all **pest control devices** is on file.
3. Devices are located as specified on the map.
4. Devices are of an acceptable type.
5. An adequate number of devices are in place.
6. All devices are clean and in working condition.
7. Bait station chemicals are recorded and **approval numbers** on file at the facility.
8. Devices are monitored and recorded in accordance with the procedures".

RELATED SECTIONS OF TIPM

03-E-06 Pest Control Procedures
03-E-08 Pest Control Records
03-E-09 Pesticide Use &Listing

SUBJECT: Pest Control Records	03-E-08
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 AR 31/2006 - *Food Regulation* Section 21(2) Meat Facility Standards (MFS) Section E. 2.1.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

It is mandatory for a "Licensed Meat Facility" (facility) to keep records pertaining to "Pest Control Activities".

Note: Any surrounding area, premises or facilities supporting a commercial food establishment must be kept free of pests and of conditions that lead to the harbouring or breeding of pests.

A written record of all pest control measures used in the commercial food establishment and surrounding area, premises and facilities must be maintained.

The facility's "Pest Control Program" calls for pest devices to be monitored.

Note: Problems noticed, in any part of the plant, must be documented and both short and long-term (if indicated) corrective action must be initiated.

Keeping records of pest inspection findings, and corrective actions is an essential component of any monitoring program.

Note: Records serve to:

a) identify problems;

b) provide a record of intervention procedures;

c) document the effectiveness of intervention procedures

Consistently finding large numbers of pests in the traps verifies that pests are entering the facility.

Note: Simply recording pest sightings without solving the root cause of the problem does not constitute an effective "Pest Control Program.

OBJECTIVE/OUTCOME

Up-to-date **"Pest Control Records"** will be on file.

Note: These records will document the inspection of all pest control devices in the facility and all corrective actions instituted to ensure that pests are eliminated from the facility.

The **"Pest Control Records"** will contain the following minimum information:

1. Date the devices were checked.

2. Number of pests found in each device (if any).
3. Corrective actions taken (if required, both short and long term).
4. Initials of the person doing the monitoring.
5. Dates when baits and/or bait stations were replaced (if applicable).

The operator of the facility will monitor the records and activities of any outside contractors that are hired to look after pest control.

Note: Monitoring is required to ensure that the facility's "Pest Control Program" is being followed.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Pest Control Records"** will be met when*:*

1. Up-to-date **"Pest Control Records"** are on file, at the facility.

   Note: These records must accurately reflect the results of monitoring the **"Pest Control Program"**.

2. Monitoring results are recorded on the day of monitoring and kept on file for at least one year.
3. There is an accurate record of short and long term corrective actions for pest control.
4. Records show that follow up activities were implemented, as required, to address any occurrences of pests in the facility.

RELATED SECTIONS OF TIPM

03-E-06 Pest Control Procedures
03-E-07 Pest Control Devices
03-E-09 Pesticide Use & Listing

SUBJECT: Pesticide Use & Listing	03-E-09
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 AR 31/2006 *Food Regulation* Section 21(2) Meat Facility Standards (MFS) Section E.2.1.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

The use of approved pesticides, in a "Licensed Meat Facility" (facility), is only **allowed if** all **other** pest control **measures fail**.

The presence of **pesticide residue** in meat or on surfaces of equipment that comes into contact with meat is a **serious contamination** issue.

Note: For this reason the use of chemical agents, to control pests, should only be undertaken by professionals or under the direct supervision of personnel trained in the proper application and storage of these agents.

The application and storage of chemical pesticide agents must be conducted in a manner that protects the safety of meat and meat products at all times.

Note: The National Meat and Poultry Regulations and Code states "The use of chemical controls such as residual bug sprays, within the facility, shall be limited to non-production areas. Mechanical controls shall be used in production areas. Rodent chemical baits are limited to exterior use only, and must be of a covered variety. Pest Control agents applied in an establishment shall be applied in accordance with all applicable laws."

OBJECTIVE/OUTCOME

All pesticides will be transported, stored, labeled and used in a manner that prevents contamination of meat, meat products and other materials that contact meat products such as ingredients and packaging material.

Note: This requires that all pesticides be:

a) used in accordance with the manufacturer's instructions;
b) locked up during storage;
c) stored away from food and food handling and storage areas;
d) stored in appropriate containers;
e) accurately labeled

The application of pesticides **while meat,** or meat products**,** are being **handled, or processed,** will be **strictly prohibited**.

Note: This prohibition also applies to spraying, or fogging, of pesticides

All food products will be removed before any pesticides are applied.

All food handling surfaces will be protected during pesticide application.

Following spraying, or fogging, all food contact surfaces will be thoroughly washed, rinsed and sanitized.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **Pesticide Use & Listing** will be met when*:*

1. All pesticides in use, at the facility, are registered under the Agriculture and Agri-Food Canada; *Pest Control Act and Regulations*.

   Note: The Pest Management Regulatory Agency (PMRA) of Health Canada is responsible for the regulation of pesticides in Canada, including the setting of residue limits and testing methods. The PMRA web site can be viewed at:

   http://www.pmra-arla.gc.ca/english/index-e.html

   PMRA can be contacted using their feedback form found at:

   http://www.pmra-arla.gc.ca/english/main/contact-e.html

2. An up-to-date **list** of all pesticides used**,** or stored, on the premises will be on file.

   Note: This list must include CFIA approval numbers and "Material Safety Data Sheets" (MSDS sheets) (if applicable).

3. A file entitled **"Record of Pesticide Usage"** is on file at the facility.

   Note: This record should have information on:

   a) concentrations used;

   b) locations where pesticides were applied, or used;

   c) dates of application

4. A written **"Pest Control Procedure"** is in place.

   Note: The procedures must address effective storage, handling and labeling instructions for all pesticides used, or stored, in the facility.

5. All pesticides are used in accordance with the manufacturer's instructions.

6. Activities of a third party individual, or company, contracted for pest control are clearly identified in the **"Pest Control Procedures"**.

RELATED SECTIONS OF TIPM

03-E-06 Pest Control Procedures

03-E-08 Pest Control Records

12-A-03 WHMIS Program for Chemicals

SUBJECT: Recall Team	03-F-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 29 Meat Facility Standards (MFS) Section F.1.1.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Despite the best efforts of a "Licensed Meat Facility" (facility) to produce a product that is safe for human consumption the possibility always exists for a unsafe product, or one that is or suspected of being unsafe, to be released.

When this happens the offending product must be removed from the market, through a **"Recall Process"**, as soon as possible.

To ensure that a recall is handled efficiently it is necessary to establish a **"Recall Team"**

Note: An established **"Recall Team"** is required so members can be contacted, at any time, so they can start working as soon as the need for a recall is determined.

The size of the **"Recall Team"** will vary with the size of the facility.

Once established the "Recall Team" should practice recall procedures so that they are prepared to act in an appropriate manner when an actual recall takes place.

OBJECTIVE/OUTCOME

A facility **"Recall Team"** will be established.

Note: The **"Recall Team"** consists of facility personnel that have been given the responsibility of conducting recalls as required.

There will be a **"Recall Team List"** which will:

1. Identify all team members.
2. Provide 24 hour contact phone numbers.
3. Have a list of assigned duties for each team member.

Note: The general duties of the recall team include but are not restricted to:

a) contacting affected customers;

b) contacting appropriate regulatory bodies;

c) contacting media as required;

d) collecting recalled product(s);

e) keeping track of any suspect, or recalled product remaining in the plant or any that has been returned to the plant;

f) completing the required paperwork

Appropriate regulatory bodies include, but are not restricted to, agencies such as the:

a) Regional Health Authority (RHA);

b) Meat Inspection Branch (MIB) of Alberta Agriculture and Rural Development (ARD);

c) Canadian Food Inspection Agency (CFIA), etc.

Required paperwork includes, but is not restricted to, items such as:

a) product recall sheets;

b) recall summary records;

c) records required by the RHA, MIB, or CFIA, etc.

The **"Recall Team"** will be thoroughly familiar with the recall procedures.

Note: Familiarity is essential to ensure the conduct of complete, comprehensive and rapid recalls. Conducting "Mock Recall Exercises" is an effective way of ensuring familiarity.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Recall Team"** will be met when*:*

1. The facility has up-to-date, written **"Recall Procedures"**

   Note: These procedures will include:

   a) a list of all recall team members;

   b) identification of each team member's position on the team;

   c) alternates for each position;

   d) responsibilities of each position;

   e) a description of how responsibilities are to be performed;

   f) contact numbers during working hours;

   g) after hours contact numbers;

2. Personnel assigned to the recall team are aware and knowledgeable about their role(s) as part of the team.

RELATED SECTIONS OF TIPM

03-F-02 Recall Procedures

03-F-05 Mock Recalls

SUBJECT: Recall Procedures	03-F-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 29 Meat Facility Standards (MFS) Section F.1.1.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Despite the best efforts to produce a product that is safe for human consumption the possibility always exists that an unsafe product, or one that is or suspected of being unsafe, could be released for sale to the public from a "Licensed Meat Facility" (facility).

An effective **"Recall Plan"**, that includes all of the elements needed to ensure a rapid and effective recovery of any meat products that are a real, or potential, health hazard to consumers, must be in place.

Note: A product coding system and distribution list are essential for the successful implementation of a recall. Distribution lists must be kept on file for a period of not less than 2 years.

OBJECTIVE/OUTCOME

The facility will have written "**Recall Procedures**" on file.

Note: These procedures must outline the steps to be taken to complete a recall and provide proof that the recall system has been tested for effectiveness.

They must include, but are not limited to the following:

a) the person, or persons, responsible for conducting a recall;

b) position, or area of responsibility, of team members (e.g. recall coordinator);

c) 24 hour contact information for all team members;

d) who is responsible for the coordination and implementation of a recall;

e) methods available to identify, locate and control recalled product including a method of notifying affected customers;

f) procedures for investigating other products that may be affected by the hazard thus need to be included in the recall;

g) methods of evaluating the effectiveness of the recall.

A "**Recall Team**" will be established

Note: The "Recall Team" is responsible for conducting and evaluating all recall activities.

The "**Recall Team**" will be competent.

Note: Competence can be demonstrated by:

a) records of training for personnel;

b) formal evaluation documentation following training;

c) successful "Mock Recall" results

TIPM – 03-F-02 Page 2 of 2 – OBJECTIVE/OUTCOME (continued)

A product coding system will be instituted.

Note: There must be codes, or lot numbers, on each pre-packaged product, which must identify the:

a) facility;
b) day;
c) month;
d) year

The product must also be linked to ingredients and/or packaging lots.

For more detail on coding see TIPM document 03-H-03.

A distribution list for all products will be on file.

Note: A proper distribution list will contain the following minimum information:

a) product identification (name and code, or lot, number);
b) amount of product (e.g. total weight, cases, boxes, etc.);
c) customer information including names, addresses & phone numbers.

For more detail on distribution lists see TIPM document 03-H-03.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Recall Procedures"** will be met when:

1. Written, facility specific **"Recall Procedures"** are on file.

   Note: These procedures should provide a concrete plan that can be followed if it is ever necessary to conduct an actual recall.

   The procedures may be depicted in the form of a flow chart.

2. A **"Recall Team"** has been established.
3. **"Recall Team"** members have been trained in their responsibilities and have demonstrated that they are capable of performing a successful recall.

   Note: The competence of **"Recall Team"** members can be shown by:

   a) records of training received;
   b) formal evaluation (e.g. oral, or written examination) results;
   c) acceptable performance in regular **"Mock Recall"** exercises

4. All meat products have been coded and distribution lists are on file for at least the last two years.

RELATED SECTIONS OF TIPM

03-F-01 Recall Team
03-F-03 Batch & Distribution Records
03-F-04 Regulatory Contacts for Recalls
03-F-05 Mock Recalls

SUBJECT: Batch & Distribution Records	03-F-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 29 Meat Facility Standards (MFS) Sections F.1.1.1, F.1.2 (1 & 2)	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Despite the best efforts to produce a product that is safe for human consumption the possibility always exists that an unsafe product, or one that is or suspected of being unsafe, could be released for sale to the public from a “Licensed Meat Facility” (facility).

When this happens affected product has to be recalled.

In order to conduct a recall the product has to be properly identified therefore it is essential for the facility, to keep accurate and complete records pertaining to the distribution of meat products as well as records of all ingredients that were used to produce each product, including records of animals slaughtered.

Note: In addition to assisting with recalls, accurate and complete records aid in monitoring the control of processing steps.

All products must be identified with a batch, or lot number.

Note: Identifying a customer that has received packages without a production number, or lot code, is useless because there is no way of knowing exactly what batch, or quantity, is in their possession.

To reduce the scope of a recall it is “Common Industry Practice” to link the lot, or batch, numbers of ingredients (e.g. spices, casings) and food contact packaging material (if possible) to the batch, or lot numbers, of product produced in the facility.

Note: **REWORK** is a large and potentially dangerous issue. When product is reworked it is difficult to track and retain linkage to an original lot, or batch, production date. When a recall is conducted the facility must be able to account for **ALL** of a particular lot, or date, code including any product that was reworked.

OBJECTIVE/OUTCOME

“Batch & Distribution Records”, for all products produced, will be on file.

Note: This includes records made during processing including live animal (slaughter) records and records of **ALL** products (including by-products) that were distributed, or sold, from the facility.

Batch and distribution records will identify the origin of meat products to the level of the primary producer.

Note: To identify to the level of the primary producer the records must contain:

a) name and address of the person from whom animals were purchased, or acquired;

b) dates of purchase, or acquisition;

c) number and type of animals;

d) number of animals slaughtered;

e) date of slaughter

Batch and distribution records will contain the name, address and phone number of all purchasers.

Note: Facilities that operate a retail portion must treat the retail section as one large external customer. The amount of product placed in the retail cabinet must be tracked to allow for an efficient and effective recall.

Large bulk and custom orders must be recorded.

Batch and distribution records will link all products to a lot, batch, or production date code that identifies the date the products were produced.

Note: Batch and distribution records must account for the entire quantity of product, and track all products to the first external customer.

All products will be labeled (identified) in a manner that links them to lot, batch, or production date codes.

Lot, batch, or production codes will be linked to the lot, or batch, codes of all ingredients and if possible to food packaging lots.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Batch & Distribution Records"** will be met when:

1. All products, produced in the facility, have permanent, legible codes, or lot numbers, on the package.

   Note: The code, or lot number, must identify the facility and the day, month and year the product was produced, or packaged.

2. Batch numbers and production codes are linked to the lot, or batch numbers, of:

   a) ingredients (e.g. spices, etc.)

   b) packaging that contacts the meat, or meat products

3. Reworked product has been recorded and tracked with its original code, or batch numbers.

4. An up-to-date list of customer names, addresses and phone numbers is on file.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

5. Up-to-date records of production, inventory and distribution by lot, or batch number, are on file.

   Note: Batch and distribution records must be retained by the facility for a period of not less than 2 years.

6. Distribution (shipping) records contain the following information:

   a) product identification;

   b) product amount (e.g. weight, cases, boxes, combos, etc);

      Note: When the **packages** are all the **same weight** the amount can be recorded either as the total weight or as the number of packages.

      When **packages** are of **random weights** both the weight and the number of packages must be recorded.

   c) code, or lot, numbers;

   d) name, address & phone number of the purchaser

RELATED SECTIONS OF TIPM

03-F-01 Recall Team

03-F-02 Recall Procedures

SUBJECT: Regulatory Contacts for Recalls	03-F-04
REGULATORY REFERENCES: AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 29 Meat Facility Standards (MFS) Section F.1.1.2	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

The operator of a "Licensed Meat Facility" (facility) may not be sure whether a recall is needed when information is received that a meat product is, or may be, contaminated. In this situation the operator is obligated to seek advice regarding the best way of dealing with the situation.

Note: **Uncertainty** about what to do is **not an excuse for inaction**. Anyone that is uncertain about what to do should seek expert advice immediately.

Rapid and accurate information gathering and the involvement of appropriate regulatory authorities will clarify whether a recall is needed and if so what the response should be.

Many different regulatory agencies may be involved in a recall. In most instances the main ones that will be involved will be the:

a) Meat Inspection Branch (MIB) of Alberta Agriculture and Rural Development (ARD)

b) Regional Health Authority (RHA)

c) Canadian Food Inspection Agency (CFIA)

Note: In the event of any disputed authority the federal jurisdiction of the CFIA would over-ride the provincial jurisdiction of the MIB.

It is important for the facility operator to have current contact information for all agencies.

Note: It is also important for the facility operator to be aware of the types of documents and records that may be required by these agencies.

OBJECTIVE/OUTCOME

The facility's written "**Recall Procedures**" will include the roles and responsibilities of the MIB, RHA and CFIA.

A list of contact numbers will be available for the MIB, RHA and CFIA.

The operator, or designated individual on the "**Recall Team**", will assume responsibility for notifying the MIB as soon as information is received about the possibility a carcass, or meat product, from the facility, is, or may be, unsafe for human consumption.

Note: Notification should include, but is not limited to:

a) a description of what may have gone wrong during handling, processing, packaging, labeling, storing or shipping of the product in question with particular reference to any breaches of AR 42/2003 or the MFS;

b) the nature of the contamination (if applicable);

c) the type of carcass, or meat product;

d) the quantity of carcasses, or meat product, that may be affected;

e) the distribution records for the affected products.

Following notification the MIB will give instructions regarding further actions, investigations, or notifications that may be required.

Note: The MIB should also know whether the RHA, or CFIA, needs to be notified.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Regulatory Contacts for Recalls"** will be met when*:*

1. Written **"Recall Procedures"** include a list of all current regulatory contacts:

   Note: The list of contacts must include, but is not limited to, the names and daytime and after hours phone numbers and fax numbers for the:

   a) MIB - Regional Manager

   b) CFIA

   c) RHA

2. Designated recall team personnel are aware of the information required by various regulatory authorities.

RELATED SECTIONS OF TIPM

03-F-01 Recall Team

03-F-02 Recall Procedures

03-F-03 Batch & Distribution Records

SUBJECT: Mock Recalls	03-F-05
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 29 Meat Facility Standards (MFS) Section F.1.1.1, F.1.2.2	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

To ensure that **"Recall Procedures"** are effective and timely and to ensure that designated personnel are capable of conducting an actual recall the "Licensed Meat Facility" (facility) must conduct at least one annual **"Mock Recall"** exercise.

Note: The "Mock Recall" must be structured to test the effectiveness of recalling any type of product produced by the facility, including carcasses.

In addition to testing capabilities **"Mock Recalls"** are also a valuable training tool for personnel that have, or will be, given responsibility for conducting recall activities.

Usually a member of the **"Recall Team"** is given the task of organizing the details of the **"Mock Recall"** and generally the exercise is started by selecting a certain day of production, or a lot number, that needs to be recalled for an imaginary reason.

Results of the **"Mock Recall"** must be recorded and analyzed with the view to improving performance.

If acceptable standards are not achieved adjustments should be made then another "Mock Recall" should be run.

Note: All deficiencies should be documented along with corrective measures that will be taken and the results of these corrective measures.

OBJECTIVE/OUTCOME

Documentation will be on file showing that **"Mock Recalls"** for carcasses, raw cuts and other meat products have been conducted at least once a year.

Note: **"Mock Recalls"** are done to test the system and must be done:

a) only on products that were shipped from the facility;

b) on a different product for each **"Mock Recall"**

Documentation will show whether the **"Mock Recall"** met acceptable standards, or not.

Note: There must be a calculation of the mock recall efficiency, which is defined as the percentage of the full lot of product that could be traced.

To be considered acceptable the recall efficiency of cooked, batched products must be high (90-100%).

All of the results of the **"Mock Recall"** will be documented and if deemed to be ineffective the facility will:

1. re-evaluate and amend the procedures;
2. validate the effectiveness of the amended procedures.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Mock Recalls"** will be met when records of annual **"Mock Recalls"** are on file.

Note: These records should:

a) document corrective actions that were taken and the results of these corrective actions when **"Mock Recall"** procedures were shown to be less than 100%;

b) show that **"Mock Recalls"** were performed on a variety of different products (if applicable)

RELATED SECTIONS OF TIPM

03-F-01Recall Team

03-F-02 Recall Procedures

03-F-03 Batch & Distribution Records

SUBJECT: Dressing Procedures - Red Meat Animals	03-G-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section 3.3	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

All "Red Meat Animals" harbor disease causing and/or food spoilage organisms (bacteria, viruses, fungi, parasites, etc.) on, or in, their bodies.

Certain parts of the animal are more likely sources of these organisms.

Note: This is particularly true of the hide and intestinal tract.

The "Licensed Meat Facility" (facility) must implement sanitary dressing procedures to minimize the chance of contamination of meat and meat products.

Removal of the hide presents the greatest potential for contamination of the carcass thus great care must be taken to ensure that the outer surface of the hide doesn't make contact with the skinned portion of the carcass.

Note: It is particularly important that high risk activities only be performed by properly trained personnel.

Similarly evisceration (removal of the guts) requires skill in order to ensure that the gut is not cut thus avoiding contamination, of the carcass, from spillage of intestinal contents.

Knives used to skin carcasses must be carefully cleaned and sanitized between carcasses to prevent cross contamination between carcasses.

OBJECTIVE/OUTCOME

The facility will have a written **"Dressing Procedure".**

Note: To reduce the risk of contamination of the carcass all written procedures must be based on "Common Industry Practice" methods.

All carcasses will be skinned and dressed, immediately after slaughter and in accordance with the facility's written procedures.

Evisceration will only be done after proper pre-evisceration steps have been completed.

Note: These steps must also be included in the written "Dressing Procedures".

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for "**Dressing Procedures- Red Meat Animals"** will be met when*:*

1. Facility specific written **"Dressing Procedures"** are on file.

   Note: These procedures must address all of the requirements of section 3-3 (a)-(f) of the MFS.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

Examples of items to be addressed include but are not restricted to:

a) knife designation and sanitation during dressing procedures;
b) sticking/bleeding practices;
c) segregating the esophagus (rodding/tying/clipping the weasand);
d) placement of the carcass on the cradle;
e) removal of front and hind legs;
f) hide removal;
g) udder and pizzle removal;
h) midline cut;
i) hoisting the animal;
j) dropping the bung including bagging it;
k) evisceration;
l) splitting the carcass;
m) SRM removal and related considerations;
n) trimming of visible contamination;
o) washing of the carcass

The above procedures apply equally to cradle and rail dressing. The only difference may be a slightly different order of steps.

2. Carcass dressing is performed only by designated, trained personnel.
3. All carcass dressing is done in accordance with the written procedures.
4. An up-to-date "**Training Record"** is on file.

Note: These records will identify all personnel that have received training in proper skinning and dressing procedures.

RELATED SECTIONS OF TIPM

03-D-09 Manufacturing Control Training
07-B-01 Dressing Procedures - Cattle & Calves
07-B-02 Dressing Procedures - Hogs
07-B-03 Dressing Procedures - Sheep, Goats & Deer
07-B-04 Dressing Procedures - Elk & Bison
07-B-05 Dressing Procedures - Rabbits (Domestic)
07-B-07 Dressing Procedures - Ratites
07-B-08 Meat By-product Harvesting - Beef
07-B-09 Meat By-product Harvesting - Pork
07-B-11 Meat Product Harvesting - Miscellaneous Species
07-B-12 Intervention Strategies - Red Meat Animals

SUBJECT: Dressing Procedures - Poultry	03-G-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18(1)(a) Meat Facility Standards (MFS) Section 3-3	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

All classes of poultry harbor disease causing and/or food spoilage organisms (bacteria, viruses, fungi, parasites, etc.) on, or in, their bodies.

Certain parts of the bird are more likely sources of these organisms.

Note: This is particularly true of the skin, feathers and intestinal tract.

The "Licensed Meat Facility" (facility) must implement sanitary dressing procedures to minimize the chance of contamination of meat and meat products.

To minimize the chance of contamination, de-feathering and evisceration must be done in an appropriate manner.

From a food safety perspective the evisceration process is one of the most hazardous activities in the dressing of poultry carcasses. For this reason every effort must be made to ensure that the intestines are not ruptured during the evisceration process.

Providing designated personnel with appropriate training and using well maintained equipment that is well designed for the purpose of evisceration is critical in preventing accidental rupture of the intestines.

OBJECTIVE/OUTCOME

The facility will have written **"Poultry Dressing Procedures**".

Note: To reduce the risk of contamination of the carcass all written procedures must be based on "Common Industry Practice" methods.

Proper withdrawal of feed and water is necessary for sanitary dressing and processing procedures and food safety. Feed and water withdrawal should be kept to the minimum level consistent with "Common Industry Practice".

All poultry carcasses will be dressed in accordance with the written procedures including evisceration immediately after slaughter.

Note: Evisceration will not be done until appropriate pre-evisceration steps, which should be detailed in the written procedures, have been completed.

Evisceration and other dressing procedures will only be performed by trained personnel. .

Evisceration will be conducted in a manner that minimizes the chance of contaminating the carcass with intestinal contents.

Note: Examples of evisceration procedures that are considered to be "Common Industry Practice" include:

a) hanging the bird in a manner that minimizes the chance of contact with spilled intestinal contents;

b) use of equipment designed to minimize the rupture of any part of the gastro-intestinal tract;

c) use of evisceration equipment made of smooth, non-corrosive, non-absorbent, non-toxic material

An evisceration fork will be used for all species of poultry with the possible exception of turkeys, ducks and geese.

Note: Manual evisceration of turkeys, ducks and geese, is allowed but an evisceration fork has to be used with care. The stronger internal attachments of the intestinal tract, in these species, makes rupture of the intestines more likely when an evisceration fork is used.

The evisceration fork will be appropriately sanitized at all times.

Note: Appropriate sanitation of the evisceration fork requires it to be free of any visible contamination when it is inserted into the abdomen and frequent rinsing with water at 82^0 C or greater.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for "**Poultry Dressing Procedures"** will be met when*:*

1. Written, plant specific, **"Dressing Procedures"** are on file all requirements specified in section 3-3 (a)-(f) of the MFS.

   Note: These procedures must address all of the requirements of section 3-3 (a)-(f) of the MFS.

   Examples of items to be addressed include but are not restricted to:

   a) sticking/bleeding practices;

   b) scalding;

   c) plucking and carcass washing;

   d) transfer practices (re-hanging);

   e) removal of oil glands, head and feet;

   f) venting;

   g) evisceration;

   h) salvaging practices;

   i) by-product harvesting practices;

   j) final carcass washing;

   k) trimming practices;

   l) washing of the carcass;

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

1. Dressing is performed only by designated, trained personnel.
2. Dressing is done in accordance with the written procedures.
3. An up-to-date "**Training Record"** is on file.

   Note: These records will identify all personnel that have received training in proper dressing procedures.

RELATED SECTIONS OF TIPM

03-D-09 Manufacturing Control Training
07-B-06 Dressing Procedures - Poultry
07-B-10 Meat By-product Harvesting - Poultry
07-B-13 Intervention Strategies - Poultry

SUBJECT: Nitrate & Nitrite Addition	03-G-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections 3.2, 3.3	**Initial Release** Sept 1, 2009 **Page 1 of 6**

RATIONALE

Curing is defined as the treatment of meat products with nitrite, or nitrate, salts, or both, in combination with salt (NaCl), spices, etc.

Note: The **lethal dose of nitrate, or nitrite, salts**, for humans, **is 1 to 2 grams**.

Due to their poisonous nature (toxicity) strict control procedures need to be developed to ensure that the amounts added are within the minimum and maximum allowances for the products being cured.

There is less risk of nitrate, or nitrite, toxicity when commercially prepared curing mixes are used. These mixes usually contain enough salt to ensure that the final product would be unpalatable if excessive amounts were used.

Note: Commercial mixes also have the advantages of being readily soluble in water and more easily weighed than bulk nitrates, or nitrites.

Curing is done to:

1. Delay the growth of undesirable micro-organisms and their toxins
2. Improve color
3. Improve texture
4. Improve flavor

Note: With the exception of shelf stable meat products, cured meat products must be refrigerated.

Curing can be done in a number of ways. One of the most common is to inject the cure then immerse the product in a curing brine to allow for equilibration and uniform distribution.

Note: Curing brine should not be mixed up in advance. It should be used as soon as it is made.

The immersion portion of the curing process should be kept as short as possible, both for maintenance of product quality as well as for safety.

Curing solutions should not be re-used as this practice can lead to contamination of meat products.

Spices are used primarily for flavoring purposes.

Note: Curing agents must not be mixed with the spices before adding them water to make the brine. Mixing them before favors the formation of nitrosamines which have been implicated as possible carcinogens (cancer causing agents).

OBJECTIVE/OUTCOME

All ingredients used, in the "Licensed Meat Facility" (facility), for the production of manufactured products, or cures, will meet all of the requirements of the *Food and Drug Act (Canada)* and associated Regulations including the use of stipulated amounts.

Note: Sodium and potassium nitrates and nitrites are considered to be the only acceptable curing salts that will impede the growth of the bacterium called *Clostridium botulinum.* The toxin produced by this bacterium causes the disease called botulism. This is a particularly dangerous type of food poisoning

All cured meat products will contain at least 100 parts per million (ppm) of curing salt.

Note: This is considered to be "Common Industry Practice".

For wet curing the amount of **nitrate/nitrite** salts used **must not exceed**:

1. **120 ppm** in **side bacon**.
2. **200 ppm** in **all other products**

For dry rub cured meat products, on racks, the maximum levels allowed per 100 kg (kilograms) of meat product are:

1. **62 g** (grams) of sodium **nitrite** salt
2. **186 g** of sodium **nitrate** salt

Note: If **potassium** nitrite, or nitrate, salts are used **instead of sodium** nitrite or nitrate salts, **the above limits** are **increased by 1.23** times.

Strict **control procedures** will be in place **to ensure** that the **amount** of nitrite, or nitrate, **used is within** the minimum and maximum **allowable** limits.

Note: Nitrates should only be used for long term curing processes, such as fermented sausage, or dry cured hams.

To determine the amounts required the reader is referred to the calculation examples that are located in the next section of this document

Bulk nitrite or nitrate salts will be kept **locked** up and records will be kept which account for their use.

Note: Binder units must have the curing salts packaged separately in a distinctly marked container.

The above requirement, for locking up, only applies to bulk nitrite & nitrate salts. It does not apply to premixes.

Salt [Sodium chloride (NaCl)] **will be used in all cured products**.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Nitrate and Nitrite Addition:** will be met when*:*

1. Written "**Curing Procedures"** are on files that specifically address the addition of ingredients and cure agents for each cured product produced at the facility are on file.

   Note: These procedures must specifically address the addition of ingredients, and cure agents, for each type of cured product produced at the facility and at a minimum they must include, for each product:

   a) nitrite or nitrate salt level calculations;

   b) percent gain calculations;

   c) brine machining instructions;

   d) pumping and tumbling instructions;

   e) formulation and mixing instructions (recipes)

2. All cured products are produced in accordance with the written procedures.
3. When bulk nitrite, or nitrate, salts are used they will be stored under lock and key.
4. Up-to-date **"Curing Records"** and **"Percentage (%) Pickup Records"** are on file.

   Note: The **"Curing Records"** must account for every use of bulk nitrite, or nitrate, salts.

   "Percentage (%) Pickup Records" may not have to be kept for each batch. The frequency required depends on the pumping or injecting process, amounts and types of products produced, etc.

5. All ingredients used in curing mixes conform to the standards of the *Food and Drug Act (Canada).*
6. The amount of each ingredient used is carefully calculated and measured every time.

   Note: Ingredients should actually be weighed every time.

7. Spices are not added to the cure before the brine is added.
8. All scales used to weigh curing agents are calibrated.

   Note: Up-to-date **"Calibration Records"** must be on file.

Following are some general calculations and examples;

Calculating the ppm of Nitrite in a Sausage Mix

General Calculations:

Formula #1

This formula is used to determine the ppm of nitrite in the final product

$$\text{ppm nitrite} = \frac{\text{sodium nitrite (kg)} \ X\ 10^6}{\text{Wt of emulsion (kg)}}$$

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

Formula #2

This formula is used to determine the ppm of nitrite in Prague powders

$$\text{Grams of nitrite in Prague powders} = \frac{(\%\ \text{sodium nitrite})\ X\ \text{grams of Prague powder}}{100}$$

Examples of Nitrite Calculations in Sausage Formulations

Example #1

In this example there are:

a) 114 kg of sausage mix

Note: The mix includes all spices, binders, seasonings, and water.

b) 23 g of sodium nitrite (bulk)

Note: 23 grams of sodium nitrite is the same as 0.023 kg of sodium nitrite.

Adding the two together **gives** us **a total** meat emulsion **of 114.023kg**

Note: The meat emulsion includes all spices, binders, seasonings, Prague powders (nitrates/nitrites), and water.

Total ppm of sodium nitrite in this example is calculated as follows:

$$\text{ppm sodium nitrite} = \frac{0.023\ \text{kg}\ X\ 10x^{6}}{114.023\ \text{kg}} = \frac{23{,}000\ \text{kg}}{114.023\ \text{kg}} = 201.71\ \text{ppm}$$

Note: The above **recipe is <u>unacceptable</u>** because **201.71 ppm** of sodium nitrite **<u>exceeds</u>** the maximum allowable limit of **200 ppm**.

Example #2

In this example there are:

a) 114 kg sausage mix

b) 350 g of Prague powder

Note: The Prague powder contains 6.25% sodium nitrite

The amount of nitrite in 350 grams of Prague powder is determined in the following manner:

$$\text{kg of sodium nitrite in Praugue powder} = \frac{6.25\ X\ 350}{100} = \frac{2{,}187.5}{100} = \frac{2{,}187.5g}{1000} = 0.021875\ kg$$

Adding the two together **gives** us **a total** meat emulsion **of 114.350 kg**

Total ppm of sodium nitrite in this example is calculated as follows:

$$\text{ppm of sodium nitrite} = \frac{0.021875\ kg\ X\ 10^{6}}{114.350} = \frac{21{,}875}{114.350\ kg} = 191.30\ \text{ppm}$$

Note: This **recipe is <u>acceptable</u>** because the **191.30 ppm** of sodium nitrite is **<u>less than</u>** the maximum allowable amount of **200 ppm**.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

Calculating Nitrites in Brined, Injected, Pumped or Tumbled Products

Formula #1

This formula is used to determine the % gain for any cured product that will have a pickup.

Note: The green weight (weight of the emulsion before the addition of brine) and the finished weight (weight of the emulsion after injection, tumbling, or immersion, but before smoking) must be known before the % gain can be determined.

A few pieces of representative product from each batch can be used to calculate a batch average.

$$\%\,\text{gain} = \frac{\textit{pumped weight } X\ 100}{\textit{green weight}} - 100$$

Note: In the above formula the term "pumped" is used as an example. The formula applies equally to products that are injected, tumbled, or immersed.

Following is an example of how this formula is used given the following:

a) The green weight is 3.5 kg

b) Weight of the brine = 2.5 kg

Note: The weight of the brine includes the water, the cure unit, salts, sugars, and any other additives that are put in.

c) The pumped weight is 5.6 kg

Note: The pumped weight is the sum, or total of the green weight and the weight of the brine picked up.

$$\%\,gain = \frac{5.6\,X\,100}{3.5} - 100 = 160 - 100 = 60$$

Note: In the case of bone-in meat cuts, the pump percentage must be calculated on a boneless basis. On average the amount of bone in a bone-in ham is approximately 15% by weight thus the green weight must be reduced by 15% before starting any calculation of the % gain.

After the % gain has been calculated the following formula is used to calculate the level of nitrites in the injected, immersed, pumped or tumbled product.

$$\text{ppm nitrite} = \frac{\textit{sodium nitrite kg}}{\textit{brine kg}} X \frac{\%\ \textit{gain}}{\textit{gain} + 100} X\ 10^6$$

Examples of Nitrite Calculations in Boneless Hams and Side Bacon

Example #1 - Boneless Hams

In this example the cure unit consists of

a) Sodium tripolyphosphate 6.42 kg

b) Sodium **nitrite** 0.28 kg

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

c) Sodium erythorbate 0.84 kg

d) Spices 0.70 kg

Total 8.23 kg

The brine is formulated as follows:

a) Cure unit 8.23 kg

b) Water 134.00 kg

c) Salt 40.00 kg

Total 182.23 kg

The % gain is 15

$$\text{ppm nitrite} = \frac{0.28\ kg\ sodium\ nitrite}{182.23\ kg\ brine} X \frac{15}{15+100} X\ 10^6$$

$$= 0.0015365\ X\ .130\ X\ 10^6 = 199.7\ ppm$$

Note: This is an **acceptable recipe** for hams because the **199.70 ppm** of sodium nitrite is **less than** the maximum allowable amount of **200 ppm**.

Example #2 - Side Bacon

In this example the cure unit is 2.25 kg of Prague Powder which is 6.4% nitrite.

$$\text{kg of nitrite in 2.25 kg of Prague powder} = \frac{6.4\ X\ 2.25}{100} = \frac{14.4}{100} = 0.144\ kg$$

The Pickle Formulation consists of

a) Water 347.75 kg

b) Cure unit 2.25 kg

Total 350.00 kg

The % gain is 60.

$$\text{ppm nitrite} = \frac{0.144\ kg\ sodium\ nitrite}{360\ kg\ brine} X \frac{60}{60+100} X\ 10^6$$

$$= 0.0004114\ \text{X}\ .375\ \text{X}\ 10^6 = 154.2\ \text{ppm}$$

Note: This **recipe is unacceptable** because **154.2 ppm** of sodium nitrite **exceeds** the maximum amount allowed in bacon which is **120 ppm**.

RELATED SECTIONS OF TIPM

03-C-03 Calibration Procedures - Records of
03-D-09 Manufacturing Control Training
03-G-04 Fermented Meats
03-G-10 Written Recipes

SUBJECT: Fermented Meats	03-G-04
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section 3.2, 3.3	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2011 **Page 1 of 20**

RATIONALE

Various methods of fermentation have been used for hundreds of years to preserve meat products.

Fermentation creates an environment that is unsuitable for the survival of disease and/or meat spoilage micro-organisms (bacteria, molds, fungi, etc.). It also imparts a particular flavor to meat products.

Note: Fermentation is initiated through the use of starter cultures. Starter cultures are living bacteria. They are available in both the freeze-dried and frozen state.

Most starter cultures contain bacteria from the genus (family) Lactobacilli, or Streptococci, but some cultures are from the genus Pediococci. They may be used separately or in combination in the fermentation process.

During the fermentation process bacterial action breaks down carbohydrates which results in the production of lactic acid.

Unlike cooked meat products, where micro-organisms are killed by heat the manufacture of fermented meat products relies on a complex and precise combination of time, temperature, nitrites, salt concentration, pH and a_w factors to control micro-organisms.

Note: **pH** is a **measure of acidity**. The pH is actually the negative logarithm of hydrogen ion, or proton, concentration. On the pH scale a reading of 7 is neutral. Readings below 7 indicate increasing degrees of acidity while readings above 7 indicate increasing degrees of alkalinity. Because pH is a logarithmic scale each step on the scale goes up by a factor of ten times. This means that a pH of 5 is 10 times as acidic as a pH of 6, a reading of 4 is 100 times more acidic than 6, a reading of 3 is 1,000 times more acidic, etc.

a_w is a **measure of water activity**. The a_w of a meat product is the ratio of the water vapor pressure of the meat product to that of pure water at the same temperature. **A_w** is measured on a scale of 0.00 to 1.00 with 0.00 being totally dry and 1.00 is pure water.

Many food borne pathogens (disease causing micro-organisms) can affect fermented meat products, however a few are considered to be of particular importance.

In Canada we need to be particularly concerned about *Escherichia coli*, including *E.coli* 0157:H7 and certain strains of a bacterium called *Staphylococcus aureus.*

At temperatures above 15.6^0 C, *S. aureus* will multiply and produce toxins (poison). A pH of 5.3 will stop both multiplication and toxin production. For this reason producers of

fermented meat products must verify that their product has attained a pH of 5.3 within pre-defined degree/hours limits.

The following are three **common fermentation methods:**

1. Backslopping

   This method uses a portion of a previously successful mixture of fermented meat mix as a source of lactic acid-producing micro-organisms to initiate the fermentation process in the next batch.

   This method depends on luck and serious problems could arise if viable (living) pathogenic or other undesirable (food spoilage) bacteria were present in the portion used.

   To avoid this care must be taken in the handling and storage of the portion from the previous batch. Storage conditions must be hygienic (clean) and storage temperatures must be controlled. Samples must be taken by the trained fermentation operator only.

2. Chemical Acidification:

   In this method fermentation is achieved by adding an approved chemical agent to acidify the product.

   Note: Examples of approved chemical agents include citric acid and glucono delta lactone.

3. Natural Fermentation:

   This method relies on self initiated fermentation by micro-organisms naturally present in the product. In this method commercial starter cultures, or portions from a previous batch, are not used. There is a high potential for failure because of the uncontrolled nature of the process.

   Note: **This method** of fermentation is **not acceptable**.

Regardless of the method of fermentation the success of the process depends on the rate of drying thus it is essential that the drying step be strictly controlled.

Note: Rapid drying causes a condition called casehardening. Drying too slow leaves the surface of the sausage soft and mold may develop. Air movement during drying is critical. If it is too slow mold growth will be encouraged and if it is too fast drying will be excessive.

OBJECTIVE/OUTCOME

Written **"Fermentation Procedures and Recipes"** will be on file, at the "Licensed Meat Facility" (facility).

Note: There must be an individual recipe for each type of fermented product produced in the facility.

Separate "Fermentation Procedures" must be written for each of the following methods of fermentation:

a) Backslopping;

b) Chemical acidification;

c) Natural.

(See the "Rationale" section of this document for more detail on these methods.)

Fermented products will be **produced in accordance with** their **specific recipes**.

All raw **materials**, including cultures, will be **stored and used in accordance** with the **recommendations of the manufacturer**.

Note: Recommendations for the storage and use of these materials must be detailed in the written "Fermentation Procedures".

Specific rooms and/or areas of the facility **will be assigned** for the production and drying of fermented meat products.

Note: For example, if the recipe calls for fermented sausages to be smoked, the smokehouse cannot be used unless it has been specifically designed and equipped for smoking fermented products. This means that the smokehouse must be commercially designed and built and equipped with a drying cycle.

Process controls will be in place to ensure that the required pH has been reached within appropriate time and temperature restraints.

Note: For details see the text entitled "Process Controls for Fermented Meat Products" in the next section of this document.

Written records, on all batches of fermented products, will be maintained.

Note: These records should be sufficient to prove that the product has been handled and processed properly. This is necessary to ensure that the product has been rendered safe for human consumption.

All recording devices will be routinely checked and calibrated and **"Thermometer Calibration Records"** will be kept.

Note: Recording devices, including thermometers, must be installed in the fermentation, drying and smoking areas in order to ensure that all stages of the process are monitored appropriately. In the smokehouse both the product and smokehouse temperatures must be recorded.

The **pH** of each lot **will be measured** and the time that it took, from the moment of formulation until the pH of the sausage achieved a pH of 5.3, or less, must be recorded.

Note: This is usually done when each batch of product leaves the fermentation room.

An inspector will be notified whenever a batch fails to reach a pH of 5.3 within specified time limits.

Note: See the next section of this document for information on the determination of specified degree/hours limits, required testing of products and disposition of product after unsatisfactory test results have been received.

Fermented Meat Products will be dried in accordance with the recommendations in the next section of this document

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Fermented Meats"** will be met when*:*

1. Up-to-date, written **Recipes** are available for each fermented meat product.

2. The recipe for each fermented meat product will be followed during production.

3. Up-to-date, written **"Fermentation Procedures"** will be on file.

   Note: The manufacturer's specifications for the storage, handling and adding of starter cultures to products must be detailed in these procedures.

   When the "backslopping" method is used, the portion of the previous mix that is to be used for a new batch must be stored under hygienic conditions at 4^{o}C or less and at a pH of 5.3 or lower. These storage conditions must be verified in a **"Storage Temperature Record"** and in the new **"Batch Record"**.

4. Specifications for starter cultures, in the **"Fermentation Procedures"**, are followed.

5. The **"Fermentation Procedures"** specify how fermented meat products that fail to meet the degree/hour requirements may be disposed of.

6. Recording devices are routinely checked and calibrated.

   Note: This is done to ensure that they are accurate and functioning properly.

7. "**Thermometer Calibration Records"** are on file.

   Note: These records are required to verify that calibration has been done.

8. A "**Fermentation Batch Record"** is on file, which tracks each batch of product through the full fermentation process.

   Note: This record tracks each batch through the fermentation process. It includes, but is not limited to proving that:

   a) a proper pH was maintained throughout the fermentation process;

   b) appropriate temperatures of the room, or surface of the product, were maintained throughout the fermentation process;

   c) a pH of 5.3 was achieved;

   d) "degree/hours" were calculated, recorded and met throughout the process;

   e) temperatures, relative humidity and air movement throughout the drying process were within acceptable limits;

   f) "Shelf stable" meat products have reached:

      i) a pH of 4.6 or less,

      ii) an a_w of 0.85 or less OR

      iii) a pH in the range of 4.6 - 5.3 and an a_w of 0.90 or less.

9. Fermented meat products that do not meet shelf stable requirements are refrigerated and labeled as “Keep Refrigerated”.

Procedural Items Required

The following procedural items must be addressed and are outlined in the remainder of this document:

1. Raw Materials
2. Maximum Allowable Hours to Reach a pH of 5.3
3. Dealing with Fermented Products that Don’t Reach a pH of 5.3 within Specified Time Limits.
4. Drying and Shelf Stability of Fermented Meat Products
5. Requirements for controlling ***Escherichia coli***-Health Canada’s Guideline 12
6. Requirements for controlling **Trichinella Spiralis** for pork

1. Raw Materials

Regardless of its’ form, the starter culture must be stored under appropriate conditions prior to use.

Note: Commercially available starter cultures must be stored in accordance with the recommendations of the manufacturer.

Cultures must be propagated in a manner that ensures that there are enough bacteria present to ensure that sufficient amounts of lactic acid are produced.

All cultures must be handled in a sanitary manner to avoid contamination by any of the undesirable, or pathogenic, micro-organisms.

When the “backslopping” method of fermentation is used a measurement of the pH, of “backslopped” portion, must be taken.

Note: A pH in the range of 5.0 to 5.3 usually indicates that the culture is safe.

For chemical acidification, controls must be in place and records kept to ensure that a pH of 5.3 or lower is achieved by the conclusion of the acidification process.

2. Reaching a pH of 5.3 in an Acceptable Time

Note: It is critical for the fermentation process to result in the achievement of a pH of 5.3 within a minimal amount of time. This provides assurance that pathogenic bacteria have not had an opportunity to multiply and produce toxins.

Judgment about the effectiveness of the fermentation process is based on a measurement of a combination of time and temperature. This measurement is expressed as “Degree/Hours”.

Note: Degree/Hours are determined by multiplying the time (in hours), at a particular temperature, by the number of degrees of temperature in excess of 15.6°C. For

example one hour at 18.6^0 C is equal to 3 Degree/Hours.

15.6^0 C is used as the base point because this is the temperature at which staphylococcal bacteria exhibit effective growth.

The fermentation process is considered to be **acceptable** when the product consistently reaches **a pH of 5.3** in less than:

1. **665 degree/hours** when the highest fermentation **temperature** is **less than 33^0 C.**
2. **555 degree/hours** when the highest fermentation **temperature** is **between 33^{0}C and 37^0 C**.
3. **500 degree/hours** when the highest fermentation **temperature** is **greater than 37°C**.

Note: Degree/Hours must be calculated for each temperature used in the process. The limitation of the number of degree/hours indicated in points 1), 2) and 3) above depends on the highest temperature in the fermentation process prior to the time that a pH of 5.3 or less is attained.

When there are variable fermentation temperatures the limit of degree/hours that will be allowed is based on the allowable limit if the highest temperature was constant throughout.

Processors are encouraged to measure temperatures at the surface of the product but if this is not possible the temperature of the fermentation room can be used.

Note: The following table and examples are based on fermentation room temperatures. Temperature and humidity should be uniform throughout the fermentation room.

Calculation of Degree/Hours at a Constant Fermentation Temperature

If fermentation is done at a constant temperature the number of "Degree/Hours can be determined by:

a) using the following table **OR**

b) by calculation

Degrees-hours limit for the corresponding temperature	Fermentation Room Temperature (C)	Maximum Allowed Hours to Achieve a pH of 5.3 (Based on Guideline)
665	20	150.0
665	22	103.4
665	24	78.9
665	26	63.8
665	28	53.6
665	30	46.2
665	32	40.5
555	33	31.8
555	34	30.1

555	35	28.6
555	36	27.2
555	37	25.9
500	38	22.3
500	40	20.5
500	42	18.9
500	44	17.6
500	46	16.4
500	48	15.4
500	50	14.5

b) Using the Calculation method for constant temperature processes

Example #1

Note: In this example:

a) fermentation room **temperature** is constant at **26°C**

b) a **pH of 5.3** is reached in **55 hours**

Calculation

Number of **degrees above 15.6° C** = 26 - 15.6 = **10.4**

Hours to reach pH of 5.3: **55**

Degree/Hours = 10.4 x 55 = **572**

Conclusion

The process in this example **meets the guideline** because a pH of 5.3 was reached in 572 degree/hours which is less than the 665 degree/hours allowed when fermentation temperatures are below 33^0 C.

Example #2

Note: In this example:

a) fermentation room **temperature** is constant at **35^0 C**

b) a **pH of 5.3** is reached in **40 hours**

Calculation

Number of **degrees above 15.6^0 C** = 35 - 15.6 = **19.4**

Hours to reach pH of 5.3: **40**

Degree/Hours = 19.4 x 40 = **776**

Conclusion

The process in this example **does not meet the guideline** because a pH of 5.3 was only reached after 776 degree/hours which is more than the 555 degree/hours allowed when fermentation temperatures are between 35 and 37^0 C.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

Calculation of Degree/Hours at Variable Fermentation Temperatures

When fermentation is not done at a constant temperature each step involving a different temperature must be analyzed to determine the number of degree/hours at each step.

Note: The degree/hours limit, for the entire fermentation process, is based on the highest temperature reached during fermentation.

Calculating total degree/hours when there are temperature variations during the fermentation process

Note: In this example

a) it takes 35 hours to reach a pH of 5.3 or less;

b) for the first 10 hours the fermentation room temperature is 24^0 C;

c) for the next 10 hours the temperature is 30^0 C;

d) for the final 15 hours the temperature is 35^0 C

The following table shows the calculation of total degree/hours for the entire process.

Hours	Fermentation room temperature (°C)	Critical Temperature Adjustment	Degrees above 15.6°C	Degree/hours
10	24°	(24°-15.6°)	= 8.4°	84
10	30°	(30°-15.6°)	= 14.4°	144
15	35°	(35°-15.6°)	= 19.4°	*291*
pH=5.3			Total:	519

During the process the highest temperature reached was 35^0 C therefore the acceptable degree/hour limit = 555 (i.e. between 33 and 37^0 C)

Conclusion

The process in this example **meets the guideline** because a pH of 5.3 was reached in 519 degree/hours which is less than the 555 degree/hours allowed when fermentation temperatures are between 33 and 37^0 C.

3. Dealing with Fermented Products that Don't Reach a pH of 5.3 within Specified Time Limits

Batches that have exceeded the degree/hours limit before reaching a pH of 5.3 must be held while samples are submitted for microbiological laboratory examination.

Note: The microbiological examination must be done after the drying period has been completed.

Minimum analysis should include an examination for the presence of the bacterium *Staphylococcus aureus* and its enterotoxin, and for principal bacterial disease causing organisms such *E. coli* O157:H7, *Salmonella, Listeria*

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

monocytogenes, etc.

Based on the microbiological analysis one of the following 3 conditions will apply:

1. Samples with **less than 104** *Staphylococcus aureus* **organisms per gram** and **no enterotoxin, or other pathogens,** detected may be sold providing the product is **labeled as requiring refrigeration**.
2. Samples with more than 104 *Staphylococcus aureus* organisms per gram **BUT no enterotoxin** present, **OR** if **other pathogens are present in very low numbers**, the product **may be used in cooked product** providing the heating process destroys all of the pathogens that are present.
3. When ***Staphylococcus aureus* enterotoxin** is **detected** the **product MUST BE DESTROYED** regardless of the number of *Staphylococcus aureus* or other organisms.

   Note: In this situation destruction is required because **cooking will not destroy** or neutralize the **enterotoxin**

4. Drying and Shelf Stability of Fermented Meat Products

To be considered shelf-stable fermented meat products must have:

1. a pH of 4.6 or less;
2. water activity level of 0.5, or less, OR;
3. a combination of pH range of 4.6 - 5.3 and a water activity level of 0.9, or less.

   Note: These products must also contain a minimum of 100 ppm of nitrite/nitrate and 2.5% salt.

Because monitoring of the pH is mandatory during the fermentation process it is not necessary to determine water activity levels, during the drying process, on a routine basis. Reaching an acceptable pH generally provides assurance that normal drying process will be sufficient.

Note: Notwithstanding the above statement “Common Industry Practice” still recommends monitoring and documenting the water activity of dried products on a regularly scheduled frequency.

Any products that don’t meet the requirements for shelf stable products must be labeled **“Keep Refrigerated”.**

5. Health Canada’s Guideline 12-Requirements for Controlling *Escherichia coli*

In order to suitably control this hazard, facilities which manufacture fermented sausages are required to use one of the following interventions for the control of verotoxinogenic *E. coli* including*E. coli* O157:H7 and Salmonella when they make this type of product.

If an establishment does not follow one of the interventions described, they are automatically considered to be using intervention 3, **End Product Testing**. End product

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

testing is to be conducted at the operator's expense.

Intervention 1- Using a heat process which is scientifically recognized as controlling E.coli 0157:H7

Time and temperature controls should be documented in the same manner as is required for other similar cooking processes. Under this intervention, it is **not** required to test product for *E. coli* O157:H7.

Minimum internal temperature maintained during the entire process		Minimum processing time in minutes after the minimum temperature has been reached
(°F)	(°C)	
130	54.4	121
131	55	97
132	55.6	77
133	56.1	62
134	56.7	47
135	57.2	37
136	57.8	32
137	58.4	24
138	58.9	19
139	59.5	15
140	60	12
141	60.6	10
142	61.1	8
143	61.7	6
144	62.2	5
145	62.8	4[1]

Intervention 2- Using a process which has already been scientifically validated to achieve a 5D reduction in E.coli 0157:H7.

Manufacturing processes used to make fermented sausages are only considered effective against *E. coli* O157:H7 if it is shown that they reduce the level of E.coli O157:H7 by 5 logs (for example from 100,000 cfu/g to less than 1 cfu/g). This is referred to as a 5D process. Under this intervention, it is **not** required to test product for *E. coli* O157:H7. or a 5 log reduction.

The operator must maintain suitable records to demonstrate that all of the critical control points for the process have been met (e.gs. casing diamter, fermentation room thermographs, ph at end of fermentation step, a_w, etc.)

The following processes have been scientifically validated as achieving a 5D or greater

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

reduction in E.coli 0157:H7:

Fermentation chamber temperature		pH at the end of fermentation process	Casing diameter	Subsequent process (dry, hold or cook)	Ref.
°F	°C				
70	21	≥ 5.0	≤ 55 mm	HEAT (1hr @ 110°F and 6 hrs @ 125°F)	1
90	32	≤ 4.6	≤ 55 mm	HOLD @ 90°F for ≥ 6 days	1
90	32	≤ 4.6	≤ 55 mm	HEAT (1hr @ 110°F then 6 hrs @ 125°F)	1
90	32	≤ 4.6	56 to 105 mm	HEAT (1hr @100°, 1hr @110°F, 1hr @120°F, then 7hrs @ 125°F)	1
90	32	≥ 5.0	56 to 105 mm	HEAT (1hr @100°, 1hr @110°F, 1hr @120°F, then 7hrs @ 125°F)	1
96	36	≤ 5.0	≤ 55 mm	HEAT (128°F internal product temperature x 60 minutes) and DRY (at 55°F and 65% Relative Humidity to a Moisture Protein Ration of ≤ 1.6:1)	2
110	43	≤ 4.6	≤ 55 mm	HOLD @ 110°F for ≥ 4 days	1
110	43	≤ 4.6	56 to 105 mm	HOLD @ 110°F for ≥ 4 days	1
110	43	≤ 5.0	56 to 105 mm	HOLD @ 110°F for ≥ 7 days	1

[1]- Nicholson, R., et al, *Dry fermented sausage and Eshcerichia coli O157:H7*.National Cattlemen's Beef Association, Research Report No. 11-316, Chicago, IL, 1996.
[2] - Hinkens, J.C., et al, *Validation of Pepperoni Processes for Control of Escherichia coli O157:H7*, Journal of Food Protection, Vol. 59, No. 12, 1996, pp. 1260-1266.

Intervention 3- Microbiological End-Product Testing Performed on Each Production Lot.

All lots are to be held pending results, and the following parameters must be met:

a) **Definition of "Lot"-** The definition of "lot" for purposes of sampling must be statistically sound and must correspond to product manufactured under the same conditions.

(b) **Sampling plan**: For each lot, the operator shall take **30** samples of finished product and submit them for analysis. The sample plan must be representative of the lot.

(c) **Sample size**: Each sample shall consist of at least **25 g** of product. Samples must be taken in accordance to standard microbiological techniques to avoid contamination of product and sampling of intact product packages is strongly recommended. It is unacceptable to take multiple samples from one intact package as this is not considered statistically representative of the lot.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

(d) **Compositing of samples** by the laboratory for analysis: It is acceptable to combine a **maximum of three (3) samples** into a composite for purposes of analysis when testing is done for *E. coli* O157:H7 and *Salmonella*.

(e) **Organisms to be tested:** At a minimum, each composite sample shall be tested for the presence of *E. coli* O157:H7 and *Salmonella.*

(f) **Laboratory requirements**: **CAUTION** - Since *E. coli O157:H7* are pathogenic to humans, the tests should be done in a laboratory that has the proper equipment for containment by personnel trained in handling level 2 pathogens.

(g) **Method used**: The method used to analyze the end product samples shall be one of the methods listed in Health Canada's Compendium of Analytical Methods, Vol. 3 Health Canada (ISBN 0-921317-17-4).

(h) **Reporting of results**: Results shall be reported in writing. Results shall be identified to the lot of product being tested and shall include individual results for each test performed, method used, minimum sensitivity of the test used, lot for which these results apply.

(i) **Release of product**: Product will be held under the control of the operator until the written results of analysis have been reviewed and found acceptable (i.e. negative for the presence of *E. coli* O157:H7 and *Salmonella*).

(j) **In case of a positive result** for either *E. coli* O157:H7 or *Salmonella*: the entire lot must be held and either submitted to process verified to achieve a minimum 5D reduction or the product must be destroyed. Possible cross-contamination of other lots shall also be assessed.

(k) **Keeping of records**: Records of test results shall be kept for a minimum of 24 months beyond the release date of the product.

Intervention 4- Implement a full HACCP plan for the product AND a process which has already been scientifically validated to achieve a 2D reduction in E.coli 0157:H7.

To be eligible to use this intervention, the operator must have implemented a HACCP system which meets the requirements of the CFIA's FSEP approach (Related information could be found on CFIA's Web site at http://www.cfia-acia.agr.ca/ english/ppc/haccp/ haccp.html). Sampling of raw batter must be done in accordance to the requirements set out in parts (a) to (k) below.

a)**Definition of "lot":** The definition of "lot" for purposes of sampling must be statistically sound and must correspond to like production practices. Provided that effective controls for tracing product are in place and all corresponding dry fermented sausage manufacturing processes have been validated as achieving at least a 2D reduction of *E.coli* 0157:H7, it would be acceptable to conduct one single series of sampling on batter which may be used thereafter in different sausages.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

(b) **Sampling plan**: For each lot, the operator shall take 15 samples of raw batter and submit them for analysis. The sample plan must be representative of the lot.

(c) **Sample size**: Each sample shall consist of at least **25 g** of product. Samples must be taken in accordance to standard microbiological techniques to avoid contamination of product. It is unacceptable to take multiple samples from one site as this is not considered statistically representative of the lot.

(d) **Compositing of samples** by the laboratory for analysis: It is acceptable to combine a **maximum of three (3) samples** into a composite for purposes of analysis when testing is done for *E. coli* O157:H7 and *Salmonella*.

(e) **Organisms to be tested:** At a minimum, each composite sample shall be tested for the presence of *E. coli* O157:H7 and *Salmonella.*

(f) **Laboratory requirements**: **CAUTION**! - Since *E. coli O157:H7* are pathogenic to humans, the tests should be done in a laboratory that has the proper equipment for containment by personnel trained in handling level 2 pathogens.

(g) **Method used:** The method used to analyze the end product samples shall be one of the methods listed in Health Canada's Compendium of Analytical Methods, Vol. 3, Health Canada (ISBN 0-921317-17-4).

(h) **Reporting of results**: Results shall be reported in writing. Results shall be identified to the lot of product being tested and shall include individual results for each test performed, method used, minimum sensitivity of the test used, lot for which these results apply.

(i) **Release of product**: Product will be held under the control of the operator until the written results of analysis have been reviewed and found acceptable (i.e. negative for the presence of *E. coli* O157:H7 and *Salmonella*).

(j) **In case of a positive result** for either *E. coli* O157:H7 or *Salmonella*: the entire lot must be held and either submitted to a 5D reduction process or be destroyed.

(k) **Keeping of records**: Records of test results shall be kept for a minimum of 24 months beyond the release date of the product.

The operator must maintain suitable records to demonstrate that all of the critical control points for the process have been met for the 2D reduction (e.gs. casing diamter, fermentation room thermographs, ph at end of fermentation step, a_w, etc.)

The following processes have been scientifically validated as achieving a 5D or greater reduction in E.coli 0157:H7:

Fermentation chamber temperature	pH at the end of fermentation	Casing diameter	Subsequent process	Ref.

°F	°C			(dry, hold or cook)	
70	21	≥ 5.0	56 to 105 mm	HEAT (1hr @ 110°F and 6 hrs @□125°F)	[1]
90	32	≤ 4.6	56 to 105 mm	HOLD @ 90°F for 7 days then dry	[1]
90	32	≥ 5.0	56 to 105 mm	HOLD @ 90°F for 7 days then dry	[1]
110	43	≥ 5.0	≤ 55 mm	HOLD @ 110°F f□r 7 days then dry	[1]
110	43	≥ 5.0	56 to 105 mm	HEAT (1hr @ □10°F and 6 hrs @ 125°F)	[1]

[1]- Nicholson, R., et al, *Dry fermented sausage and Escherichia coli O157:H7.*National Cattlemen's Beef Association, Research Report No. 11-316, Chicago, IL, 1996.

Intervention 5- Use an alternative manufacturing process which is scientifically proven against E.coli 0157:H7.

The facility operator may make a request for the evaluation of an alternative manufacturing process by Health Canada, Director, Bureau of Microbial Hazards, Food Directorate, HPB Ottawa (i.e. a 5 D process that differs from those outlined in Intervention 2 or a 2D process with raw batter testing that differs from intervention 4). To allow the process to be evaluated, manufacturers shall use the same challenge protocol that was developed by the USDA and described below under Annex 1 Challenge Protocol. Because of the complex nature of the protocol, it is strongly recommended that the services of an experienced food technology center be retained.

Upon completion of a successful evaluation, the establishment shall be receive a letter of no objection indicating that the process has been evaluated for its ability to control *E. coli* O157:H7 and found acceptable. Until such confirmation is received, the operator will have to manufacture product in accordance to one of the other four interventions outlined above.

6. Requirements for Controlling Trichinella Spiralis in Pork

All smokehouses or other cooking devices, freezers, and any other room/device, used for the destruction of *Trichinella* in pork or pork products shall be equipped with accurate automatic devices that **continuously** record time/ temperature.

Time/temperature recorders and thermometers used in registered establishments shall be tested for accuracy against a known accurate standard thermometer and clock. Such tests shall be performed just prior to installation and at least once a year thereafter or more frequently as may be necessary to ensure their accuracy. A dated record of such tests shall be kept, along with the responsible person, and the necessary information on deviations and appropriate corrective actions.

For freezing, heating and curing methods used to ensure the destruction of viable *Trichinella* in striated pork muscle or meat product containing striated pork muscle, the operator is responsible for keeping current and accurate records which document all parameters required for process control (e.g. lot identification, time/temperature records,

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

% salt, casing diameter, etc.), the critical limits which must be respected as well as the actual measurements confirming that the critical limits were met and, when a process deviation has occurred, the corrective action taken.

All operator control records shall be verified on a regular basis and kept at the establishment for at least one year or for the duration of the shelf life of the product if the latter is greater than one year. Records shall be available to the inspector upon request.

The inspector is responsible to maintain a freezing log book in addition to the operator's control records.

Heating

All parts of the pork muscle tissue shall be heated according to one of the time/temperature combinations listed in Table B.2

Table B.2
Thermal treatments to ensure the destruction of *Trichinella* in Pork Meat

Minimal Internal Temperature (°C)	Minimum time[1]
49	21 hrs.
50	9.5 hrs.
52	4.5 hrs.
53	2.0 hrs.
54	1.0 hr.
55	30 min.
56	15 min.
57	6 min.
58	3 min.
59	2 min.
60	1 min.[2]
62	1 min.[2]
63	Instant[2]

[1] The time to raise internal product temperature from15°C to 49°C shall not exceed 2 hours unless the product is cured or fermented.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

[2] Time, when in combination with internal product temperatures of 59°C to 62°C, does not need to be monitored if the product's minimum thickness exceeds 5.1 cm and refrigeration of the product does not begin within 5 minutes of attaining 59°C.

The operator shall use procedures which ensure the proper heating of all parts of the product. It is important that each piece of sausage, ham, and other product treated by heating in water be kept entirely submerged throughout the heating period; and that the largest pieces in a lot, the innermost links of bunched sausage or other massed articles, and those pieces placed in the coolest part of a heating cabinet, compartment or cooking vat be included in the temperature test.

Temperature monitoring shall therefore be conducted at the center of the largest pieces and at the coldest spot of the vat, heating cabinet or smokehouse. The operator shall keep records of their monitoring procedures including results, process deviations and corrective actions. Both the operators monitoring procedures and records should be routinely verified by the inspector as per the Compliance Verification System (CVS) program.

Freezing

Highlights of the various approved freezing methods for destroying trichinae

In methods #1 and #2, room temperature is controlled for the purposes of establishing that the process for destroying trichinae is compliant. Products are put in the freezer after chilling (i.e., once they have reached a temperature no higher than 4°Cwithout being frozen). Owing to these two factors, spacers must be used. The boxes may not be shrink-wrapped.

In method #3, products are already frozen when the treatment for destroying trichinae begins. The entire treatment needs to be monitored using a properly installed thermocouple. Spacers are not required in this method and the boxes may be shrink-wrapped.

Method #4 uses both types of monitoring (i.e., first the thermocouple, then room temperature) to ensure the destruction of trichinae. Spacers are not required and the boxes may be shrink-wrapped.

Method #5 has been developed for meat products frozen in bulk containers according to a specific protocol; the trichinae destruction treatment uses the time/temperature combinations adopted in method #3. Given the size of the containers, spacers cannot be used. Boxes may not be shrink-wrapped.

Freezing Method #1:

When this method is used, pork striated muscle or products containing pork striated muscle tissue, after preparatory chilling to a temperature of 4°C or less, shall be kept frozen at the indicated temperature for an **uninterrupted** length of time equal or longer to the one specified in the following table.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

Table B.3.1
Freezing method #1 to ensure the destruction of *Trichinella*
(Temperature -25°C)

Group	Time
Group 1 pork products with maximum thickness of 25 cm	10 days
Group 2 pork products with thickness between 25 - 50 cm	20 days

Insulating packaging material shall be removed prior to the commencement of the freezing process. Boxes shall be stacked in such a way as to permit air circulation and to permit product to reach the freezing room temperature as quickly as possible **(spacers required and no shrink wrap)**.

Freezing time calculation shall begin only from the moment that the freezer's temperature reaches the specified value. In cases where the freezer temperature exceeds the specified maximum temperature indicated in the freezing schedule, the operator shall either use a different time-temperature schedule which allows for the higher temperature or shall restart the counting of the number of uninterrupted freezing days from the moment that the freezer temperature returns below the specified maximum.

Freezing method # 2:

When this method is used, pork muscle or products containing pork muscle tissue, after preparatory chilling to a temperature of 4°C or less, shall be kept frozen at the indicated temperature for an **uninterrupted** length of time equal or longer to the one specified in Table B.3.2.

Insulating packaging material shall be removed prior to the commencement of the freezing process. Boxes shall be stacked in such a way as to permit air circulation and to permit product to reach the freezing room temperature as quickly as possible **(spacers required and no shrink wrap)**.

Freezing time calculation shall begin only from the moment that the freezer's temperature reaches the specified value. In cases where the freezer temperature exceeds the specified maximum temperature indicated in the freezing schedule, the operator shall either use a different time-temperature schedule which allows for the higher temperature or shall restart the counting of the number of uninterrupted freezing days from the moment that the freezer temperature returns below the specified maximum.

Table B.3.2
Freezing Method # 2 to Ensure Destruction of *Trichinella*

Freezer Temperature (°C)	Min. # of Days (uninterrupted)	Min. # of Days (uninterrupted)

	Group 1	Group 2
-15	20	30
-23	10	-
-25	-	20
-29	6	12

Group 1: 15 cm thickness or less
Group 2: 15 to 50 cm thickness

Freezing Method # 3:

In lieu of the methods prescribed in Freezing Method # 1 and Freezing Method # 2 above, products containing pork striated muscle may be treated by means of commercial freeze drying or controlled freezing.

When using this method # 3, **there is no obligation to use spacers and the use of shrink wrap around pallets is acceptable**.

Product brought in already frozen shall be treated in accordance with one of the time/product internal temperature combinations specified in Table B.3.3. For **each lot**, the **internal temperature** is to be monitored by a thermocouple placed in the CENTRE of the thickest piece of meat and in the warmest location of the freezer (not close to cooling equipment). The temperature shall be measured with properly calibrated thermoelectric instruments (recording thermometers) and continuously recorded. The charts shall include pertinent information and, at least, the lot number, its description, the number of boxes, date in, date out, and the signature of the inspector.

Table B.3.3
Freezing Method # 3 to Ensure Destruction of *Trichinella*

Product Internal Temperature (°C)	Minimum Time (hours)
-18.00	106
-21.00	82
-23.50	63
-26.00	48
-29.00	35
-32.00	22
-35.00	8
-37.00	½

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

Temperature, when measured in degrees Celsius, shall be measured to the next lowest tenth of a degree Celsius or, in the case of temperature measuring devices unable to attain such a degree of accuracy, to the next **lowest** degree Celsius. For example, if a thermometer is not accurate enough to read -23.5°C, the meat shall be frozen to -24°C.

Freezing method # 4:

For methods # 1 and # 2, the control of the freezing temperature is accomplished by monitoring the freezer's ambient temperature. For method # 3, the same control is exerted through the use of a thermocouple in the centre of the warmest piece of meat.

A fourth method has been found acceptable. This method is based on both types of controls to ensure the destruction of trichina.

When using this method # 4, **there is no obligation to use spacers and the use of shrink wrap around pallets is acceptable**.

This method is done in two steps.

Step 1:

The purpose of this first step is to ensure that the temperature of all products of the lot to be treated has attained a temperature equilibrium with the freezer temperature. For **each lot**, the **internal temperature** is to be monitored by a thermocouple placed in the CENTRE of the thickest piece of meat and in the warmest location of the freezer (not close to cooling equipment). For doing so, as soon as the product is brought into the freezer, a thermocouple is placed at the centre of the warmest box of the lot. This box is then placed at the centre of the largest pallet. The temperature shall then be measured with properly calibrated thermoelectric instruments (recording thermometers) and continuously recorded until product temperature at the centre of this box is the same as the freezer's ambient temperature.

Step 2:

At this time, the thermocouple may be removed. The freezing time calculation may begin. The treated products shall be kept frozen at the indicated temperature for an **uninterrupted** length of time equal or longer to the one specified in Table B.3.1 or B.3.2.

For each lot treated, the operator shall keep the charts of the two steps to clearly demonstrate the control that is exerted. Records for the two steps shall be kept on file for each lot. The charts shall include all pertinent information and, at least, the lot number, its description, the number of boxes, date in, date out, the freezing method used and the signature of the monitor.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

Freezing method # 5

This method is based on the protocol for freezing meat products in bulk containers (Table B.3.3. It **applies only to big cuts of meat** in bulk containers (e.g., a ham with bone) and has two steps.

Step 1:

The first step consists in ensuring that all refrigerated products that will be put in bulk containers will reach a temperature of -18°C or lower.

From the outset of the freezing process, **core temperature** must be monitored for **each lot** to be treated using a thermocouple inserted in the MIDDLE of the biggest cut of meat located in the warmest part of the freezer (not close to a refrigeration unit). Temperature must be recorded on a continuous basis using properly calibrated thermoelectric instruments (recording thermometers).

Step 2:

Freezing time for the treatment to destroy trichinae starts now. Treated products must be kept at the prescribed temperature without interruption for the amount of time specified in Table B.3.3.

The thermographs for each lot processed in each step should be preserved to clearly demonstrate that the proper controls have been applied. The temperature recordings for both steps must be kept, along with all pertinent information, notably the lot number, lot description, number of bulk containers, date of entry and removal, and the monitor's signature.

RELATED SECTIONS OF TIPM

02-G-03 Temperature Recording Devices
03-C-03 Calibration Procedures - Records of
03-D-09 Manufacturing Control Training
03-G-05 Dried - Dehydrated Products
03-G-10 Written Recipes
09-A-01 Trichinosis - Control of

SUBJECT: Dried - Dehydrated Products	03-G-05
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section 3.2, 3.3	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2011 **Page 1 of 3**

RATIONALE

Drying is an effective method of preserving meat products. Lack of moisture creates an environment that is unsuitable for the growth and multiplication of micro-organisms (bacteria, molds, fungi, etc.) that cause spoilage and which may transmit diseases.

Drying can be accomplished by:

1. Exposure to air.
2. Heating.
3. Freeze drying.

Drying leads to a reduction in the water activity in the product.

Note: It is important to realize that **drying DOES NOT DESTROY micro-organisms or** their **toxins**. It only delays the subsequent growth of these agents.

It is essential for drying to be conducted properly.

Proper drying requires strict control of a number of factors including temperature, air movement through the room, relative humidity, etc.

Note: If drying occurs too fast there will be hardening of the product, particularly the outer surface. If drying takes too long the surface of the sausage will be soft and mold may develop. Excessive air movement will lead to fast drying and if it is too slow the growth of molds will be enhanced. Excess humidity will also slow down the rate of drying.

OBJECTIVE/OUTCOME

The "Licensed Meat Facility" (facility) will have written **"Dehydration Procedures"** on file.

Note: Drying procedures must be available for each different type of product.

The facility will have **"Dehydration Records"** on file.

Note: These records provide proof that the product has been handled and processed in a manner that ensures it is safe for human consumption.

All ingredients used in the production of dehydrated products, including the meat, will be handled and stored under conditions that limit the growth of micro-organisms (e.g. refrigeration).

Note: It is important that there be a limited number of micro-organisms in the initial product because the process of dehydration doesn't destroy them, it only slows their growth. The more there are at the start the faster the finished product will deteriorate.

Special rooms and areas will be designated for the production and drying of fermented meat products.

Note: These rooms, or areas, must be separated and designed in such a manner that the product only moves in one direction. One way movement serves to eliminate any chance of cross-contamination.

Drying can be done **in** the **smokehouse IF** it has been **specifically designed** and equipped with a drying cycle.

Drying will meet the requirements for temperature, relative humidity, time, pH, etc. that are set out in the next section of this document.

If a dehydrated product is made with beef (e.g. beef jerky), the manufacturing process **must** include a **kill step** specifically designed for ***E. coli* O157:H7** prior to dehydration. The following methods have been found acceptable for this purpose:

(a) cooking the product so it reaches an internal temperature of 71°C for 15 seconds before starting the drying process;**OR**
(b) use of a process validated as achieving a 5D reduction in *E. coli* O157:H7. **AND**
(c) an alternative challenge study of a design acceptable to the CFIA and Health Canada achieving a 5D reduction in *E. coli* O157:H7 can be used.

Note: This step is mandatory because this dangerous organism is reasonably likely to be present in beef products. The operator is responsible for selecting the appropriate kill step. This kill step must be monitored and documented.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Dried-Dehydrated Meat Products"** will be met when*:*

1. Written **"Cooking and/or Dehydrating Procedures"** are on file for each dried meat product.

   Note: Drying may be done at temperatures of 13-18^0 C (55-65^0 F) and at a relative humidity of 65-70% for a period of 21-90 days. Regular checks should be made to ensure that the daily weight loss during drying does not exceed 0.7%.

2. "**Cooking & Water Activity Records"** are on file

   Note: These records should prove that all dehydrated meat products were produced in accordance with the written **"Cooking and Dehydrating Procedures"**.

   In general meat and meat products can be dried to whatever is specified in the written procedures providing there is no temperature abuse of the product before, or during, the drying process and the growth of mold is suppressed. **This general statement does not apply to products**, including fermented products, **labeled and sold as "Shelf Stable"**.

3. **For products** to be **labeled** as **"Shelf Stable"** production records will prove that one of the following conditions has been met:

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

a) The a_w of the finished product is 0.85 or less, regardless of final pH.

Note: **a_w** is a **measure of water activity**. The a_w of a meat product is the ratio of the water vapor pressure of the meat product to that of pure water at the same temperature. **A_w** is measured on a scale of 0.00 to 1.00 with 0.00 being totally dry and 1.00 is pure water.

b) The pH of the finished product is 4.6 or less.

Note: **pH** is a **measure of acidity**. The pH is actually the negative logarithm of hydrogen ion or proton concentration. On the pH scale a reading of 7 is neutral. Readings below 7 indicate increasing degrees of acidity while readings above 7 indicate increasing degrees of alkalinity. Because pH is a logarithmic scale each step on the scale goes up by a factor of ten times. This means that a pH of 5 is 10 times as acidic as a pH of 6, a reading of 4 is 100 times more acidic than 6, a reading of 3 is 1,000 times more acidic, etc.

In addition to meeting one of the above requirements all **products containing <u>beef</u>**, **other than** those that have been **fermented verification that a <u>kill step</u>**, for *E. coli* 0157:H7, **was used** before the drying process was started. (e.g. heating the product to 71° C for 15 seconds) **is required**.

For **<u>Fermented Products</u>** production records must show that the pH has been reduced to below 5.3 or lower at the end of the fermentation period, the A_w is less than 0.90 and the product contains not less than 100 ppm nitrite or nitrate with salt at the moment of formulation.

4. Written **"Calibration Procedures"** and **"Calibration Records"** are on file.

Note: These records should contain details on all equipment, used in the dehydrating process, that require calibration (e.g. thermometers, water activity recorders, etc.).

5. Personnel **"Training Records"** are on file.

Note: These records should provide the names of personnel that are responsible for dehydration activities and they should detail the type of training that was provided.

RELATED SECTIONS OF TIPM

02-G-03 Temperature Recording Devices
03-C-03-Calibration Procedures - Records of
03-G-04 Fermented Meats
03-G-10 Written Recipes
09-A-01Trichinosis - Control of

SUBJECT: Product Cooking	03-G-06
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section 3.2, 3.3	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2011 **Page 1 of 4**

RATIONALE:

Cooking can render many foods digestible, palatable, bring them to enjoyable eating temperature, and kill or injure viruses, parasites or vegetative forms of bacteria. Microorganisms, however, may survive depending on time-temperature exposure, previous treatments and characteristics of contaminating organisms (e.g. *Salmonella*). Experience has shown that the main risk to public health from meat products is due to food-poisoning organisms such as salmonellae, staphylococci and *Clostridium perfringens*.

In order to avoid risks of this nature, the temperature and duration of the cooking process for heat treated meat products employed in registered establishments should be such that the heat treatment alone or in combination with other preserving processes is sufficient to destroy all vegetative forms of these pathogens

Note: Time and temperature are critical factors in ensuring the destruction of pathogens. Specific internal temperatures must be reached in the product to effectively destroy any viable pathogens.

Required temperatures will vary with the type of meat product.

It is important to ensure that there is sufficient heat penetration, throughout, to ensure that the entire meat product has been properly cooked.

Note: A calibrated thermometer must be used to ensure that the desired internal temperature was reached. This is the only way that the operator can be sure that the final product is safe.

OBJECTIVE/OUTCOME

Microorganisms that may be distributed throughout meat during cure injection, reforming, or preparation of an emulsion. Cooking to 71ºC or maintaining temperatures above 60 ºC for an adequate period of time generally ensures that all vegetative forms of pathogens are destroyed, and takes into consideration some room for error in thermometer readings.

Note: Further information on cooking requirements can be found in the CFIA manual of procedures Section 4.3-Cooking at http://www.inspection.gc.ca/english/fssa/meavia/man/ch4/4-3-4e.shtml#a4-3

Cooking equipment used must be capable of consistently (lot by lot) delivering the specified cooking process.

Measuring and/or recording equipment must be suitable to accurately and consistently measure and/or record the data used to verify that the control limits identified in the manufacturing process are being met

Written “Cooking Procedures” will be developed, implemented, and maintained.

Note: These procedures must provide details on precautions taken to prevent, eliminate, or reduce, hazards to an acceptable level.

Cooking meat products to an instantaneous kill temperature of 71ºC is generally the easiest method to achieve a fully cooked, RTE product, however, time and temperature charts can be used (an example is depicted below), provided that validation documentation is provided.

Table 1 - Times for a given temperature, minimum holding time at that temperature (minimum dwell time) needed to obtain a 6.5D lethality of *Salmonella* spp.- Products containing NO chicken.

Degrees Celsius	Minimum Time to 6.5D reduction	Degrees Celsius	Minimum Time to 6.5D reduction
54.4	112 min	63.3	169 sec
55.0	89 min	63.9	134 sec
55.6	71 min	64.4	107 sec
56.1	56 min	65	85 sec
56.7	45 min	65.6	67 sec
57.2	36 min	66.1	54 sec
57.8	28 min	66.7	43 sec
58.4	23 min	67.2	34 sec
58.9	18 min	67.8	27 sec
59.5	15 min	68.3	22 sec
60.0	12 min	68.9	17 sec
60.6	9 min	69.4	14 sec
61.1	8 min	70	Instant
61.7	6 min	70.6	Instant
62.2	5 min	71.1	Instant
62.8	4 min	-	-

Note: Cooking time/temperature requirements are dependant on the species of meat used. Further cooking charts can be found in CFIA Manual of Procedures, Annex D at http://www.inspection.gc.ca/english/fssa/meavia/man/ch4/annexde.shtml

Validation involves verifying and demonstrating that the manufacturing process:

(a) is designed to deliver the necessary amount of thermal lethality to reach food safety; **and**
(b) that the operating procedures and equipment used to make meat products on a day-to-day basis will deliver the manufacturing process as designed.

Further detailed requirements on validation can be found in section 4.3.2.2 of the CFIA manual of procedures at http://www.inspection.gc.ca/english/fssa/meavia/man/ch4/4-3-4e.shtml#a4-3-2-2

If the operator has no validation that the process provides at least the minimum needed amount of thermal lethality, the product must be considered as a heat treated non RTE meat product.

In order to meet these requirements, the operator must conspicuously label the meat product to prevent it from being mistaken for a cooked RTE product and provide clear preparation instructions that when followed by the consumer will fully cook the product (i.e. provide enough thermal lethality instructions to achieve a 6.5D or 7.0D reduction in *Salmonella* spp.).

Records of cooking times and temperatures will be kept for all edible meat products.

Note: These records must be kept for a minimum of one year from the date that the products were made.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **Cooked Meat Products** will be met when*:*

1. Written plant specific "**Product Cooking Procedures"** are on file.

   Note: These procedures must meet all of the requirements of section 3-3 subsections (a) to (f) of the MFS.

2. Meat products are cooked in accordance with the procedure and reach the temperature specified in the procedure.
3. Calibrated thermometers are used to determine the internal temperature of cooked product.

   Note: **"Calibration Records"** for the thermometers must be on file.

4. Accurate and up-to-date, **"Cooking Records"** are kept.

   Note: As a minimum these records must include:

   a) Date;
   b) Time;
   c) Product name;
   d) Amount of product;
   e) Internal temperature reached (and time, if applicable);

f) Initials of responsible personnel (including verifier)

RELATED SECTIONS OF TIPM

02-G-03 Temperature Recording Devices
03-C-03 Calibration Procedures - Records of
03-D-09 Manufacturing Control Training

SUBJECT: Cooked Product Cooling	03-G-07
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section 3.2,3.3	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Most common food poisoning bacteria will grow from 0^0 C up to 54^0 C, but their range of rapid growth is from 27^0 C to 54^0 C. It is important to cool product effectively and continuously, but it is particularly important to have rapid cooling during the rapid growth range temperatures of 27^0 C to 54^0 C.

There is always the possibility that a few micro-organisms (bacteria, molds, fungi, etc.) might survive the cooking process. These survivors have been heat-shocked, but not completely destroyed.

Note: The vegetative forms, of these micro-organisms, will have died but spores may survive. Spores are bacterial forms that have a tough outer cover which makes them more resistant to heat. These opportunistic micro-organisms waits until the temperature gets to the point where it is not too hot, yet warm enough to multiply. If the temperature remains in the optimum range long enough, some of these spore forming organisms are capable of producing a toxin (poison) that is strong enough to kill.

OBJECTIVE/OUTCOME

The "Licensed Meat Facility" (facility) will use appropriate cooling methods of all heat processed (cooked) meat products.

Note: Appropriate cooling means using one of the methods outlined in the procedures section of this document.

Approved cooling methods include:

a) Slow Cooling Rate for Specific Heat Processed Products
b) Rapid Cooling Rate
c) Interrupted Cooling Rate

Proper use of these methods ensures that micro-organisms won't have an opportunity to multiply and produce toxins.

Written **"Cooling Procedures"** will be on file.

Note: There must be a written procedure for each type of heat-processed product detailing how the product will be cooled and the time frame for events to occur.

The cooling process will be verified.

Note: The process for each product must be verified. Verification must occur at specified frequencies to ensure that the time/temperature results comply with regulatory guidelines.

"Cooling Records" will be on file.

Note: These records must be retained for 2 years.

COOLING GUIDELINES

Slow Cooling Rate for Specific Heat Processed Products

These following guidelines apply to formulated products, i.e. products that have been cured and have added nitrites and salt and reduced water activity:

a) with a water activity (a_w) of above 0.92, no less than 120 ppm of sodium nitrite (or its equivalent in KNO_2) and a salt concentration* of 3.5% or more in the finished product; OR

b) with a water activity (a_w) of above 0.92, no less than 40 ppm of sodium nitrite (or its equivalent in KNO_2) and a salt concentration* of 6% or more in the finished product; OR

c) with a water activity (a_w) that is less than or equal to 0.92 at the beginning of the cooling process, with or without nitrite (such as dried products); OR

d) with a water activity (a_w) of above 0.92, no less than 180 ppm of sodium nitrite (or its equivalent in KNO_2) and a salt concentration* of 2.3% or more in the finished product.

Note: $$\text{Salt Concentration} = \frac{\%\text{ salt}}{\%\text{ salt} + \%\text{ moisture in end product}} \times 100$$

Example

Example: If there is 2.8% salt in the formulation and the end product has a moisture level of 72%:

$$\text{Salt Concentration} = \frac{2.8}{2.8 + 72} \times 100 = 3.74\%$$

The slow cooling guidelines can also be used if the products meet one of the above conditions (a-d) and ALSO meets the following condition 1 **and** one of the choices in condition 2:

1. The *internal* temperature does not remain between 49^0 C and 4^0 C ($120.^0$ F to 40^0 F) for more than 20 hours **AND**
2. The cooling process:
   a) causes a continuous drop in the product temperature; **OR**
   b) controls the product's surface temperature so that it does not stay between 49^0 C and 20^0 C (120.2^0 F to 68^0 F) for more than 2 hours.

Rapid Cooling Rate

With the exception of products included above in section (1), the operator shall use the rapid cooling rate to rapidly and continuously cool all other heat processed products.

There are 2 choices for a rapid cooling rate:

1. During cooling, the product's maximum internal temperature should not remain between 54^0 C and 27^0 C (129.2^0 F to 480.6^0 F) for more than 2 hours; nor between 27^0 C and 4^0 C (80.6^0 F to 40^0 F) for more than 5 hours [i.e. from 54^0 C to 4^0 C (129.2^0 F to 40^0 F) in a total of 7 hours] except for products listed in #2 below.

2. Product consisting of pieces of intact (not tenderized muscle) such as turkey breast, or pork loin, may be cooled within 7.5 hours from the initiation of the cooling process as long as chilling begins immediately after the cooking cycle is completed and the internal temperature of the product is 5^0 C (41^0 F) or less within 7½ hours from the initiation of the cooling process, while taking no more than 2 hours for the 50^0 C to 20^0 C temperature zone.

Interrupted Cooling Rate

This guideline applies to heat processed products kept in intermediate storage temperatures. This means that they are not cooled completely to 4^0 C in a continual cooling stage, but that the cooling is done in more than one stage. Products heat processed to 69^0 C (156.2^0 F) or more and then cooled from 54^0 C to 18^0 C (129.2^0 F to 64.4^0 F) within 2 hours may be held for up to 4 hours **IF THEY ARE**:

1. Kept below 18^0 C (64.4^0 F) during the 4 hours, **AND**
2. Protected from post cooking contamination (e.g. covered, wrapped, etc), **AND**
3. Cooled to 4^0 C (40^0 F) within 2 hours *immediately* at the end of the 3 hour long holding period.

Note: For permission to use a cooling process that DOESN'T meet any of the preceding guidelines the operator must provide the appropriate regulatory authority and describe the cooling process and relevant data for evaluation.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Cooked Product Cooling"** will be met when*:*

1. Written **"Cooling Procedures"** are on file at the facility.

   Note: These procedures must meet, all of the requirements of subsections (a) – (f) of Section 3-3 of the MFS for each heat processed meat product.

2. All meat products are cooled in accordance with the procedures.
3. Accurate and up-to-date **"Cooling Records"** are on file.

   Note: These records should verify that:

   a) cooling times and temperatures comply with regulatory guidelines

   b) temperatures are taken at the frequencies specified in the procedures

4. Calibrated probe thermometers are used to take temperature.
5. Thermometer **"Calibration Records"** are on file.

RELATED SECTIONS OF TIPM

02-G-03 Temperature Recording Devices

03-C-03 Calibration Procedures - Records of

03-D-09 Manufacturing Control Training

SUBJECT: Carcass Cooling - Red Meat	03-G-08
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 52 AR 31/2006 *Food Regulation* Section 25(1) Meat Facility Standards (MFS) Section 3-3	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Meat will spoil if stored under conditions that allow the growth of micro-organisms (e.g. bacteria and fungi).

The warm temperature and moistness of recently slaughtered carcasses provides ideal conditions for the growth and development of bacteria and fungi.

Cooling is an effective method of preventing the growth and development of food spoiling micro-organisms therefore all carcasses must be:

1. Cooled quickly to an internal temperature of 4^0 C (40^0 F), or less,
2. Maintained at this temperature, or lower, until they are shipped, or processed.

OBJECTIVE/OUTCOME

All edible red meat carcasses, cuts and offal will be chilled immediately after the final carcass inspection has been completed.

Cooling of the carcass will meet the following regulatory standards:

1. Cooling will be continuous.
2. The surface temperature will reach 7^0 C (44.6^0 F), or less, within 24 hours.
3. The internal temperature (warmest part) of the carcass will be 7^0 C (44.6^0 F), or less before cutting starts
4. Following cutting the temperature must decline steadily to reach 4^0 C (40^0 F), or less, as soon as possible.
5. Once a temperature of 4^0 C (40^0 F) has been reached the carcass must remain at that temperature, or lower, until it is shipped.

Note: In order to meat these requirements the equipment and facilities must be capable of cooling meat and meat products in a timely and efficient manner.

Specific cooling procedures, including cleaning and pre-cooling of coolers, will be developed and followed.

Note: The cooler should be empty before the start of the kill and cooled to at least 4^0 C. It is “Common Industry Practice” to bring the temperature down to 2^0 C to ensure a suitable temperature is maintained after warm carcasses have been put in.

There will be adequate cooler space.

Note: Coolers must not be overcrowded. Carcasses must not touch each other nor should they touch the floor.

"Cooling Rate Records" will be kept for each day of slaughter.

Note: These records must be kept a minimum of 1 year.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **Carcass Cooling- Red Meat** will be met when*:*

1. Written plant specific "**Carcass Cooling Procedures"**, are on file

   Note: These procedures must meet all of the requirements of section 3-3 subsections (a) to (f) of the MFS.

2. Onsite observation and records demonstrate that the procedures are being followed.
3. Carcass temperatures are monitored and recorded during the cooling process.
4. Up-to-date "**Carcass Cooling Records"** are on file.

   Note: These records and onsite observations should demonstrate that:

   a) cooling starts immediately after the final carcass inspection;

   b) cooling is continuous

5. **"Calibration Records"** are on file for the probe thermometers used to take carcass temperatures.
6. **"Storage Records"** are on file.

   Note: These records should verify that temperatures were monitored regularly as carcasses were added.

RELATED SECTIONS OF TIPM

02-G-03 Temperature Recording Devices
03-B-02 Storage Procedures & Records
03-C-03 Calibration Procedures - Records of
03-D-09 Manufacturing Control Training

SUBJECT: Carcass Cooling - Poultry	03-G-09
AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18(1)(c) AR 31/2006 *Food Regulation* Section 25(1) Meat Facility Standards (MFS) Section 3.3	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2010 **Page 1 of 2**

RATIONALE

Poultry products will spoil if they are stored under conditions that allow the growth of micro-organisms (e.g. bacteria and fungi).

The warm temperature and moistness of recently slaughtered birds provides ideal conditions for the growth and development of bacteria and fungi.

Cooling is an effective method of preventing the growth and development of food spoiling micro-organisms therefore it is important to rapidly chill poultry carcasses and giblets immediately after dressing and inspection procedures have been completed.

Poultry carcasses and other edible products can be chilled by refrigeration or by immersion in cold water.

Note: Most provincially licensed abattoirs use cold water for chilling. Satisfactory chilling requires refrigeration of the water or the continuous addition of ice.

Chilling rates will be affected by:

1. Temperature of the water;
2. Processing room temperature;
3. Water overflow and replacement rate;
4. Size of birds;
5. Number of birds in the chill tank

Records are required to verify that product has been properly chilled.

Note: Deep muscle temperatures, taken periodically throughout the chilling process, must be recorded.

OBJECTIVE/OUTCOME

All dressed poultry carcasses and other edible poultry products (e.g. giblets) will be chilled immediately after evisceration and washing.

Temperatures of **4^0 C,** (40^0 F) **or lower,** will be reached within the times specified in the following table:

Weight of finished poultry	Time for cooling (maximum)
Under 1.8 kg (4 pounds)	4 hours
Between 1.8-3.6 kg (4-8 pounds)	6 hours
Over 3.6 kg (8 pounds)	8 hours

Giblets, carcass parts harvested during dressing procedures, including detached necks and salvaged portions	2 hours
Chicken feet (paws)	4 hours
Turkey breasts, breast fillets, legs, drumsticks and thighs	4 hours

Note: Chilling equipment must be capable of meeting the above parameters, and, where possible, is located where cooling will occur most efficiently.

Ice must be used as a chilling agent unless the chill tanks, or other chilling mechanisms, are refrigerated

To avoid unnecessary water absorption, poultry must be removed from chill tanks as soon as possible after reaching the required temperature.

Written **"Carcass Cooling (Chilling) Procedures"** will be developed and followed.

Daily **"Carcass Cooling (Chilling) Records"** will be maintained.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **Carcass Cooling- Poultry** will be met when:

1. Written plant specific "**Carcass Cooling (Chilling) Procedures"**, are on file.

   Note: These procedures must meet all of the requirements of section 3-3 subsections (a) to (f) of the MFS.

2. Cooling begins immediately after evisceration and washing.
3. Deep muscle temperatures are monitored and recorded in accordance with the written procedures for each slaughter day.
4. Chill water is maintained at 0 to 2^0 C.

   Note: It is "Common Industry Practice" to continuously replace the water in order to achieve proper cooling.

5. Up-to-date **"Carcass Cooling (Chilling) Records"** are on file.

   Note: These records should show the time frame taken to reach an internal temperature of 4^0 C and demonstrate that:

   a) cooling starts immediately after the final carcass inspection;

   b) cooling is continuous

6. **"Calibration Records"** are on file for the thermometers used to take temperatures.

RELATED SECTIONS OF TIPM

02-G-03 Temperature Recording Devices
02-G-08 Poultry Chilling Equipment
02-O-03 Giblet Salvaging Station(s)
03-C-03 Calibration Procedures - Records of
03-D-09 Manufacturing Control Training

SUBJECT: Written Recipes	03-G-10
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section 3.1,3.2, 3.3	**Initial Release** Sept 1, 2009 **Page 1 of 1**

RATIONALE

The operator of a "Licensed Meat Facility" (facility) is responsible for establishing and adopting procedures that will ensure that all products they manufacture are completely safe for human consumption.

To minimize the chance of error all instructions (recipes) should be in writing.

Note: Recipes should fully describe methods of production and they should specify the control and monitoring of such methods.

Practices relating to monitoring the quantity of the ingredients, used in preparing meat products, are of particular importance.

Note: Some ingredients, particularly nitrites and nitrates, are toxic (poisonous) when added in excess. For this reason ingredients, in processed meat products, must be accurately measured. Guesswork, or estimation, in the measurement of ingredients is hazardous and must be avoided.

Due the possibility of poisoning only ingredients that have been approved by the Canadian Food Inspection Agency (CFIA) can be used.

Note: Only amounts deemed to be safe can be used.

OBJECTIVE/OUTCOME

Written recipes and methods of preparation for all meat products requiring the addition of any ingredient(s) will be kept on file at the facility.

Note: All recipes must state accurate amounts of and ingredients that are to be added and the written methods of preparation must state, in detail how the product is to be made, including methods and times of preparation, cooking, cooling, etc.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Written Recipes"** will be met when:

1. Written **"Recipes",** for all meat products produced at the facility, are on file.

   Note: These recipes must provide specific details on any ingredients that are to be added.

2. All recipes are in compliance with the *Food and Drug Act* (Canada) and it' s associated Regulations pertaining to the ingredients that are to be added.

RELATED SECTIONS OF TIPM

03-G-03 Nitrate & Nitrite Addition
03-G-04 Fermented Meats
03-G-05 Dried - Dehydrated Products
03-G-06 Product Cooking
03-G-12 Allergen Control Program
03-G-13 Grinding Procedures

SUBJECT: Ready to Eat (RTE) Storage & Handling	03-G-11
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section 3.1, 3.2, 3.3	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

"Ready to Eat" (**RTE**) **products** have been cooked, or otherwise processed (e.g. fermented) in a manner that makes them **safe to eat without further cooking**.

Because these products can be eaten without further cooking makes it **essential to avoid** any **contamination** through poor handling, packaging, or storage practices.

To protect against contamination it is important for the "Licensed Meat Facility" (facility) to develop and adhere to processing controls that enhance food safety.

Note: Implementation of **process controls** is **more effective** in ensuring product safety **than testing** of the finished product.

Complete separation of RTE products, from raw product, at all times, is of utmost importance to prevent contamination. Separation is essential in processing and storage areas.

Note: Separation in storage can be achieved by:

a) use of impervious packaging;

b) storage in separate coolers

Keeping meat at 4^0 C, or less, is essential in preventing the growth of bacteria and molds.

Note: This temperature requirement applies to all stages of storage, handling and transportation.

Poor hygienic practices, by facility personnel, are a potential cause of cross contamination, between RTE and raw product.

Note: Under ideal procedures only designated personnel will work with RTE products. If this is not possible specific rules such as separate protective clothing (e.g. smocks and gloves) must be strictly enforced.

If a common area has to be used for handling and packaging of RTE products as well as raw, or semi-cooked, products the handling and packaging of RTE products should be conducted before the other products are worked with.

Note: These areas must be thoroughly cleaned and sanitized before they are used again for RTE products.

OBJECTIVE/OUTCOME

The facility will have specific procedures for the handling, storage, and packaging of RTE products.

Note: These procedures must be:

a) written;

b) implemented;

c) communicated to all staff

RTE products will be separated from raw meat, or raw meat products, at all times.

RTE products will be handled, stored and packaged:

1. In dedicated rooms.
2. By dedicated personnel that are dressed appropriately.

Note: Dedicated rooms and personnel is the ideal situation. If dedication is not possible the procedures must designate specific areas for handling, storage and packaging of RTE products and/or specify criteria that must be followed to minimize any chance of cross contamination.

Personnel working with RTE products will be trained appropriately.

Note: Appropriately trained personnel will understand the precautions needed to prevent contamination of RTE product with raw product and they will be able to implement appropriate procedures.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the "**RTE Storage & Handling"** will be met when:

1. Detailed written "**RTE Storage & Handling Procedures"** are on file at the facility

   Note: These procedures must provide details about how the facility is preventing, or eliminating, the chance of contamination of RTE products.

2. Onsite observations demonstrate that RTE products are handled and packaged in accordance with the written procedures.
3. All RTE products are stored in a manner that effectively controls the growth of pathogenic micro-organisms and protects the product from physical damage.

RELATED SECTIONS OF TIPM

03-D-01 Health & Hygiene Policy
03-D-02 Cleanliness & Protective Clothing
03-D-03 Hand Washing & Gloves
03-D-09 Manufacturing Control Training
03-G-07 Cooked Product Cooling

SUBJECT: Allergen Control Program	03-G-12
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section 3.1, 3.2, 3.3	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Food ingredients can cause life threatening allergic reactions in susceptible individuals.

For this reason an effective allergen control program is essential to reduce this very real and serious risk.

Note: Allergens are materials that are capable of causing an allergic reaction.

By law, the presence of common **allergens**, in any food product, including meat products, **must be declared on the label**.

Note: At the time this document was written the official list of common allergens included:

a) Peanuts;

b) Tree nuts;

c) Eggs and egg products;

d) Milk and dairy, products;

e) Crustaceans;

f) Fin fish;

g) Soy;

h) Wheat;

i) Sesame seeds;

j) Sulfites

k) Mustard seed

As new allergens are identified the list of allergens will expand.

All products containing any of the above common allergens that are stored, in a “Licensed Meat Facility” (facility), must be labeled by color coding, or other means, to identify that it contains allergens.

Note: The facility operator is responsible for developing and implementing procedures, at all stages of production, to ensure that cross-contamination does not occur between allergens and non-allergenic products.

OBJECTIVE/OUTCOME

A written **"Allergen Control Program"** will be on file at the facility.

Note: The purpose of this program is to ensure that allergens used, or stored, in the facility do not cross-contaminate any non-allergenic products, or ingredients.

All **allergen** containing products and **ingredients will be identified and controlled** at all stages of production.

Final **products that contain allergens will be accurately labeled** to identify the allergenic ingredients.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for an effective **"Allergen Control Program"** will be met when:

1. An up-to-date, written **"Allergen Control Program"** is on file.

   Note: This program will include a:

   a) master list of all ingredients, processing aids and packaging that clearly identifies those which are allergenic or that contain, allergens;

   b) listing of secondary ingredients (e.g. spices, flavorings, additives, release agents, colorings, etc.);

   c) master list of all finished products which clearly identify all products that contain allergens;

   d) requirement for the suppliers of ingredients to have an effective allergen control program

   The term "up-to-date" means that the program has been modified as required and as new allergens are identified.

2. **"Written Allergen Procedures"** are in place relating to the transportation, receiving and storage of ingredients and finished products that contain allergens.

   Note: These procedures must ensure that items containing allergens are segregated, clearly labeled and handled in a manner that minimizes the chance of contamination of other ingredients, packaging materials or finished products.

3. Procedures are in place to dedicate processing equipment, or areas of the facility, **OR** to segregate production through scheduling whenever ingredients, or products, containing allergens are processed.

   Note: Allergens, equipment, packaging materials and personnel should be kept in mind when scheduling, or rescheduling of production occurs and procedures must be in place to control allergens during product change over.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

4. Written **"Sanitation Procedures"** are in place for equipment used to handle products that contain allergens
5. Written **"Rework Procedures"** are in place to control any rework and/or reformulation activities for products that contain allergens
6. **"Training Records"** for personnel involved with handling of ingredients and/or products that contain allergens are on file.

   Note: These records should:

   a) identify the topics that were covered;

   b) name personnel that received the training;

   c) indicate that the training was understood (e.g. examination results)

7. Products that contain allergens are properly labeled so that all allergens are identified.

   Note: In addition procedures must be in place to ensure that labels remain current and accurate after reformulation.

RELATED SECTIONS OF TIPM

03-D-09 Manufacturing Control Training

03-E-03 Sanitation Procedures

11-C-04 Ingredient Listing & Allergen Information

SUBJECT: Grinding Procedures	03-G-13
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section 3.3	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Ground meat products are considered to be a higher risk product than other raw cuts of meat because micro-organisms (bacteria, fungi, molds, etc.), when present, will be spread throughout the product.

Note: A bacterium called ***E. coli* O157:H7** is of **particular concern in ground beef**.

Appropriate processing practices can significantly reduce the possibility of contamination.

Note: Appropriate processing practices, of importance, include but are not limited to:

a) strict rules of hygiene for personnel doing the grinding;

b) frequent cleaning and sanitation of equipment and storage tubs particularly between batches;

c) prompt processing to minimize the chance of microbial growth;

d) proper storage temperatures for both raw materials and finished product;

e) no carry over (i.e. re-working of a product);

f) no double grinding

OBJECTIVE/OUTCOME

Written **"Grinding Procedures"** will be on file and implemented.

Note: These procedures must provide details about precautions that need to be taken, during processing that will have the effect of preventing, eliminating, or reducing hazards to an acceptable level.

Grinding will be done without delay (as soon as possible after cutting) and under conditions that will prevent the initial contamination of the product and minimize the chances of further development of any pathogenic (disease causing) micro-organisms that might get into the product.

Note: Failure to do so could lead to the spoilage of the product or the presence of dangerous numbers of pathogens in the product.

Meat, or meat products, that are going to be ground will be stored at a proper temperature and in a manner that reduces the possibility of contamination, before, during and after the grinding process.

Note: Under ideal conditions grinding would take place in a separate refrigerated area. When that is not possible specific procedures need to be developed to minimize the risks.

Appropriate records, of all batches, will be on file.

Note: These records are of utmost importance in case of a recall of ground meat product.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Grinding Procedures"** will be met when:

1. Facility specific, written "**Grinding Procedures"** are on file

   Note: These procedures must meet all of the requirements of section 3-3, subsections (a) to (f) of the MFS.

2. The procedures detail all of the operational controls that need to be practiced before, during and after grinding.

   Note: This should also include handling and storage procedures.

3. Grinding equipment is included in the facilities written **"Sanitation Program"**,

   Note: The frequency of cleaning must be specified.

4. Onsite observations demonstrate that the written procedures are followed.
5. Any testing procedures, for the presence of pathogens, are specified.
6. Appropriate facilities (e.g. separate processing areas with temperature controls) are available OR written **"Operational Control Procedures"** are on file.

   Note: These procedures must ensure that hazards are minimized if the location of the grinding area may pose an increased risk (e.g. a non-refrigerated processing area).

RELATED SECTIONS OF TIPM

02-G-01 Processing Rooms - Temperature Requirements

03-D-09 Manufacturing Control Training

03-F-03 Batch & Distribution Records

SUBJECT: Intervention Strategies	03-G-14
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section 3.3	**Initial Release** Sept 1, 2011 **Page 1 of 2**

RATIONALE

A primary goal of the slaughter process is to minimize contamination of the carcass with micro-organisms (bacteria, molds, fungi, etc.) and to effectively remove contamination that may have occurred.

Note: Most contaminants, micro-organisms, chemical, or physical, have the potential to cause harm to consumers of meat, or meat products.

Sanitary dressing procedures are the primary means of reducing contamination of poultry carcasses, by micro-organisms, but in reality, no matter how careful the dressing procedure is conducted, it is almost impossible to dress a carcass without some bacterial contamination.

Note: Many bacteria found in the manure (e.g. Salmonella, Campylobacter, etc.) and on the skin of animals are capable of causing serious disease in humans.

The unavoidability of bacterial contamination is the reason that “Intervention Protocols” are necessary as a manufacturing control.

OBJECTIVE/OUTCOME

Written **“Chemical Intervention Procedures”** will be on file and implemented.

Note: These procedures must provide details about precautions that need to be taken, during processing that will have the effect of preventing, eliminating, or reducing hazards to an acceptable level.

Chemical intervention will be performed as detailed in the written procedures and under conditions that will prevent hazards to the carcasses or to facility workers.

Note: Failure to perform chemical intervention properly could lead to the spoilage of the product or the presence of dangerous levels of chemicals on/in the product.

Chemical intervention is to be performed in a suitable part of the facility.

Note: Chemical intervention is usually performed on the kill floor or in the drip cooler, to minimize the risk of cross contamination to other finished products.

Appropriate records of intervention application will be on file.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for “**Intervention Strategies- Red Meat Animals**” will be met when**:**

1. **Written**, abattoir specific, **“Intervention Procedures”** are on file.

   Note: Written protocols must include monitoring procedures and records, including tests of the concentrations (and temperature, if applicable) of any solutions used in the protocol at least once every shift.

These procedures must include:

a) the method of intervention;
b) the person responsible;
c) cleanliness requirements for the equipment;
d) descriptions for the proper utilization of the equipment;
e) the site and rate of application including solution flow rate and pressure;
f) safe and sanitary storage requirements for chemical agents;
g) chemical concentrations, temperatures and other specifications;
h) a description of actions taken if the method of intervention does not follow the written program

2. An up-to-date **list of all non-food chemicals** in use, or stored, on the premises.

   Note: There should also be documentation indicating that these chemicals have been approved for use in it's specific application.

3. All microbial control treatment solutions and/or treated water are tested and the test results are captured by a continuous recorder, or if recorded manually, a minimum of once every 4 hours.

   Note: Records must show ongoing compliance with:

   a) Maximum allowable concentrations (and if applicable, temperature and/or time) as indicated by Health Canada for use on raw poultry; and
   b) minimum concentration (and if applicable, temperature and/or time) needed to ensure effective control of microbial organisms.

4. **"Intervention Strategies"** do not result in the contamination of any non-compatible products, ingredients or packaging material.
5. All facility personnel involved in the performance of **"Intervention Strategies"** are in compliance with Occupational Health and Safety Requirements.

   Note: A current "Material Safety Data Sheet" (MSDS) must be on file, at the facility, for each microbial control agent in use.

6. "**Intervention Training Records"** are on file at the premises**,** for personnel responsible for conducting the intervention.

   Note: Training must include MSDS training for chemicals being used.

7. On site observations by demonstrate that the abattoir is performing the **"Intervention Strategies"** in accordance with the written protocol.

RELATED SECTIONS OF TIPM

03-C-02 Approved Chemicals & Chemical Listing

03-D-09 Manufacturing Control Training

03-G-01 Dressing Procedures - Red Meat

03-G-02 Dressing Procedures - Poultry

SUBJECT: Smoking of Non-RTE Products	03-G-15
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section 3.2, 3.3	**Initial Release** Sept 1, 2011 **Page 1 of 3**

RATIONALE

Cooking can render many foods digestible, palatable, bring them to enjoyable eating temperature, and kill or injure viruses, parasites or vegetative forms of bacteria. Microorganisms, however, may survive depending on time-temperature exposure, previous treatments and characteristics of contaminating organisms (e.g. *Salmonella*).

Non-RTE meats (e.g. smoked and cold smoked products) include products which have been subjected to a further process of smoking or a heat treatment that does not raise the product temperature to a temperature and time combination that guarantees that all vegetative bacteria have been destroyed (fully cooked temperatures).

When product is held at temperatures above 15.6^0 C, *S. aureus* can multiply and produce toxins (poison). These toxins are heat stable and may not be killed with partial cooking.

Proper cold smoking will **limit** the growth of these toxins.

Note: Control of the time and temperature that smoked products are exposed to within critical zones are critical factors in ensuring that the growth of these toxins are limited

Note: A calibrated thermometer and accurate measurement of time/time frames must be used to ensure that smoked products are not held in these critical zones past critical time limits.

Note: These products are **not** considered "**Ready To Eat**" and do require to be labeled as such as further cooking is required by the consumer after purchase.

OBJECTIVE/OUTCOME

All smoked meat products will be processed in a manner that will limit the production of toxins.

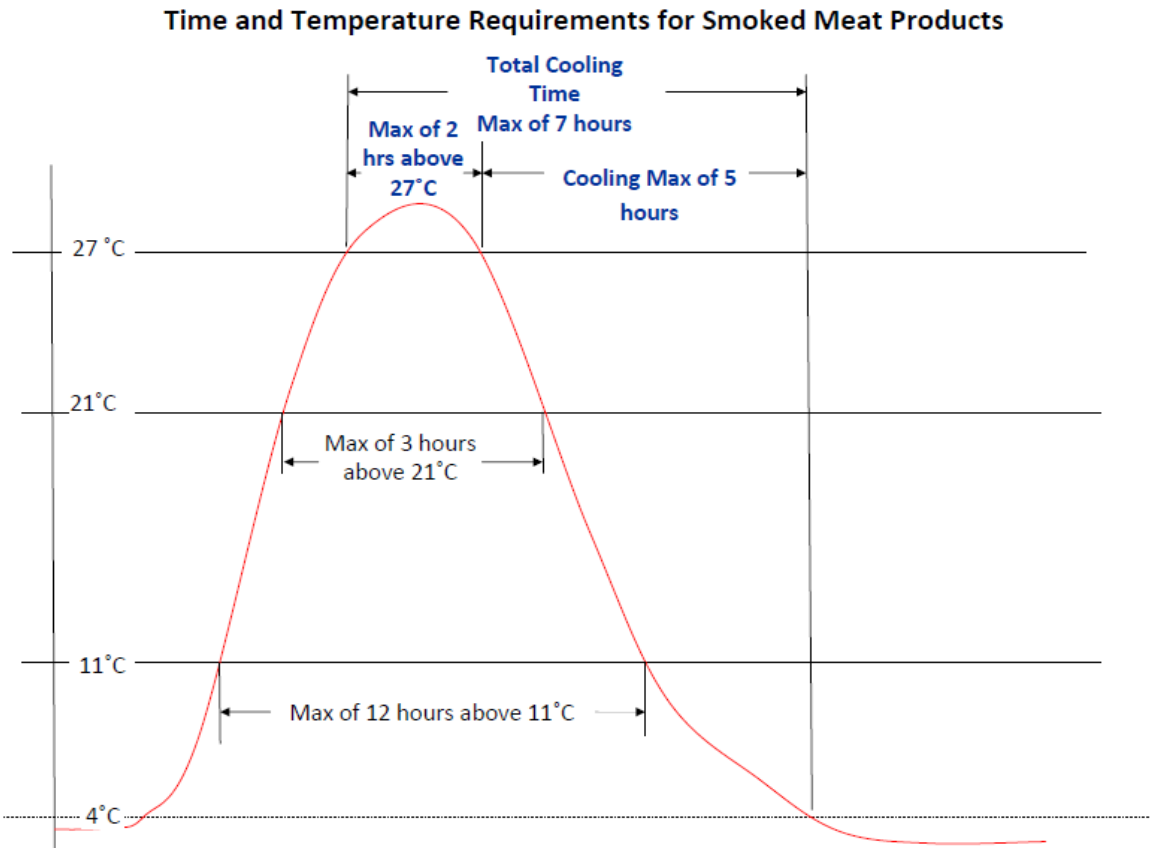
Note: To accomplish this, the operator must meet all of the time and temperature requirements for the product being produced.

Written "Smoked Product (NRTE) Procedures" will be developed, implemented, and maintained.

Note: These procedures must provide details on the criteria that will be used to limit the growth of hazards.

Records of smoking times and temperatures will be kept for all edible meat products.

Note: These records must be kept for a minimum of one year from the date that the products were made.



Note: The above temperature requirements do not apply for NRTE bacons and hams, as they have multiple other hazard controls (e.g. salt, nitrate/nitrite levels)

Any NRTE product labels clearly state that the product is **NOT RTE**, with the words "must be cooked", "raw product", "uncooked", or any equivalent words or word that indicates that the product requires further cooking before consumption.

Product labels include a preparation instruction, that when followed by the consumer will fully cook the product (e.g. cook to 71.1 °C)

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **Smoking of Non-RTE Products** will be met when*:*

1. Written plant specific "**Product Smoking Procedures"** are on file.

   Note: These procedures must meet all of the requirements of section 3-3 subsections (a) to (f) of the MFS including temperatures specified by regulation.

2. Meat products are smoked in accordance with the procedure and are not kept in the Critical temperature zones for longer than the maximum allowable time frames.
3. Calibrated thermometers are used to determine the internal temperature of Smoked product.

   Note: **"Calibration Records"** for the thermometers must be on file.

4. An accurate method of measuring how long smoked products are within each temperature zone.
5. Accurate and up-to-date, **"Smoking Records"** are kept.

    Note: As a minimum these records must include:

    a) Date;

    b) Time;

    c) Product name;

    d) Amount of product;

    e) Time frames that product were within the critical temperature zones;

    f) Initial of monitor and verifier

RELATED SECTIONS OF TIPM

02-G-03 Temperature Recording Devices

03-C-03 Calibration Procedures - Records of

03-D-09 Manufacturing Control Training

SUBJECT: Audits - General	03-H-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) All Sections	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2010 **Page 1 of 2**

RATIONALE

In 1997 a “Joint Policy” was signed by the Ministries of Alberta Health and Wellness (AHW) and Alberta Agriculture and Rural Development (ARD).

In this agreement it was determined that, by January 2002, all “Licensed Meat Facilities”, in the Province of Alberta, would comply with the standards set out in a document called the “Meat Facility Standards” (MFS).

Note: The MFS includes both “Prerequisite Program Criteria” (e.g. Sanitation program, Recall program etc.) and “Manufacturing Controls Criteria”, which include the 7 *Codex alimentarius* principles of HACCP (Hazard Analysis Critical Control Point).

Prior to the publishing of the first edition of the MFS, in 1999, food safety assurance, in ARD licensed facilities, relied entirely on enforcement of meat inspection legislation through the traditional meat inspection system.

Once the authority of the MFS was mandated in section 15.1 of AR 42/2003 a shift occurred from assuring food safety through traditional inspection to assuring food safety through a combination of traditional inspection and the audit approach.

Note: Section 20 of AR42/2003 read as follows: “An operator shall ensure that the meat facility standards are met in regard to matters dealt with in this Part.”

ARD uses the MFS as the basis for the development and maintenance of written, preventative, science-based food safety programs in provincial meat facilities.

Note: Following implementation of the 1999 version of the MFS the Regulatory Services Division (RSD) of ARD recognized the need for improvements. In particular there was a need to clarify criteria and strengthen process control requirements for ARD licensed facilities. In response the MFS was modified, following industry consultation. The modified version of the MFS is the document that the RSD uses to audit facilities licensed by the RSD at the time this document was developed.

ARD will work to ensure the continued relevance of the MFS as changes occur in the meat industry. The MFS will be modified, as required, as the ARD strives to ensure the continued competitiveness of our meat industry and continued food safety excellence of products produced by ARD licensed facilities.

The Meat Inspection Branch (MIB) of the RSD is responsible for the inspection of slaughter and dressing procedures in provincially licensed red meat and poultry abattoirs.

Through their legislated authority the MIB will continue to be responsible for monitoring ongoing compliance, of all licensed facilities, to the *Meat Inspection Act* (Alberta) (MIA) AR 42/2003 and the MFS.

TIPM – 03-H-01 Page 2 of 2 – RATIONALE (continued)

Note: MIB Inspectors and RSD Auditors, knowledgeable about the requirements of AR 42/2003 and the MFS will act to ensure the safe production of meat products on a continual basis.

As part of their responsibilities for ensuring continued excellence in food safety and the competitiveness of the meat industry, in Alberta the RSD has developed a program called the **"RSD Audit Program"**.

Note: This program is a vital component for achieving continued excellence and further enhancement of food safety within Alberta.

To remain eligible for licensing it is mandatory for facilities to comply with AR 42/3003 and the MFS.

Note: Compliance includes being prepared for audits that are conducted under the **"RSD Audit Program"**.

To properly prepare for audits, abattoir managers need to be committed to:

a) developing, implementing and maintaining written programs (including manufacturing controls);
b) maintaining required records;
c) ensuring that abattoir personnel are properly trained;
d) providing any assistance required by RSD and/or MIB personnel during audit activities

OBJECTIVE/OUTCOME

The facility operator will be committed to working towards full compliance with provincial meat inspection legislation (MIA & AR 42/2003) and the MFS.

An annual audit will be conducted in accordance with the "RSD Audit Program".

Note: An audit is a systematic, independent examination of a facility's compliance to the MIA, AR 42/2003 and the MFS. The intent is to provide a clear picture of the facility's food safety performance with respect to legislation and the MFS. Current meat inspection regulations and MFS criteria will form the basis of the audit.

All audits will be conducted by appointed auditors. Appointed auditors will be RSD personnel, including MIB Inspectors, or independent auditors contracted by ARD.

To be appointed, as an auditor, an individual must:

a) have in-depth, practical meat industry experience;
b) excel at the interpretation of regulations and food safety standards;
c) be trained and certified in audit protocol

Abattoir operators will receive advance notice of the audit.

The results of consecutive audits will demonstrate increasing levels of compliance with The MIA, AR 42/2003 and the MFS.

RELATED SECTIONS OF TIPM

03-H-02 Annual Audits

SUBJECT: Annual Audits	03-H-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) All Sections	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2010 **Page 1 of 3**

RATIONALE

The intent of this document is to clearly outline the process for the conduct of an "Annual Audit".

OBJECTIVE/OUTCOME

A full **"Annual Audit"** will be conducted in every 12 month period.

Note: The purpose of an annual audit is to verify that the "Licensed Meat Facility" (facility) is in compliance with the current MFS and meat inspection legislation (Meat Inspection Act and Regulations).

The **intent** of the **"Annual Audit"** is to **stimulate** the desire for **continuous improvement** , and to ensure that facilities meet, or exceed, regulatory requirements.

Annual audits must always **be announced**. Annual audits are completed within a 40 day guideline and may involve one (1) to three (3) onsite visits.

Annual Audits will be conducted as follows:

1. The audit will be scheduled by telephone, with the facility owner/operator**.**

   Note: Scheduling is the responsibility of the RSD Auditor. If at all possible, the audit should be **scheduled** at least **3 weeks in advance**.

   Following this call the agreed upon audit appointment date will be confirmed by fax. The fax should also remind the operator of the facility about the scope of the audit.

   Annual audits may be conducted on a kill or a non-kill day.

2. The Auditor will notify the Area Manager (AM), Regional Supervisor (RS) and the Food Safety Audit Manager, by e-mail, of the annual audit date(s)

   Note: The AM may attend the onsite portion of all annual red meat audits, at a minimum, and the RS may attend the onsite portion of all annual poultry audits. A designated mobile inspector will attend mobiler facilities.

3. A brief opening meeting will be held before the start of the audit.

   Note: Attendees at this meeting will include the auditor, the owner/operator (or designate) at a minimum, and the AM/RS, if present.

   The purpose of this meeting is to ensure that the facility owner/operator is

aware of scope and requirements of the audit.

4. The audit is conducted.

   Note: The owner/operator, or designate is required to accompany the auditor during the audit.

   The AM/RS, or designated "mobiler" inspector may also accompany the auditor during the onsite portion of the audit.

5. Upon completion of the full audit the auditor will document all findings.

   Note: Documentation includes completion of the full "MFS Annual Audit Checklist/Report". A copy of this document can be obtained from any RSD auditor at any time.

   Significant findings will be summarized in the "Annual Audit Summary Report".

6. Before the closing meeting the auditor will go over key audit findings with the AM/RS (or "mobiler" inspector)

7. A closing meeting is held.

   Note: Attendees at this meeting include the auditor, the facility owner/operator, and the AM/RS (or "mobiler" inspector).

   During this meeting, the auditor will summarize the priority non-conformances identified during the audit. Details concerning significant findings will be discussed with the facility owner/operator.

   The full "Annual Audit Report" and "Annual Audit Summary" is not given to the facility representative at this time. The representative will be advised that a copy will be given to them by the AM/RS, upon completion of the internal audit review process.

   The owner/operator will also be told that they will be sent a copy of the full report and summary by MIB.

8. The RSD Auditor will send reviewed and completed reports, by e-mail to the AM, RS, and Food Safety Program Manager. The Auditor will schedule an internal corrective action plan (CAP) meeting with the AM or RS within 5 business days.

9. The AM/RS will schedule a meeting with the facility owner/operator within 5 business days of receiving the completed audit report.

10. The "Annual Audit Summary Report" will be signed by owner/operator upon completion of the Corrective Action Plan (CAP) meeting.

    Note: Copies of the signed "Annual Audit Summary Report" and the "Annual Audit Report" will be left with the owner/operator and the designated MIB Inspector for follow-up.

11. There will be appropriate follow-up for the "Annual Audit".

    Note: The MIB Resident Inspector, or delegate, is responsible for follow-up and documentation of non-conformances and corrective actions.

    Timelines for the performance of corrective actions must include:

a) an action plan;

b) date(s) by which deficiencies are to be corrected or for a corrective action plan to be submitted to the RS and/or AM;

c) date for inspection to verify that timelines were adhered to

The MIB inspector is responsible for recording agreed upon timelines and following up with the facility representative and/or designated MIB Inspectors to ensure that timelines have been met. Compliance monitoring of non-conformances will be maintained at the regional office level by designated MIB inspection staff.

If compliance monitoring shows that the facility operator is unwilling or able to comply with CAP items and dates, the AM, in consultation with the MIB Head and RSD Executive Director, may recommend the involvement of the Inspection/Investigation Branch (IIB), for investigation and handling of noncompliance.

RELATED SECTIONS OF TIPM

03-H-01 Audits - General

SUBJECT: Partial Audits	03-H-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

The intent of this document is to clearly outline the process for the conduct of a partial audit.

OBJECTIVE/OUTCOME

Partial audits will be conducted as required by the Meat Inspection Branch (MIB).

Note: The purpose of a partial audit is to verify that a "Licensed Meat Facility" (facility) is operating in compliance with the MFS and current meat inspection legislation (Meat Inspection Act & Regulations).

The frequency of partial audits will be determined by MIB, and will be based on risk calculations for each specific facility. Each facility will receive, at a minimum, one (1) partial audit in a 12 month period.

Additional partial audits may be conducted based on the receipt of food safety complaints or other relevant information through the MIB Area Managers (AM) and/or Regional Supervisors (RS) or external sources.

Animal welfare criteria will be assessed in at least one partial audit each year.

Audits will be conducted as follows:

1. All audits will be scheduled by telephone unless special circumstances require the conduct of an unannounced audit,

   Note: Scheduling is the responsibility of the Auditor. At least **24 hours notice is required** for all announced partial audits.

   Formal notification of the audit will be sent to the owner/operator of the facility, by fax, if requested.

2. The Auditor will notify the AM, RS and Regional Administrative Support Staff of the audit dates for each facility in the region.

   Note: This notification will give the AM/RS or their delegate, an opportunity to have a representative MIB Inspector present during the audit if desired. The presence of the resident MIB Inspector, or a representative, is encouraged.

3. A brief opening meeting will be held before the start of the audit.

   Note: Attendees at this meeting will include the Auditor, a facility representative and a MIB Inspector, if available.

   The purpose of this meeting is to ensure that the facility representative is aware of scope and requirements of the audit.

4. The audit is conducted.

   Note: The facility representative must be on the premises during the audit and is strongly encouraged to accompany the auditor during the audit.

   The MIB Inspector and the RS are encouraged to accompany the auditor.

5. The Auditor will document audit findings.

   Note: Documentation includes completion of the "Partial Audit Report" and "Animal Welfare Audit Report" (if applicable).

   Significant findings will be summarized in the "Audit Summary with Inspection Findings" and "Animal Welfare Report" (as applicable).

6. Before the closing meeting the Auditor will go over key audit findings with the MIB Inspector, or representative (if they are available).

7. A closing meeting is held.

   Note: Attendees at this meeting include the Auditor, a facility representative and the MIB Inspector, or representative (if available).

   During this meeting, the Auditor will present the "Partial Audit Report" and the "Animal Welfare Audit Report" (if applicable).

   Details concerning significant findings will be discussed with the facility representative. Dates will be set for non-conformances at this meeting. If this is not feasible (i.e. a long term corrective action plan or major construction is required), a designated MIB inspector and the BA will communicate on acceptable timelines, and the MIB inspector will follow up to ensure that all timelines are set for non-conformances identified on the "Summary Report".

8. Audit reports will be signed.

   Note: A copy of the signed "Audit Summary Report" and "Animal Welfare Audit Report" (where applicable) will be left with the facility representative and the MIB Inspector.

   The BA will retain the signed copy of the report(s) and send the copy to the head office of the MIB, in Edmonton for filing.

9. Completed reports are e-mailed to the AM and/or RS, Meat Safety Program Manager and the Regional Administrative Support person.

There will be appropriate follow-up for the "Partial Audit".

Note: The MIB Resident Inspector, or delegate, is responsible for follow-up.

Timelines for the performance of corrective actions must include:

a) an action plan;

b) date(s) by which deficiencies are to be corrected or for a corrective action plan to be submitted to the RS and/or AM;

c) date for inspection to verify that timelines were adhered to

The MIB inspector is responsible for documenting agreed upon timelines and following up with the facility representative and/or designated MIB Inspectors to ensure that timelines have been met. Compliance monitoring of non-conformances will be maintained at the regional office level by designated MIB inspection staff.

RELATED SECTIONS OF TIPM

03-H-01 Audits - General
03-H-02 Annual Audits
05-D-01 Animal Welfare Audits - Red Meat Abattoirs
05-D-02 Animal Welfare Audits - Poultry Abattoirs

SUBJECT: HACCP Systems - General	03-I-01
REGULATORY REFERENCES None	**Initial Release** Sept 1, 2009 **Page 1 of 4**

RATIONALE

The purpose of this document is to provide the reader with some general information on "Hazard Analysis Critical Control Point" (**HACCP**).

Note: Provincially **licensed facilities** are **not required to have a** complete **HACCP system.**

Even though a HACCP system is not a legal requirement **licensed facilities** are **required to comply with the "Meat Facility Standards"** (MFS), which is based on the principles of HACCP.

Note: The MFS are based on the principles of HACCP and Sections 10 & 20 of AR42/2003 *Meat Inspection Regulation* provides the legal requirement for licensed facilities to comply with the MFS.

Federal facilities must have a recognized **HACCP** system.

Implementation of the MFS requires some basic understanding of HACCP principles.

GENERAL INFORMATION ABOUT HACCP

History

The first HACCP system was developed by the Pillsbury Company in conjunction with the "National Aeronautics and Space Administration" (NASA).

Note: The intent of this original HACCP system was to ensure the safety of food products intended for space travel.

This original concept has developed to the point where **HACCP is** now **an internationally recognized**; science based food safety **system** that focuses on preventing, eliminating, or reducing to an acceptable level, all potential food safety hazards.

Intent

The intent of a HACCP system is to ensure continuing production, processing, distribution and marketing of safe foods.

Note: HACCP ensures food safety by analyzing and controlling biological, chemical and physical hazards associated with ingredients and processing rather than relying solely on inspection systems and finished product testing.

HACCP systems are designed to be **pro-active** rather than re-active.

Note: **Pro-active** means that steps are taken to **prevent problems rather than** waiting for them to develop then trying to **react**.

Advantages of HACCP Systems

HACCP systems are generally cost effective and have been proven to be successful in controlling food safety hazards, which may occur all along the continuum, from production through to the retailing sectors.

By controlling food safety hazards a successful HACCP system will instill confidence, in the safety of the product by both the processor and members of the public.

Note: Customer confidence can be a distinct market advantage.

HACCP in Canada

In **1986** various federal departments started to work closely together to establish minimum federal food safety inspection standards based on HACCP principles.

Note: Departments involved included:

a) Agriculture Canada

b) Health and Welfare Canada

c) Fisheries and Oceans Canada

d) Consumer and Corporate Affairs Canada

In **1989** the Food Production and Inspection Branch of Agriculture Canada presented the Food Safety Enhancement Program (FSEP).

In **November 2005** it became mandatory for all federally registered establishments to have a HACCP system.

Food Safety Enhancement Program

The Canadian Food Inspection Agency (CFIA) relies on FSEP to ensure that the conditions under which food products are manufactured and the ingredients used in their manufacture lead to the production of safe food.

Note: FSEP applies to the following commodity groups:

a) meat and poultry;

b) dairy;

c) processed fruit and vegetables;

d) shell eggs;

e) processed eggs;

f) hatcheries;

g) honey;

h) maple sugar

FSEP is recognized, internationally as being consistent with the principles and application of the Hazard Analysis Critical Control Point (HACCP) system developed by “Codex Alimentarius”.

Note **Codex Alimentarius** is Latin for "food code" or "food book". The “Codex” is a collection of internationally recognized standards, codes of practice, guidelines and other recommendations relating to foods, food production and food safety.

Only FSEP registered facilities are considered to be CFIA **HACCP recognized and certified**.

Note: It is theoretically possible for a provincially licensed facility to be CFIA HACCP recognized and certified but this can only occur through the CFIA. To be recognized and certified a provincial facility would have to meet all of the requirements of the FSEP program as verified by a CFIA inspection.

CFIA HACCP recognition is required for the interprovincial sale of meat products.

Meat Facility Standards (MFS)

The original MFS were developed by a joint committee comprised of individuals from Alberta Health and Wellness and Alberta Agriculture, Food and Rural Development.

Note: The original MFS committee was formed in 1992 in response to a recognition that there was a need for standards that would apply to all licensed facilities, in Alberta, regardless of which department issued the license.

The MFS which came into effect in 1999:

1. Was based on the principles of the CFIA's FSEP.
2. Follows HACCP principles.
3. Specifies pre-requisite programs.
4. Have a Manufacturing Controls section.

Note: Although the "Manufacturing Controls" section of the MFS requires implementation of some of the HACCP principles. Implementation of **the MFS does not constitute a** recognized or **certified CFIA HACCP system**. As stated earlier a certified CFIA HACCP system requires a CFIA audit.

Section 15.1(a) of AR 42/2003 (consolidated up to 112/2009) requires licensed facilities to comply with the requirements of the MFS.

Note: Examples of Canadian HACCP systems include:

a) "Canadian Meat Hygiene Standard" (CMHS)

b) "Alberta HACCP Advantage" (AHA!).

c) CFIA FSEP

Alberta HACCP Advantage (AHA!)

AHA! is a **voluntary program intended for** the use of non-federally registered (**provincially licensed**) food processing **facilities in Alberta**.

Note: AHA! was developed by Alberta Agriculture and Rural Development (ARD), in cooperation with Agriculture and Agri-Food Canada.

AHA! provides:

1. A framework for food safety systems or HACCP systems development;
2. User friendly resource materials;
3. Formal government recognition of implemented systems.

Note: Information on the AHA! program can be obtained at:

www.agriculture.alberta.ca/aha

OBJECTIVE/OUTCOME

Operators of "Provincially Licensed Meat Facilities" will understand:

1. What HACCP is, in general terms.
2. How the MFS relates to HACCP.
3. The possible advantages of a recognized HACCP system.

Note: For more specific information on HACCP pre-requisites and implementation of the "12 Steps of HACCP" and the "7 Principles of HACCP" the reader is referred to the related sections of TIPM listed below.

RELATED SECTIONS OF TIPM

03-I-02 HACCP System - Pre-requisites

03-I-03 HACCP System - Implementation of

SUBJECT: HACCP Systems - Pre-requisites	03-I-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Certain physical, environmental and operating conditions are essential for the production of safe food products.

Note: Under HACCP (Hazard Analysis Critical Control Point) these are referred to as "Prerequisite Programs".

Unlike **federal facilities,** which **must have** a recognized **HACCP** system, "**Provincially Licensed Meat Facilities"** are **not required to have a** complete **HACCP system.**

Even though they are not legally required to have a recognized HACCP system **"Provincially Licensed Facilities"** are **required to comply with the "Meat Facility Standards"** (MFS).

Note: The MFS are based on the principles of HACCP and Section 15.1 of AR 42/2003 *Meat Inspection Regulation* provides the legal requirement for "Provincially Licensed Facilities" to comply with the MFS.

A HACCP system can only be built upon a solid foundation of prerequisite programs.

Note: The existence and effectiveness of a facility's prerequisite programs should be reviewed during the design and implementation of each HACCP plan.

Prerequisite programs are established and managed separately from individual HACCP plans.

Note: **Prerequisite Programs** + HACCP Plan(s) = HACCP System

Prerequisite Programs include, but may not be limited to:

1. Premises

   Note: This includes items such as:

   a) building exterior;
   b) building interior;
   c) sanitary facilities;
   d) water/steam/ice quality and supply;

2. Equipment

   Note: This includes items such as:

   a) design;
   b) installation;
   c) maintenance;
   d) calibration

3. Sanitation and Pest Control

   Note: This includes:

   a) sanitation procedures;

   b) pest control procedures;

4. Personnel

   Note: This includes items such as:

   a) training in hygienic food handling practices;

   b) technical training for specialized procedures;

   c) personal hygiene and health requirements including:

      a) cleanliness;

      ii) personal conduct;

      iii) communicable disease;

      iv) injury

5. Transportation, Receiving and Storage

   Note: This includes items such as:

   a) transportation vehicles;

   b) temperature control during transportation;

   c) receiving of food ingredients and packaging materials;

   d) receiving of meat products;

   e) receiving and storage of non-food chemicals;

   f) storage of finished products, etc.

6. Recall

   Note: This includes items such as:

   a) complaint procedures;

   b) mock recall exercises;

   c) actual recall procedures;

   d) product coding and identification;

   e) distribution details

7. Allergens

   Note: This includes programs intended to control and reduce the risk of contamination of products with allergens (agents that cause allergic reactions) during processing.

The number of and naming of “Prerequisite Programs” depends on which HACCP standard is chosen by a facility.

TIPM – 03-I-02 Page 3 of 3 – RATIONALE (continued)

For more specific information on prerequisite programs, for HACCP, the reader is referred to the "**Alberta HACCP Advantage" (AHA!)**.

Note: **AHA!** is a **voluntary program intended for** the use of non-federally registered **(provincially licensed)** food processing **facilities in Alberta.** This program was developed by Alberta Agriculture and Rural Development (ARD), in cooperation with Agriculture and Agri-Food Canada.

Information on the AHA! program can be obtained at:

www.agriculture.alberta.ca/aha

OBJECTIVE/OUTCOME

All HACCP pre-requisite requirements will be met.

RELATED SECTIONS OF TIPM

03-I-01 HACCP Systems - General

03-I-03 HACCP Systems - Implementation of

SUBJECT: HACCP Systems - Implementation of	03-J-03
REGULATORY REFERENCES None	**Initial Release** Sept 1, 2009
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RATIONALE

The purpose of this document is to outline the 12 steps (and 7 principles) that are required to establish a HACCP system that could be eligible for certification by the Canadian Food Inspection Agency (CFIA).

Note: A fully developed HACCP system includes development, implementation, verification and validation of prerequisite programs and having a HACCP plan for each product that the facility produces.

HACCP systems can be developed, implemented, audited and certified **in non-federally registered meat facilities** but they **are not recognized as CFIA HACCP certified** unless the audit was conducted by the CFIA.

Provincially licensed **facilities with HACCP systems that have passed** a **CFIA audit may** be allowed to market meat products **outside** of the Province of Alberta. Facilities with HACCP systems that haven't passed a CFIA audit are still restricted to selling their product within the Province.

There are twelve (12) steps to the development of a complete HACCP plan. These steps are:

1. Assembling a HACCP team;
2. Describing each product and identifying its intended use;
3. Listing product ingredients and incoming materials;
4. Development of process flow diagrams and plant schematics;
5. On-site verification that the flow diagrams and the plant schematics will work;
6. Identification and assessment of hazards **(Principle 1)**;
7. Determination of critical control points **(Principle 2)**;
8. Establishing critical limits **(Principle 3)**;
9. Establishing monitoring procedures **(Principle 4)**;
10. Establishing corrective actions **(Principle 5)**;
11. Establishing verification procedures **(Principle 6)**;
12. Establishing documentation and record keeping **(Principle 7)**

Note: Steps one to five (1-5) are considered to be preliminary tasks while steps six to twelve (6-12) incorporate the seven (7) principles of HACCP.

OBJECTIVE/OUTCOME

There will be a strong commitment, by management, to the development and implementation of a certifiable HACCP plan.

Note: A firm commitment to HACCP, by top management, emphasizes the importance of producing safe food products, to facility personnel.

The following 12 steps will be implemented to establish a HACCP System that would be eligible for certification.

Note: Establishment of a **certifiable HACCP system** is **not required** in a **"Provincially Licensed Meat Facility"** but establishment would ensure complete compliance with the Meat Facility Standards (MFS) and could provide a marketing advantage.

For more detail than what is provided in this document the reader is referred to a key resource that has been developed for the Alberta HACCP Advantage (AHA!) program. This resource is called the **"AHA! Guidebook"**

The "AHA! Guidebook" is a comprehensive, user-friendly manual that explains how to develop and implement an effective food safety or HACCP system. All of the forms that are mentioned, in the following text will be found in this publication.

The "AHA! Guidebook" is available online at:

www.agriculture.alberta.ca/aha

The 7 forms referred to in the following text will be found in this publication as well as other documents (e.g. records) that can be downloaded and utilized.

Step 1 - Assembling a HACCP Team

A HACCP team should consist of individuals that have knowledge and experience appropriate for the product and/or processing line that the HACCP plan will apply to.

This team will work together to:

1. Design the system;
2. Implement the system

Note: The team should include members from various departments within the facility, including but not limited to: production, quality, sanitation, maintenance, etc.

There should be a team leader that is capable of directing HACCP activities.

Note: Ideally all team members should be knowledgeable about food-safety hazards and HACCP principles but it is particularly important for the team leader to have extensive knowledge and training in HACCP.

Step 2 - Describing Each Product and Identifying its Intended Use

Each finished product, covered by the HACCP plan, must be fully described and identified.

Note: Information from the product description, along with ingredient and processing information, will help the team identify hazards.

The following **information** should be recorded **on Form #1** from the "AHA! Guide Book:

1. Generic name of the process and/or product type (e.g. HACCP plan for "Cooked Sausage")
2. Common name of the product (e.g. "Holy Smokes Sausage")
3. Properties of the product that will influence its safety (e.g. water activity, pH, salt, preservatives)
4. Intended use of the product (e.g. ready-to-eat, heat and serve, etc)
5. Type of packaging and packaging conditions (e.g. 5 kg pails, lined corrugated boxes, etc).
6. Shelf life of the product

   Note: Shelf life is the time that the product remains suitable, for human consumption under normal marketing conditions at a given storage temperature and humidity. The shelf life must be verified through testing, or other means of proving validity.
7. Where the product will be sold (e.g. retail, hospitals, restaurants, etc)
8. Labeling instructions (e.g. "best before" date, cooking instructions, storage requirements, etc)
9. Controls required during shipping and storage (e.g. temperature and humidity requirements)

Step 3 - Listing Product Ingredients and Incoming Materials

A full **description** of the **product** should be recorded **on Form #2** from the "AHA! Guide Book:

1. A general description of the food;
2. A listing of all ingredients;
3. Processing methods

   Note: The following list of possible items to be included in a complete description is intended to give examples and therefore is not fully inclusive:

   a) source of ingredients;
   b) properties of ingredients;
   c) specifications for ingredients;
   d) product formulation;
   e) incoming materials such as packaging material;
   f) procedures at each stage of processing;
   g) equipment used;
   h) time and temperature to which products are exposed;
   i) potential source of contamination before, during and after processing

Step 4 - Development of Process Flow Diagrams and Plant Schematics

A **process flow diagram** shows, in simple block or symbol form, a **clear outline of** the **steps required to manufacture and distribute a food product**, from receiving of raw materials through processing and distribution of the finished product.

Note: Process flow diagrams provide an important visual tool that the HACCP team can use to complete the remaining steps of the HACCP plan development.

Only a clear, simple, but complete, description of the process is needed.

Process flow diagrams can be **recorded** on **Form #3** from the AHA! Guidebook.

A properly drawn schematic diagram will show:

1. Flow patterns of all:
    a) Ingredients;
    b) packaging materials;
    c) finished product
2. Facility personnel movement:
    a) within processing areas;
    b) to and from washrooms
3. Locations of hand-wash stations and footbaths

Note: Schematic diagrams are helpful in identifying potential areas of cross-contamination.

Facility schematics can be **recorded** on **Form #4** from the AHA! Guidebook.

Step 5 - On-site Verification of Flow Diagrams and Facility Schematics

The HACCP team should perform an on-site review of the facility to verify the accuracy and completeness of flow diagrams and facility schematic drawings.

Note: An on site review is necessary because the accuracy of flow diagrams and facility schematic drawings are critical to conduct a complete hazard analysis.

It is best to perform the on site review while processing operations are taking place.

Modifications should be made to the diagrams and schematics as needed.

Note: If any step is missed, a significant food safety issue may not be addressed.

After these five preliminary tasks have been completed, the seven principles of HACCP are applied.

Step - 6 **HACCP Principle #1** - Identification and Assessment of Hazards

A thorough hazard analysis is essential for the development of an effective HACCP system.

It is the responsibility of the HACCP team to conduct the analysis.

Note: Hazards are any agents or activities that have the potential to make meat products unsafe for human consumption. Hazards may be:

a) physical;
b) chemical;
c) biological;
d) allergenic

A HACCP system will address and control all significant hazards associated with a particular product.

Note: In the process of identifying hazards the HACCP team must review:

a) all ingredients;
b) all processing steps and activities;
c) characteristics of the final products

Based on the above review a list is made of potential biological, chemical, physical, and allergenic hazards that may be introduced, increased, or controlled, at each step in the production process.

Note: As the process unfolds **potential hazards** can be noted on AHA! Guidebook forms 2, 3 and 4, following which they are **described fully** on **Form #5**

Detailed information must be provided, identifying specific organisms and other contaminants.

If the HACCP team is uncertain whether hazards exist with ingredients, in the process or with the operating practices, measurements and laboratory testing may be required.

Step - 7 **HACCP Principle #2** - Determination of Critical Control Points (CCP)

All CCPs must be determined (identified).

Note: A CCP is a location, or processing step where it is possible and essential to implement controls that are designed to:

a) prevent;
b) eliminate; or
c) reduce food safety hazards to an acceptable level

The determination of a CCP is based on:

1. Identified hazards;
2. Operational procedures;
3. Subsequent use of the product

Note: Examples of CCPs include:

a) chilling;
b) cooking (thermal processing);
c) metal detection, etc.

Use of a CCP "Decision Tree" can be used by the HAACP team to assist in determining CCPs.

Note: A decision tree is a tool that contains a series of questions, which serve as a guide in CCP determination. For an example the reader is referred to **Form #8** of the "AHA! Guidebook".

CCPs should be numbered sequentially and in a manner that identifies the type of hazard that is to be controlled.

Note: For example:

a) CCP – 1 B refers to Critical Control Point 1, which controls a biological hazard.

b) CCP – 2 BC refers to Critical Control Point 2, which controls both a biological and chemical hazard.

CCPs must be **recorded** on **Forms #5 & 7** from the AHA! Guidebook.

Note: CCPs should also be identified on the process flow diagram on **Form #3**.

After analyzing all hazards that may affect a product before, during and after the production process, it may be noted that some hazards are out of the facility's control. The HACCP team must document all biological, chemical and physical hazards, which are not addressed at the facility and were not determined to be CCPs.

Unaddressed Hazards are **described** on **Form #6** from the AHA! Guidebook.

Note: In addition to describing these hazards ways in which the unaddressed hazard could be mitigated must be recorded. Examples of ways to address these hazards include the placement of cooking instructions on the label, producer education, etc.

Step - 8 **HACCP Principle #3** - Establishing Critical Limits

Each CCP must operate within specific parameters to ensure all hazards are appropriately and effectively controlled.

The HACCP team needs to identify control methods and set the critical limits needed to control identified hazards.

Note: A critical limit is a maximum or minimum value to which a biological, chemical, or physical parameter must be controlled at a CCP to prevent, eliminate, or reduce, to an acceptable level, the occurrence of a food safety hazard.

A critical limit is used to distinguish between safe and unsafe operating conditions at a CCP.

Scientific research may be required to determine the limits that are both appropriate and acceptable for a given product.

Critical limits should not be confused with operational limits, which may be established for reasons other than food safety.

Criteria most frequently used for critical parameters are:

a) time;

b) temperature;

c) water activity;

d) pH;

e) amount, or concentration of, preservatives;

f) microbiological parameters;

g) sensory information.

Control measures need to be established to ensure that critical limits are met.

Control measures for each CCP **and** its associated **critical limits** are **recorded** on **Form #7** from the AHA! Guidebook.

Note: In summary the following information needs to be recorded on Form #7:

a) process step;

b) CPP number;

c) hazard description;

d) critical limits for each CPP

Critical limits can be based on items such as:

a) government regulations;

b) company standards;

c) scientific data

There can be more than one critical limit for each CCP.

It is important to ensure that critical limits are described in a clear and concise manner in order to avoid confusion amongst facility personnel.

Displaying the critical limits next to CCPs is an excellent way to assist facility personnel in the identification of processes that are out of control.

Step 9 - **HACCP Principle #4** Establishing Monitoring Procedures**- Form 7**

Once control measures are in effect and food safety criteria have been established, appropriate monitoring procedures must be determined.

Monitoring involves:

1. Defining how the CCP will be assessed;
2. Determining who will perform the monitoring;
3. Doing the monitoring, at appropriate time intervals;
4. Recording the monitoring

Note: Ideally monitoring will be continuous and all monitoring equipment will be carefully calibrated for accuracy. When continuous monitoring is not possible, a monitoring procedure must be selected that will ensure that processing that is out of control is detected immediately. The frequency of monitoring is an important consideration when monitoring can't be done continuously.

Examples of monitoring activities include:

a) visual observations;
b) temperature measurements;
c) measurements of time;
d) pH measurements;
e) determination of moisture levels

Monitoring activities are **recorded** on **Form #7** from the AHA! Guidebook.

Note: Form 7 asks:

a) who;
b) when;
c) what/how

These three questions are also asked in the following two sections dealing with deviation and verification procedures.

Step 10. - **HACCP Principle #5** Establishing Corrective Actions for Deviations

When monitoring results indicate that critical limits are not being met, action must be taken to:

1. Bring the process into control to ensure that no more hazardous product is produced.
2. Deal with hazardous product that was produced in an appropriate manner.

Note: Appropriate actions for dealing with hazardous products include:

a) detention (for testing);
b) reworking;
c) disposal

The HACCP team is responsible for determining what corrective actions are required for each CCP and critical limit.

Note: Generally the sooner deviations, from acceptable critical limits, are identified; the easier it is to institute corrective action thus minimizing any change of producing product that is out of conformance.

The action required will depend on the potential hazard that may occur.

Examples of corrective actions could include:

a) increased processing temperatures;
b) extended processing time;
c) reheating;
d) reprocessing;
e) ceasing, or stopping production;
f) holding product for investigation

All corrective actions taken must be recorded.

Note: Recording of corrective actions is done to:

a) verify that appropriate actions were taken;

b) identify recurring problems so that the HACCP plan can be modified

Deviation procedures are **recorded** on **Form #7** from the AHA! Guidebook.

Step 11 - **HACCP Principle #6** Establishing Verification Procedures

Verification procedures to prove the effectiveness of the HACCP system need to be established.

Note: **Verification procedures** are the methods, procedures, tests, and audits that are **conducted in addition to monitoring**. These procedures should determine compliance with the HACCP plan and identify whether the plan needs modification.

There are several ways to verify a HACCP system including:

a) auditing the HACCP system;

b) auditing HACCP records;

c) reviewing recorded deviations;

d) conducting tests on finished product to ensure conformity

Verification procedures are **recorded** on **Form #7** from the AHA! Guidebook.

Step 12 - **HACCP Principle #7** Establishing Documentation and Record Keeping

The HACCP team must ensure that there is proper documentation (written records) of all:

1. Monitoring data;
2. Deviations;
3. Corrective actions;
4. Verification results

Note: These records must:

a) specify who recorded the data;

b) specify who verified it;

c) be filed in a safe manner;

d) be readily available for use

HACCP records provide a complete product profile, which can be used if there are any subsequent problems.

RELATED SECTIONS OF TIPM

03-I-01 HACCP Systems - General

03-I-02 HACCP Systems - Pre-requisites

SUBJECT: On Farm Food Safety Programs	04-A-01
REGULATORY REFERENCES At the time this document was written there were no regulatory requirements relating to On Farm Food Safety (OFFS) Programs therefore participation is voluntary. Note: The possibility of federal and/or provincial legislation, relating to OFFS programs, has been given some consideration.	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

The purpose of this TIPM document is to provide the operator of a "Licensed Meat Facility" (abattoir) with some general information about OFFS programs that have been established for the animal species that they are processing.

Since the early 1990s, food safety and food quality issues have become major priorities for everyone involved in food production in Canada.

Canadian farmers have always produced safe and high quality products, but now the marketplace is requiring farmers to prove that they are producing food the way that they say they are.

Since the mid-1990s various commodity groups, including livestock organizations, have taken a proactive approach to ensure the safety and quality of their products. This has lead to the development of OFFS programs that embrace a "Farm Gate to Food Plate" philosophy.

Note: The two main purposes of OFFS programs are to:

a) help producers to better manage on farm food safety risks and

b) to provide a method whereby for producers can document their practices in order to provide proof about the safety of their products

OFFS programs are based on the principles of HACCP (Hazard Analysis Critical Control Point).

Note: HACCP is an internationally recognized approach that focuses on how to monitor, control and prevent the food safety risks through the implementation of "Good Production Practices" (GPPs). These GPPs are the foundation of the national OFFS programs.

Canadian OFFS programs, for food producing animals, have been developed by national livestock organizations. These organizations have developed their programs with input from industry experts and experts from the Canadian Food Inspection Agency. This ensures that these programs have a sound scientific basis.

Note: A couple of well known OFFS programs include:

a) Quality Starts Here (QSH), Verified Beef Production (VBP) program

b) Canadian Quality Assurance (QSA) program for pork.

In addition OFFS programs have been developed for bison, sheep, goats, chickens, turkeys and dairy products.

Livestock organizations generally take the following steps to develop an OFFS program:

1. A generic (standard) plan is followed to develop a general national strategy.
2. Current production practices are analyzed so a HACCP model can be developed.
3. The HACCP model is used to determine which GPPs are best to eliminate, or reduce, food safety hazards during on farm production.
4. A "Producer Manual" is developed.
5. Livestock producers are then encouraged to implement an OFFS program.

Note: At all stages, of development and implementation, the national livestock organization will cooperate with provincial producer associations. In most instances the provincial associations work directly with the livestock producer in setting up the OFFS program.

OFFS programs have been designed so that they can be audited. Upon completion of a satisfactory audit the national producer association will "certify" individual OFFS programs.

Note: Certification is used as a marketing tool through which certified farms can demonstrate, to their customers, that they have met the OFFS program requirements and that they are committed to maintaining them.

The "Canadian on Farm Food Safety Program" (COFFS) is a cost-shared program between industry and Agriculture and Agri-Food Canada (AAFC).

Note: Initially AAFC provided funding through the Canadian Adaptation and Rural Development Fund.

Since April 2003 funding has been provided under the Food Safety and Quality Chapter of the new Agricultural Policy Framework (APF).

National commodity groups also support the program by contributing staff time, volunteer hours spent by producers, and other administrative resources.

The COFFS Program is administered by the Canadian Federation of Agriculture (CFA).

For more detailed information on OFFS programs the reader is referred to the following web sites.

http://www.inspection.gc.ca/english/fssa/polstrat/reco/recoe.shtml

http://www.onfarmfoodsafety.ca/pages/index.php?main_id=1

OBJECTIVE/OUTCOME

Abattoir operators will:

1. Be familiar with OFFS programs established, by livestock organizations, for the species that they are handling.
2. Cooperate with OFFS programs that have been developed for the species that they are handling.
3. Take advantage of information provided from livestock producers that are participating in an OFFS program.

    Note: Two items that have direct food safety implications are the presence of broken needles and drug residues in carcasses. One requirement of an OFFS program is for the producer to provide notification whenever an animal with a broken needle in it has been sent to an abattoir.

    Another major component of an OFFS program is the record keeping that is required in relation to the use of drugs for the treatment of disease. These records greatly reduce the chance of having animals sent to slaughter before the complete drug withdrawal period has transpired. If by chance the producer becomes aware that an animal has been shipped too early they are obligated, as an OFFS program participant, to notify the abattoir.

RELATED SECTIONS OF TIPM

None

SUBJECT: Livestock Documentation (Manifests)	04-A-02
REGULATORY REFERENCES: *Livestock Identification and Commerce Act* Section 19(1)(a) AR 208/2008 *Livestock Identification and Commerce General Regulation* Section 25	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Records of livestock movement are necessary to protect against fraud and to provide trace back information if required to investigate and control a livestock disease outbreak or a food safety problem.

The "Livestock Manifest" is the official document that has been developed to ensure that all pertinent information relating to the identification and movement of livestock is recorded.

Note: An example of the manifest is attached to this document.

Section 19(1)(a) of the Alberta *Livestock Identification and Commerce Act* requires that all animals being transported in Alberta be accompanied by a "Livestock Manifest".

Note: There are a few exceptions to this requirement under section 19(2) but these do not apply to movement of livestock to a "Licensed Meat Facility" (abattoir).

Section 25(6)(b) of AR 208/2008 requires a person to retain a livestock manifest for a period of 10 years.

Note: The requirement to retain the manifest for 10 years is a new requirement which has been put in to ensure that information goes back far enough to facilitate trace backs for chronic slow developing diseases such as Bovine Spongiform Encephalopathy (BSE, or mad cow disease).

The "Livestock Manifest" has several sections.

Note: Several individuals are responsible for recording information on a manifest including the:

a) owner of the livestock;
b) brand inspector;
c) transporter;
d) abattoir operator

The owner is responsible for information in parts A, B & F. In general terms these sections outline:

1. The purpose of the manifest;
2. Transportation and sales details;
3. Description of the livestock including the number, color, type, brands, etc;
4. "Livestock Security Interest Declaration" (section F)

TIPM – 04-A-02 Page 2 of 2 – RATIONALE (continued)

Note: The owner of the livestock has to certify the accuracy of the information in parts A and B with a signature in part C.

If the owner is selling the animal, to the abattoir operator, or another party, the "Livestock Security Interest Declaration", in part F has to be completed.

Part D will be completed by a brand inspector when one is present at the abattoir.

Note: The abattoir operator will make copies of manifests available to the brand inspector upon request.

Part E has to be completed and signed by the person that brings the animal to the abattoir.

Note: This section provides details on the transport vehicle including the license number.

The abattoir operator, or a delegate, must complete and sign part G.

Note: This section verifies receipt of the animals. Information in this section includes the date, time, number of animals, etc.

OBJECTIVE/OUTCOME

A completed "Livestock Manifest" will accompany every shipment of food animals to the abattoir.

Note: In accordance with AR 208/2008 the person delivering the animal (owner, or trucker) must complete part E of the manifest and give the abattoir operator the original and 3 copies.

The abattoir operator, or designate, will complete and sign part G.

Note: Once this section has been completed and signed a copy is given back to the transporter.

A copy of the manifest will be made available to the Meat Inspection Branch (MIB) Inspector.

Note: The MIB Inspector will return the copy upon completion of the ante-mortem (before death) inspection.

A brand inspector, when present, will be given the original and two copies.

The brand inspector will keep the original and one copy and return a copy to the abattoir operator.

The abattoir operator will retain a copy of the manifest for a period of 10 years.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Livestock Manifests"** will be met when at least one copy of every "Livestock Manifest" is retained for a minimum of 10 years.

Note: The original and two copies should be retained unless the original and one copy were taken by a brand inspector.

RELATED SECTIONS OF TIPM

04-A-03 Poultry Flock Health Declaration

Attachment - TIPM Document 04-A-02

This information is collected for the purposes of the Livestock Identification and Commerce Act and is governed by the Freedom of Information and Protection of Privacy Act. For further information contact LIS at 109, 264 Midpark Way SE Calgary, Alberta T2X 1J6 or by phone at: (403) 509-2088 or (866) 509-2088

LIVESTOCK IDENTIFICATION SERVICES LTD.

ALBERTA LIVESTOCK MANIFEST

ZZ999999

Part A - Purpose of Manifest

☐ Transport Only	Transport for Sale by	☑ Owner	☐ Dealer on Behalf of Owner

Check if Livestock Security Interest Declaration is by Separate Document ☐

Part B - Transportation and Sale Details

Pen or Lot Number	Date YYYY / MM / DD: 2009/01/01

Owner or Dealer Name (Print Clearly & Press Hard): John Smith — Phone #: 403-222-3333

Owner or Dealer Address: Box 123 Anywhere, Alberta, T1A 1A1

On Account Of:

Pay To (If Other Than Owner): — Address:

Transport From Address	Premises ID
Somewhere, Alberta	

Transport To Name: Alberta Auction Market

Transport To Address: Someplace, Alberta

Description of Livestock

Number	Colour	Kind	Brand(s) / Identifier(s)	Loc.	AV	Other Information
4	RWF	Cattle	A-A	RR	Y/N	
10	MIX	Calves	NVB		Y/N	
					Y/N	
					Y/N	
					Y/N	
					Y/N	
					Y/N	
					Y/N	

Total: 14

Part C - Parts A and B Certification

I CERTIFY THAT PARTS "A" AND "B" ARE TRUE

X John Smith of Owner or (If Permitted) Owner's Agent

Part D - Inspector

Adj Total	Inspector Signature	Inspector #	Client #

Inspection Site #	Assur. Fund # Eligible	Check-off # Eligible	Livestock Permit #

Part E - Transporter

Transporter's Name (Print)	Trailer or AAA-123 ce License #
Atom Trucking Company	
Transporter's Signature: Bob Doe — Phone #	Trucking Charges: $400.00

Part F - Livestock Security Interest Declaration (If Sale by Owner)

Name and Address of Holder of Livestock Security Interest in the Livestock

Alberta Banking Company, 123-4 Street SE, Calgary, Alberta T2T 3T3

I CERTIFY THAT THIS DECLARATION IS TRUE

X John Smith of Owner — Date: 2009/01/01

Part G - Destination

Date and Time Received	Count	Placed in Pen #
2009/01/01 11:00 AM	14 hd	123
Received and Counted By: (Print Name) / Signature: Sue Tucker SA Tucker		Premises ID: ABIIIAYOT

HEAD OFFICE COPY

ZZ999999

SUBJECT: Poultry Flock Health - Documentation of	04-A-03
REGULATORY REFERENCE Note: There is **no legislated requirement** for an abattoir **to gather information on the health of poultry flocks but**, given the intense public concern over food safety, **this practice is highly recommended**.	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

The availability of information on the flock health of birds submitted to a “Licensed Meat Facility” (abattoir) for slaughter could be very beneficial in the event of a recall, or an outbreak of a serious disease condition.

Information on the health history of the flock, growing conditions, transport conditions, etc. can be of assistance for Meat Inspection Branch (MIB) Inspectors in interpreting ante-mortem and post-mortem findings and ensuring an appropriate disposition of unhealthy birds.

Note: Appropriate flock health information will confirm that there are no drug residues in the birds.

OBJECTIVE/OUTCOME

A flock information document will accompany every shipment of birds, other than ostriches, rheas and emus, which are brought to an abattoir for slaughter.

Note: The MIF - 37 “Flock Health Declaration” has been developed by the MIB for this purpose. A copy of the MIF - 37 is attached to this document.

Any method of getting the MIF - 37 to the producer would be acceptable. Following are some options depending on the situation:

a) completion of the MIF - 37 at the time of delivery when the producer actually delivers the birds;

b) providing copies of the MIF - 37 to regular clients and asking them to give the completed forms to the trucker for delivery to the abattoir;

c) having producers fax the information to the abattoir

Information collected will include but is not limited to:

1. The Producer's name and address.

   Note: The use of a unique producer code that makes it possible to identify the producer's name and address, as required, would be acceptable.

2. Identification of the flock of origin.

   Note: The farm, barn and lot, or flock number, should be noted.

3. Medications used during the growing and finishing period.

   Note: This includes medications used for prevention as well as for the treatment of diseases.

   Evidence should be provided which ensures that all drug withdrawal periods were adhered to.

4. An accurate statement of feed and water withdrawal times.

The producer's signature, on the document, will confirm that the information provided is accurate and complete.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Poultry Flock Health- Documentation of"** will be met when:

Completed MIF - 37 forms are kept on file, at the abattoir, for a minimum of 2 years.

RELATED SECTIONS OF TIPM

None

Attachment - TIPM Document 04-A-03

MIF - 37

Alberta Agriculture and Food

Meat Inspection Branch
Regulatory Services Division

FLOCK HEALTH DECLARATION

Date:_____ Abattoir #_____ Lot # _____

Submitted for slaughter _____ Time of feed withdrawal _____

Time of water withdrawal _____

Type

☐ Broilers ☐ Fowl ☐ Turkeys ☐ Ducks ☐ Geese ☐ Other

Producer
Name _____
Address _____
_____
Telephone _____ _____

Disease History

List the diseases encountered during the "Grow Out Period"

_____
_____
_____

Diagnosis determined by ☐ owner ☐ veterinarian ☐ laboratory confirmation

---

Medication History & Drug Withdrawal Times
List all drugs given (whether for treatment or prevention) and when

Medication Dates of Administration

_____
_____
_____
_____

Miscellaneous

Method of Transportation
- ☐ Truck
- ☐ Trailer
- ☐ Other (describe)

_____
_____

Biosecurity
The following "Biosecurity" measures were taken

_____
_____

Producer Declaration
I confirm that, to the best of my knowledge, the above information is accurate and complete and that all diseases diagnosed in the flock either through the observation of clinical signs, veterinary examination or laboratory testing have been identified and reported on this form. I also certify that all drug withdrawal times have been complied with.

Signature of Producer_____

SUBJECT: Humane Transportation Requirements	04-A-04
REGULATORY REFERENCES AR 203/2005 *Animal Protection Regulation* Sections 10 to 16 inclusive	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

The intent of this document is to make the operator of a "Licensed Meat Facility" (abattoir) aware of the requirements of AR 203/2005 relating to appropriate transportation of animals.

Although the abattoir operator is not directly responsible for the condition of vehicles used to transport animals to the abattoir, or transportation practices, they often have to deal with animals that have been stressed, injured, or otherwise compromised, during transportation.

The abattoir operator should advise the operators of transport vehicles about any contraventions of AR 203/2005 that they observe.

The Meat Inspection Branch (MIB) Inspector has a responsibility to report any humane transportation issues to their Regional Supervisor (RS) and/or Area Manager (AM).

Note: The MI – 40 is the MIB's "Directive" on Compromised Animals. In accordance with this "Directive" when a MIB Inspector reports an issue, the Area Manager is responsible for deciding whether it is serious enough for further investigation and possible reporting to the Society for the Prevention of Cruelty to Animals (SPCA).

Depending on the situation the RS and/or AS may consult with the Division Veterinarian (a veterinarian appointed by the Regulatory Services Division of Alberta Agriculture and Rural Development).

OBJECTIVE/OUTCOME

All animals will be transported to the abattoir in accordance with the requirements of AR 203/2005.

Note: Sections 11 to 16 of AR 2003/2005 deal with the following issues:

a) transport of compromised (injured, or sick) animals;

b) loading densities;

c) cleanliness of the transportation vehicle;

d) protection of animals from adverse weather, exhaust fumes, etc;

e) segregation of incompatible animals (e.g. boars from other hogs);

f) requirements for feed and water

The abattoir operator will advise the transporter about any apparent contraventions that are observed when animals arrive at the abattoir.

RELATED SECTIONS OF TIPM

05-B-01 Animal Transport Vehicles - Design & Maintenance

05-B-05 Sick or Non-ambulatory Animals

SUBJECT: Presence of Non-food Animals	05-A-01
REGULATORY REFERENCE AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 25	**Initial Release** Sept 1, 2009 **Page 1 of 1**

RATIONALE

The operator of a "Licensed Meat Facility" (facility) has a responsibility to ensure that meat is processed in an environment free from any biological, chemical or physical sources of contamination.

All animals are potential carriers of infectious agents that could be serious food safety hazards from the direct, or indirect, contamination of meat, or meat products. A good example is toxoplasmosis (a parasite of dogs and cats which has the potential to cause disease in humans).

Note: Direct contamination occurs when an animal comes into direct contact with meat, or meat products. Indirect contamination occurs when clothing, or equipment, contaminated with animal secretions, or excretions (e.g. saliva, feces, urine, etc.), comes into contact with meat, or meat products.

Allowing any animals, other than those presented for slaughter, to be present in the facility creates a major food safety hazard.

Having animals around the premises, particularly pets could increase the chances that facility personnel could cause indirect contamination of meat and meat products from soiling of their shoes and clothing.

Quite simply, prohibiting the presence of all animals, other than those being slaughtered, results in an environment that is more conducive to food safety.

OBJECTIVE/OUTCOME

Only animals that are going to be slaughtered will be allowed to be in a facility.

Note: Guard dogs and personal service dogs are exceptions to the above providing their presence is conducted in accordance with TIPM document 05-A-02.

This prohibition also applies to the animal holding area of an abattoir.

Note: Dogs cannot be used to help move animals into slaughtering facilities.

RELATED SECTIONS OF TIPM

05-A-02 Guard or Service Dogs

SUBJECT: Guard or Service Dogs	05-A-02
REGULATORY REFERENCE AR 42/2003 *Meat Inspection Regulation* (Consolidated to AR 112/2009) Section 25	**Initial Release** Sept 1, 2009 **Page 1 of 1**

RATIONALE

Normally **all animals**, other than those being offered for slaughter, are prohibited from being in, or on, the premises of a "Licensed Meat Facility" (facility) because they **are potential carriers of infectious agents** that could lead to serious food safety risks from the direct, or indirect, contamination of meat, or meat products. A good example is toxoplasmosis (a parasite of dogs and cats which has the potential to cause disease in humans).

Note: Direct contamination occurs when an animal comes into direct contact with meat, or meat products. Indirect contamination occurs when clothing, or equipment, contaminated with animal secretions, or excretions (e.g. saliva, feces, urine, etc.), comes into contact with meat, or meat products.

Notwithstanding the inherent risks, allowances can be made for the presence of guard dogs and/or personal service dogs providing steps are taken to mitigate the risks.

Allowing the use of guard dogs and/or personal service dogs does not absolve the operator of the facility from their responsibility to ensure that meat is processed in an environment free from any biological, chemical or physical sources of contamination.

OBJECTIVE/OUTCOME

A guard dog will be allowed to be in the facility providing:

1. It is not permitted to enter any of the buildings or any other areas that contain food animals, or where carcasses, parts of carcasses, meat products, or ingredients, are processed, packaged, labeled, handled or stored.
2. The animal is appropriately restrained so it does not pose a safety risk to MIB Inspectors nor impedes them from performing their duties.
3. The animal's health status does not pose a risk to any food animals, or meat products, in the facility.

Service dogs that are specially trained to provide assistance to individuals with medical disabilities (e.g. a seeing-eye dog) may be allowed access to all parts of the facility providing they are not allowed to come into direct contact with any meat, or meat products.

Note: Facility personnel that need to use a service dog must:

a) avoid contacting meat, or meat products, while they are handling the animal;

b) remove their smocks, or coveralls, before handling the animal;

c) wash and sanitize their hands before handling any meat, or meat products, after they have handled the animal

RELATED SECTIONS OF TIPM

05-A-01 Presence of Non-food Animals

SUBJECT: Records of Shipment	05-A-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 30 AR 208/2008 *Livestock Identification and Commerce General Regulation* Section 25	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Section 30 subsections 1 to 4 of AR 42/2003 cover the records that the operator of a "Licensed Provincial Abattoir" (abattoir) is required to keep.

Note: Accurate and complete records are valuable aids for:

a) monitoring the control of processing steps;

b) providing information in the event of a product recall

This document outlines the information, pertaining to the animals that are delivered for slaughter to a provincially licensed abattoir, which must be collected and retained.

For inspection purposes and in the event of a recall complete records of animals delivered for slaughter must be kept.

Note: Such records should provide:

a) name and address of the person(s) from whom the animals were purchased, or acquired;

b) date of purchase or acquisition;

c) number and kind of animals;

d) number of animals that were slaughtered;

e) date of slaughter

In addition to the above, for poultry (with the exception of ratites and birds for custom slaughter), flock information identifying the health history, growing conditions and transport of the birds is required.

Note: This information will assist Meat Inspection Branch (MIB) Inspectors in making accurate post-mortem dispositions. This information is also essential for tracing reportable diseases, which will help maintain the overall safety of the poultry industry.

OBJECTIVE/OUTCOME

The following **information** will be collected and retained **for** all live **animals, originating in the Province of Alberta**, that are submitted to a provincially licensed abattoir:

1. Names and addresses of persons, or corporations, from whom the animals were purchased, or otherwise acquired.
2. Date of delivery to the abattoir.
3. Number and kind (type) of animal(s) delivered.
4. Number and kind (type) of animal(s) slaughtered.
5. Date of slaughter.
6. Enough information on each animal to make it possible for an inspector to trace it to its farm of origin.

Note: CCIA (Canadian Cattle Identification Agency) tag numbers must be recorded for cattle and bison. These tags will allow the determination of the animal's farm of origin. The abattoir operator also has an obligation, in accordance with section 186(1) (b) of the *Health of Animals Regulation* (Canada) to report the CCIA tag numbers of slaughtered animals to the agency.

Since January 1, 2004 it has been compulsory for a CSIP (Canadian Sheep Identification Program) tag to be placed in all sheep and lambs before they leave their farm of origin. MIB Inspectors report information on untagged animals to the Canadian Food Inspection Agency and the Alberta Sheep and Wool Commission in accordance with Regulatory Services Division (RSD) - Meat Inspection Directive MI - 22.

7. Such other information as the Director of the RSD may require.

Note: The above records must be kept for a minimum of ten (10) years.

For **animals originating** from **outside of the Province of Alberta** the following **additional information** is **required**.

1. Gross weight of the livestock.
2. Number of square meters, or square feet, of floor space in the transport vehicle.
3. Time, date and location where the livestock:
   a) came under the custody of the carrier;
   b) were fed, watered and rested while in the custody of the carrier;
   c) were unloaded at their destination
4. Date and location where the transport vehicle was last cleaned and disinfected.

Note: The inter-provincial transportation of livestock is most likely going to occur at abattoirs that are close to a provincial border.

The abattoir operator will comply with all of the requirements for livestock manifests in accordance with AR 208/2008 *Livestock Identification and Commerce General Regulation.*

Note: For details on livestock manifests the reader is referred to TIPM document 04-A-02 Livestock Documentation (Manifests).

Upon the request of a MIB Inspector, or other authorized individual, the abattoir operator will provide the above records for inspection.

Note: The MIB Inspector also has the authority to remove records for photocopying should that be necessary.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **Records of Shipment** will be met when:

1. Livestock manifests are retained for a period of 10 years.

Note: Manifests, when properly completed will contain all of the pertinent information that is required.

2. Poultry flock health records are retained for a period of 2 years.

RELATED SECTIONS OF TIPM

03-F-03 Batch & Distribution Records
04-A-02 Livestock Documentation (Manifests)
04-A-03 Poultry Flock Health - Documentation of

SUBJECT: Livestock Yards & Holding Pens	05-A-04
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1, 18(b)(iii), 21(2), 21(3) & 26 AR 203/2005 *Animal Protection Regulation* Section 12(1)	**Initial Release** Sept 1, 2009 **Page 1 of 4**

RATIONALE

Food animals are sentient beings. This means that they are capable of suffering discomfort, fear and pain.

Exposure to strange environments frightens them and makes them more difficult to handle.

Like people, animals react positively or negatively to sights and sounds in their environment.

Not withstanding our inherent moral obligation to handle animals in a human manner section 21(1) of AR 42/2003 states, “A person shall minimize pain and distress of any animal that is being prepared for slaughter or slaughtered”.

Note: Animal handling, or holding facilities, in a “Licensed Meat Facility” (abattoir) should be constructed in a manner that takes into account an animal’s likes and dislikes. Having an animal friendly environment makes it much easier to handle them and minimizes their chance of injury and possible damage to the carcass from rough handling.

Properly designed and maintained facilities also have the advantage of making the task of moving animals quieter, less stressful, more humane and least laborious.

Note: Animals generally fear darkness, dead ends, sharp turns, shadows, flashing bright lights, high frequency noises and even unusual odors. Conversely, they move effortlessly when moved in single file and through chutes with solid sides and open ends so that they can see through them and see and follow the lead animals. Proper construction will alleviate many animal handling problems.

Sections 21(2) & 21(3) of AR 42/2003 specify that animals must be provided with immediate shelter and access to feed, water and bedding if held for more than 24 hours.

Overcrowding and exposure to other species causes stress thus there is a need to provide separation of the species and adequate space for the number of animals being handled at any one time.

In addition to meeting the moral obligations of handling animals in a humane manner, properly designed and maintained facilities reduce the chances of contamination into the slaughter facility, from dirty animals and reduce the chances that rough handling may affect meat quality from bruising and other injuries.

Frequent cleanup of the holding area limits the risk of transfer of diseases from animal to animal and adds to the comfort of livestock during a stressful time of being placed in a new environment.

OBJECTIVE/OUTCOME

Animal handling facilities and/or equipment will:

1. Be constructed in a manner that minimizes the chance of injury while food animals are handled in any manner.

    Note: Section 12(1) of AR 203/2005 states, "**No person shall** load, or **unload**, **livestock in a manner** that is **likely to cause injury** or undue suffering to it."

2. Meet the following requirements.

Unloading docks of different heights will be available, or the ramps will be adjustable.

Note: This is necessary for the safe unloading of animals from vehicles of varying heights.

Unloading docks will be constructed in a manner that eliminates gaps between the vehicle and the dock.

The following are considered to be "Common Industry Practice":

a) a level area on the dock before the ramp;

b) a maximum slope of 20^0 to 25^0 for pigs;

c) a maximum of 45^0 for other species;

d) stair step dimensions for cattle of a 3 ½ inch (9-10cm) rise and a 12-inch (30cm) long tread. If space permits, an 18-inch (cm) long tread will create a more gradual ramp;

e) stair step dimensions for pigs of a 2 ½ inch (6.35cm) rise and a 10-inch (25cm) tread. On adjustable ramps, cleats with 8 inches (20cm) of space between them are recommended. Ramps for small piglets require cleat spacing of 3 inches (8cm);

f) sides of sufficient strength and height to minimize the chance of injury to animals and there must not be any gaps between the vehicle and the loading dock**.**

There will be appropriate facilities for the handling of compromised (e.g. crippled) animals.

Floors in holding pens, alleyways and chutes will be:

1. Well sloped for proper drainage;

    Note: Drainage can be accomplished through individual water runs out of each pen or via valley-type drains located in the alleyway.

2. Scored, or otherwise treated, if made of concrete, to provide a non-slip surface.

    Note: It is "Common Industry Practice" to have concrete floors.

3. Constructed of materials that enable easy cleaning and sanitation.

    Note: The use of smooth impervious materials, for construction, will greatly facilitate the ease of cleaning and sanitizing.

The walls and gates of holding pens and alleyways will be constructed of smooth, impervious material.

Note: Rust resistant metal pipe or tubing with a diameter greater than 8 cm (3 inches) is the preferred material.

It is recommended that any wooden walls and gates be painted, or whitewashed, regularly.

Sliding and one-way gates, in alleyways and loading chutes, will be constructed so that animals can see through them.

Note: This makes animals more willing to move forward and reduces their feeling of being trapped.

Hinges and dividers should be constructed and maintained so that they move smoothly without any squeaks or high-pitched noises.

Note: Squeaks and high pitch noises causes stress and fear in animals thus making them more difficult to handle.

All pens and alleyways will be well lit and spacious, with gates and dividers that allow animals to see through.

Note: This type of construction will greatly aid in the movement of livestock as they will have a greater desire to move in and out of the pens voluntarily.

Animal holding facilities will be properly ventilated.

Note: Sufficient ventilation will prevent the development of strong odors and condensation. Poor ventilation is stressful for the animals. Ventilation is particularly important for poultry, rabbits and any other animals that are confined in crates.

A sufficient number of pens should be covered by a roof.

Note: It is not mandatory for all livestock pens to be covered but a sufficient number of covered pens must be provided to afford protection to those animals, or classes of livestock, that normally require shelter.

There will be sufficient pen capacity to comfortably accommodate the peak number of animals that are anticipated on any given day.

Note: Sufficient capacity is defined as having enough space to allow all the livestock to lie down at the same time.

The capacity of each livestock pen should be indicated on the facility's site plan.

It is recommended that pens be kept no more than 75% full.

There must also be a sufficient number of pens to allow the separation of species and the separation, or isolation, of animals that may cause harm to other animals (e. g. bulls, boars, cows with large horns, aggressive animals, etc.).

Animal holding areas will be sufficiently separated from the stunning and bleeding area.

Note: This is a requirement to prevent the entrance of dust, odors, or other forms of contamination, to the kill floor.

All animal handling facilities must be properly maintained.

Note: Well maintained facilities will be free of any protruding nails, bolts, sharp corners or anything else that may contribute to the injury or discomfort of animals.

All animal holding facilities will be cleaned and sanitized regularly and as required.

Note: To ensure frequent and thorough cleaning there should be written sanitation protocols for livestock handling facilities as part of the abattoir's **"Sanitation Schedule"**.

Yards, driveways, etc., which have been used to hold or move suspect or condemned animals prior to slaughter will be cleaned in accordance with the written sanitation protocols.

Properly drained and protected concrete, or metal, bins will be available for the storage of manure pending final removal for disposal.

Note: Such facilities must be built & maintained in accordance with local ordinances.

Livestock will have access to clean drinking water within a reasonable length of time.

Note: It is "Common Industry Practice" to make water available in all holding pens.

Cold weather conditions may require heaters to prevent freezing.

Animals held longer than 24 hours will have adequate amounts of food, water and bedding.

Note: This is absolutely essential without exception and while 24 hours meets basic legislated requirements animals should have access to water much earlier than this particularly when the weather is hot.

Sufficient bedding, in the form of straw or other litter, must be provided.

Note: Sufficient bedding is defined as enough to prevent the hide of animals from becoming wet, or soiled with manure.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Livestock Yards & Holding Pens"** will be met when:

1. The **"Sanitation Schedule"** includes livestock pens.
2. The maintenance of the **"Livestock Yards & Pens"** is monitored and recorded.

Note: Information can be recorded in **"Preventative Maintenance Records"** or in the **"External Inspection Records"**.

RELATED SECTIONS OF TIPM

03-A-03 External Premises Inspection
03-C-04 Preventative Maintenance Procedures - Records of
03-E-04 Sanitation Schedule

SUBJECT: Stunning & Bleeding Area	05-A-05
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 8, 18(a)(i), 21(1), 22 & 22.1	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Adequate restraint is essential for the humane stunning of animals in a "Licensed Meat Facility" (abattoir).

Note: Poultry and rabbits can be readily restrained by hand thus elaborate restraint equipment is not essential for these species.

In addition to a moral obligation of preventing the infliction of unnecessary animal suffering there are also a number of regulations that require humane slaughter.

The headings in the Objectives/Outcome section of this document address the following:

1. Permission for alternative methods of slaughter on religious grounds – Section 8
2. Construction of ramps, alleys, etc. – Section 18(a)(i)
3. Prohibition on inflicting unnecessary pain – Section 21(1)
4. Ensure rapid & permanent unconsciousness - Sections 21(2)(a) & (b)
5. Need to maintain stunning equipment – Section 22
6. Permissible methods of stunning – Sections 22.1(2)(c)

OBJECTIVE/OUTCOME

All animals will be stunned in a manner that is safe for abattoir personnel and humane for the animal.

The conditions listed in the following sections will be met.

Knocking (Stunning) Box and Stunning Equipment

Chutes and knocking (stunning) boxes will:

1. Have slip proof footing.
2. Be narrow enough to prevent an animal from turning around.

   Note: The knocking box should be designed so that it is appropriate for the species and size of animal being stunned. It must be able to confine an animal without discomfort while preventing excessive movement of the animal forwards, backwards, or sideways.

3. Have sufficient slope on the floor to automatically eject the stunned animal onto the landing (shackling) area.

Only one animal at a time will be put into the knocking box.

Note: This will reduce the stress on the animals and will reduce the chance of carcass damage from bruising.

The following conditions will be met for stunning and stunning equipment:

1. The person doing the stunning must be knowledgeable about proper stunning techniques and physically capable of performing the job without inflicting unnecessary pain on the animal.
2. Only stunning methods that are specifically allowed under section 22.1(2)(c) of AR 42/2003, will be used.

   Note: A blow to the head with a mechanical penetrating device (captive bolt), carbon dioxide gas, electrocution or shooting with a rifle are the stunning methods specifically allowed under section 22.1(2)(c) of AR 42/2003.

3. All stunning equipment will be properly maintained so that it is fully functional.

   Note: Poor maintenance, of stunning equipment, is a major cause of improper stunning.

It is recommended that the entire knocking box, except for the opening that allows the stunned animal to be expelled, be located outside of the kill floor.

Note: This recommendation is to provide increased safety for abattoir and inspectional personnel. There is a much greater chance of personnel injury from a ricochet when the knocking box is located on the kill floor.

Landing Area

Landing areas will be:

1. Located to the side or front of the knocking box;
2. Dry;
3. Separately drained;
4. A sufficient distance from the bleeding area;

   Note: There should be enough separation of the landing and bleeding areas to minimize the chance of getting blood from a bled animal on a recently stunned animal.

5. Secure enough to prevent the escape of improperly stunned animals

Bleeding Area

The bleeding area will be:

1. Curbed;
2. Steeply graded to the blood and wash-up drains;
3. Have drains of sufficient size to prevent blockage due to clotting;

   Note: Minimum requirements are a 6" (150 mm) diameter drain and a slope of 17^0, toward a discharge point in the inedible section of the abattoir.

4. Equipped with hand and equipment washing facilities.

If animals are conveyed, by means of a moving chain, prior to, during and after bleeding, the rail must be long enough to ensure that all animals have bled to death prior to entering the scalding tank.

Ritual or Religious Slaughter

In accordance with section 8 of AR 42/2003 ritual, or religious, slaughter will only be allowed with the written consent of the Director of the RSD.

Note: The Director will only approve alternative methods of slaughter if there are assurances that the physical facilities and skill of the individuals performing the slaughter are such that the animal will be rendered unconscious, in a timely fashion, to the satisfaction of the resident MIB Inspector.

Directives MI – 18 and MI – 33 in the RSD Manual of Directives and Procedures apply to the conduct of alternative slaughter methods. Facilities and equipment used must provide for complete immobilization of the animal prior to bleeding.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Stunning & Bleeding Area"** will be met when*:*

1. The **"Stunning & Bleeding Area"** is included in the **"Preventative Maintenance Procedures"** and/or the **"Internal Inspection Procedures"** of the abattoir.
2. Issues and corrective actions relating to the **"Stunning & Bleeding Area"** are recorded in the **"Preventative Maintenance Records"** or **"Internal Inspection Records"** of the abattoir.
3. On site observations demonstrate that the **"Stunning & Bleeding"** area is properly constructed, maintained, cleaned and sanitized.
4. Ritual, or religious, slaughters, if applicable, are done in a manner that is satisfactory to the MIB Inspector.

RELATED SECTIONS OF TIPM

03-A-02 Internal Premises Inspection
03-C-04 Preventative Maintenance Procedures - Records of
05-B-06 Stunning & Bleeding Practices
07-A-03 Ritual Slaughter

SUBJECT: Segregation of Animals	05-A-06
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 18(1)(h), 21(1) & 26(a) AR 203/2005 *Animal Protection Regulation* Sections 10 to 15 inclusive	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Section 18(1)(h) of AR 42/2003 requires an abattoir to have facilities that allow the safe and humane handling of all species of animals that are brought to the abattoir.

Section 26(a) requires the abattoir operator to ensure that pens are not overcrowded.

Note: The appropriateness of the facilities and having sufficient space are both important for ensuring that undue pain, or discomfort, is not inflicted on animals in accordance with section 21(1) of AR 42/2003.

In addition to the legislated requirements of ensuring that animals are not subjected to stress and/or injury, from other animals, the abattoir operator also has an ethical, or moral, responsibility to handle animals in a humane way.

Stress from fear, and possible injury are likely to occur unless precautions are taken to protect weak, or vulnerable, animals from other animals in their immediate surroundings.

Note: Young animals and those suffering from previous injuries and/or disease conditions are at the highest risk. They should be kept separate from animals that are likely to cause them harm.

Animals most likely to cause injury to the young, weak or vulnerable include:

1. Adults;
2. Mature and intact (un- castrated) males;
3. Aggressive animals

Note: Fear from recent transportation, handling, strange surroundings and mixing with unfamiliar animals may lead to aggressive behavior in animals that normally aren't aggressive.

Mixing animals of different species will often create hazards for the smaller or less aggressive species.

OBJECTIVE/OUTCOME

Transportation of Animals to the Abattoir

All animals must be properly segregated in accordance with Section 15 of AR 203/2005.

Note: This section requires segregation of the following types of animals during transportation:

a) livestock of different species;

b) groups of mature bulls, de-tusked boars, rams and goat bucks;

c) cows, and sows with suckling offspring;

d) livestock of the same species but of substantially different weight, or age

Boars with tusks must be separated from all animals including other boars.

Abattoir operators have a responsibility to advise vehicle operators about any contraventions of AR 203/2005 that are observed. The vehicle should also be advised that such infractions could be reported to the authorities.

Note: Directive MI – 40 Compromised Animals, in the Regulatory Services Division Manual of Directives and Procedures, requires Meat Inspection Branch (MIB) Inspectors to report any contraventions of AR 203/2005 to their Regional Supervisor and/or Area Manager who in turn will decide whether the issue is serious enough to investigate further and possibly report to the S.P.C.A.

Care of Animals at the Abattoir

The abattoir operator will ensure that the same separation required during transportation is maintained in the pens at the abattoir.

Note: If an animal becomes aggressive after it has been delivered to the abattoir there is a responsibility to immediately segregate that animal from all others.

Any animal that appears to be ill, or injured, will be immediately segregated from other healthy animals.

RELATED SECTIONS OF TIPM

05-A-04 Livestock Yards & Holding Pens

SUBJECT: Animal Transport Vehicles - Design & Maintenance	05-B-01
REGULATORY REFERENCES AR 203/2005 *Animal Protection Regulation* Sections 13 & 14	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

While not directly responsible for the condition of vehicles used to transport animals to the operator of a "Licensed Meat Facility" (abattoir) often has to deal with animals that have been stressed, injured or otherwise compromised during transportation.

The intent of this document is to make abattoir operators aware of the requirements of AR 203/2005 relating to transportation vehicles, or containers.

Abattoir operators have a responsibility to advise the operators of transportation vehicles about any contraventions to AR 203/2005 that are observed.

Note: MI – 40, the Meat Inspection Branch Directive on Compromised Animals, requires Meat Inspection Branch (MIB) Inspectors to report any contraventions to their Regional Supervisor and/or Area Manager who in turn will decide whether the issue is serious enough to investigate further and possibly report to the S.P.C.A or other authorities.

OBJECTIVE/OUTCOME

All animals will be transported in a vehicle, or container, that is suitably designed and maintained to ensure that the use of that vehicle, or container, does not cause injury, or sickness, in animals being transported.

Note: A vehicle is defined as any means of conveyance used for the transportation of animals. A container is defined as a box, or a crate, used for the shipment of animals.

Vehicles, or containers, will be constructed to ensure that:

1. Exhaust fumes will not be able to enter the animal compartment.
2. The front and sides of the box will be of sufficient height.

   Note: Sufficient height is defined as being high enough to protect animals from adverse environmental conditions (e.g. wind) and high enough to prevent animals from jumping out, being pushed out, or falling out.

   If the vehicle has a roof it must be high enough for animals to stand, in a natural position, without contacting the roof.

3. The flooring is slip-proof.

   Note: The floor may be constructed with slip-proof material (e.g. checkered steel plating) or evenly covered with straw, dry sand, or other suitable material.

4. Animals will be protected, from exposure to severe weather conditions, during transit.

5. Air flow (ventilation) is sufficient to prevent suffocation and/or the development of heat stroke.

    Note: Proper ventilation is of particular importance when the weather is hot.

All vehicles will be maintained in a sanitary condition.

Note: Vehicles should be cleaned and sanitized before loading to:

a) prevent the spread of disease from prior inhabitants;

b) reduce the risk of carcass contamination from the entry of dirty animals into the abattoir

Vehicles will be maintained in a manner that minimizes any risk of injury to animals being transported.

Note: **Items** identified, in AR 203/2005, as **unacceptable** include:

a) fittings that are not secure or are inadequately padded, fenced off or obstructed;

b) bolt heads, or other, objects projecting into animal holding areas;

c) broken, cracked or damaged siding or flooring material;

d) inadequate ventilation;

e) unsafe footholds, or footholds that are not secure;

f) any other equipment in a condition likely to cause injury, or undue suffering, to the animals being transported

The abattoir operator will advise the operators of transport vehicles about any contraventions of AR 203/2005 that are observed.

RELATED SECTIONS OF TIPM

05-A-06 Segregation of Animals

SUBJECT: Delivery & Prompt Unloading	05-B-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 21(1) & (2) AR 203/2005 *Animal Protection Regulation* Sections 10, 12(1) & 12(3)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

In addition to the ethical and moral requirement to handle animals in a manner that will not cause any undue suffering there is also a legislated requirement to do so under section 21(1) of AR 42/2003.

Section 21(2) of AR 42/2003 also requires the operator of a "Licensed Meat Facility (abattoir) to ensure that animals arriving at the abattoir to be provided with immediate shelter.

Note: This means that animals must be unloaded from their transportation vehicle as soon as possible after arrival at the abattoir.

Because abattoirs handle different species of animals, of variable ages and weights and because these animals come in different types of vehicles, facilities need to be suitably designed and maintained in a manner that allows all types of animals to be unloaded in a safe and humane manner. (See TIPM document 05-A-05 Livestock Yards & Holding Pens for details on facility requirements.)

Implementation of the measures outlined in this document will minimize the stress on animals during their transfer to a new environment.

Abattoir operators have a responsibility to advise the operators of transportation vehicles about any contraventions to AR 203/2005 that are observed.

Note: MI – 40, the Meat Inspection Branch Directive on Compromised Animals, requires Meat Inspection Branch (MIB) Inspectors to report any contraventions to their Regional Supervisor and/or Area Manager who in turn will decide whether the issue is serious enough to investigate further and possibly report to the S.P.C.A or other authorities.

OBJECTIVE/OUTCOME

Animals will be unloaded as soon as possible after their arrival at the abattoir.

Note: To prevent unnecessary delays livestock producers and/or truckers should consult with the abattoir operator to schedule deliveries.

Unloading will be done in a humane manner.

Note: Unloading facilities must be designed and maintained in a manner that will minimize the chance of injury during unloading.

Beating animals in any manner, during unloading, in a manner likely to cause injury, **will not be tolerated**.

Animals with injuries (e.g. lameness, etc.) must be handled with extra care, including more time to unload, in order to prevent further injury.

Note: Providing livestock producers and truckers comply with sections 10(1) of AR 203/2005 *Animal Protection Regulation,* which makes it illegal to transport animals which by reason of infirmity, illness, injury, fatigue or any other cause may suffer unduly, abattoirs should not have to deal with compromised animals other than those that may have been injured during transport.

Injured animals must be segregated in pens if necessary to prevent further injury**.**

RELATED SECTIONS OF TIPM

05-A-04 Livestock Yards & Holding Pens

SUBJECT: Handling of Live Animals in the Abattoir	05-B-03
REGULATORY REFERENCE AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 21(1) AR 203/2005 *Animal Protection Regulation* Sections 12(1) & 12(3)	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Section 21(1) of AR 42/2003 *Meat Inspection Regulation* requires animals to be handled in a manner that will not cause any undue suffering. In addition to this legal requirement there is also a moral and ethical requirement to handle animals in a humane manner.

Note: In addition to this section abusive handling of animals is also prohibited by sections 12(1) & 12(3) of AR 203/2005.

Mishandling of animals, at a "Licensed Meat Facility" (abattoir) may be intentional or unintentional. **Intentional abuse** simply **must not be tolerated**.

Note: Training of abattoir personnel should eliminate un-intentional abuse providing the training provides sufficient knowledge about animal behaviour patterns so that they can be moved with a minimum of frustration both to the animal and abattoir personnel.

Mishandling of animals can also affect the quality of the product being produced at the abattoir. For example, animals that have been stressed, from improper handling, may not bleed out properly thus leading to the production of an inferior meat product (e.g. "Pale Soft Exudative" [PSE] pork).

The purpose of this document is to provide some basic information on animal behaviour.

Note: More **detailed information** on **animal welfare** and handling procedures **can be found at:**

http://www.grandin.com/index.html

OBJECTIVE/OUTCOME

Live animals will be handled in a humane manner.

Note: Meat Inspection Branch (MIB) Inspectors **are authorized to deal with animal welfare issues** related to the infliction of unnecessary pain, or discomfort on animals being moved to slaughter. In the case of excessively rough, or abusive, handling they have the authority to immediately suspend the kill until the contravention has been corrected. They will also record the details of these contraventions and actions taken and report them to appropriate authorities such as the S.P.C.A. as necessary.

Abattoir personnel will take the natural behaviour patterns of animals into consideration while handling them.

Note: Animal behaviour depends on several factors including:

a) natural instincts (inherited traits and characteristics of the species);

b) individual differences;

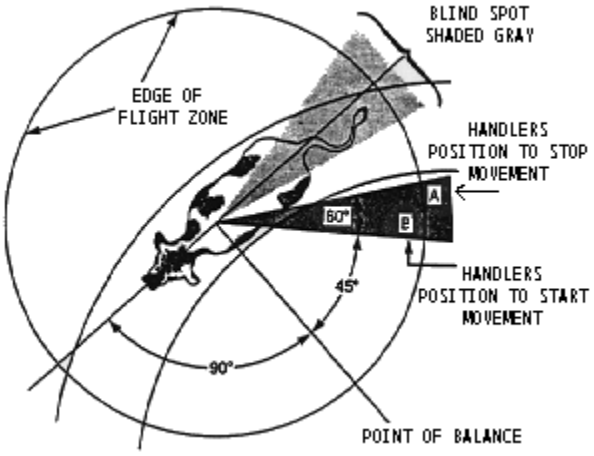
c) previous experiences

Appropriate lighting (e.g. a spotlight directed onto a ramp or other apparatus) will be used to encourage animal movement in the desired direction.

Note: This takes advantage of the natural tendency for pigs, sheep, and cattle to move from a dimly illuminated area to a more brightly illuminated area, provided they are not subjected to a glare.

Abattoir personnel will be knowledgeable about and take advantage of the animal's natural flight zone when attempting to make them move forward.

Note: The following diagram, of the flight zone for cattle, shows the best location for a handler to approach the animal from.



To make the animal move forward, the handler should stand in the black shaded area either to the right or left side of the animal.

The edge of an animal's flight zone can be determined by slowly walking up to the animal and observing how it responds.

In the above diagram the circle represents the edge of the flight zone.

Abattoir personnel will be calm and patient when moving animals.

Note: More can be accomplished by giving animals time to understand what is expected of them rather than a whole lot of shouting.

Impatience is one of the main causes of inhumane treatment of food animals. Impatience arises when animals fail to move freely from one point to another. This gives rise to frustration, which is often taken out on the animals.

Other factors which tend to lead to the inhumane treatment of animals include being taken away from other tasks to unload animals and needing to move animals into the knocking box fast enough to keep pace with the speed of the slaughter line.

Striking, beating, kicking, lifting by the wool or any other action that causes injury, or pain, **will not be tolerated**.

Electrical prods will be used sparingly. Prods and other instruments are not to be a handler's primary driving tool.

When electric prods are used they will be used at the lowest effective power setting and will never be used in a manner that causes excessive pain or distress.

Note: Electric prods must not be used on sick, or injured, animals and they must never be applied to the face, udder, genitals, anus or any other area that will cause undue pain or distress.

To facilitate the smooth movement of animals, from one point to another, items that might frighten them should not be located where one wants them to go.

Note: Animals have a natural instinct to be shy about what they perceive to be obstacles. For example, flapping objects, ventilation drafts, floor drains, loud noises or other movements ahead of them may cause them to balk. Whenever possible, things of this nature should be located outside of the area where the animals are expected to go, or reduced to an absolute minimum.

RELATED SECTIONS OF TIPM

05-B-02 Delivery & Prompt Unloading
06-A-10 AM Care of Animals - General
12-B-05 Safe Handling of Livestock

SUBJECT: Timely Slaughter	05-B-04
REGULATORY REFERENCE AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 26(b)	**Initial Release** Sept 1, 2009 **Page 1 of 1**

RATIONALE

Animals submitted to a "Licensed Meat Facility" (abattoir) should be slaughtered as soon as possible for the following reasons:

1. Animal holding facilities, at most abattoirs, are not designed for the long term care and comfort of animals.
2. Mixing animals, from multiple sources, increases the risk that some of the animals may get sick over time.

   Note: An animal's health can change dramatically within a 24-hour period therefore, another ante-mortem inspection must be conducted if an animal hasn't been slaughtered within 24 hours of the original inspection to determine whether it is still fit for slaughter.
3. In the case of animals brought to the abattoir in crates it is impractical to provide them with food and water.

Holding animals for the purpose of fattening them is specifically prohibited in section 26(b) of AR 42/2003.

OBJECTIVE/OUTCOME

All animals will be slaughtered as soon as possible after their arrival.

Note: It is recommended that animals not be held for more than 24 hours before slaughter.

Immediate slaughter is particularly desirable for animals delivered in crates (i.e. rabbits and poultry).

To improve meat quality, it is "Common Industry Practice" to give pigs at least 2 hours of rest before slaughter.

Livestock will have access to clean drinking water within a reasonable length of time.

Note: It is "Common Industry Practice" to have water available in all holding pens.

Heaters may be needed, to prevent freezing, during cold weather.

Animals held for **more than 24 hours will receive adequate** amounts of **food, water and bedding**.

Note: This is absolutely essential, without exception and while 24 hours meets basic legislated requirements for water animals should have access to water much sooner when the weather is hot.

Animals will not be held longer than a week without permission of a Meat Inspection Branch (MIB) Inspector.

Abattoir pens will not to be used to fatten animals.

RELATED SECTIONS OF TIPM

05-A-04 Livestock Yards & Holding Pens
06-A-11 Time Requirements for AM Inspection

SUBJECT: Sick or Non-ambulatory Animals	05-B-05
REGULATORY REFERENCES: AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 21 AR 203/2005 *Animal Protection Regulation* Sections 10, 12(1) & 12(3)	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2010 **Page 1 of 2**

RATIONALE

Ethical and moral responsibilities to provide humane care to animals, along with the legislated requirements, under section 21 of AR 42/2003 and sections 10 & 12 of AR 203/2005, of not causing undue suffering to animals require that injured or sick animals receive special attention.

Sick or injured animals, upon arrival, may be:

1. Mobile and capable of exiting the transportation vehicle on their own.
2. Immobile but able to exit the vehicle with assistance, or through the use of special devices.
3. Immobile and impossible to move without causing undue pain or suffering.

Regardless of their condition it is imperative that sick, or injured, animals be handled in a humane manner and that they be slaughtered as soon as possible in a manner that doesn't compromise food safety.

In addition to the need to treat animals humanely sick animals may pose a risk to the health of other animals if their condition is contagious.

Note: It may be necessary to prioritize the disposal of these animals to minimize the chance of spreading disease.

OBJECTIVE/OUTCOME:

In accordance with AR 203/2005, no person shall load, or transport, animals that, by reason of infirmity, illness, injury, fatigue or any other cause, would suffer unduly during transport.

Note: Circumstances relating to situations where it is suspected that a sick, injured or non-ambulatory (downer) animal has undergone undue and/or additional suffering during transport, will be referred to and handled by the Meat Inspection Branch (MIB) Inspector in a prompt and humane manner.

In the absence of a MIB Inspector, the abattoir operator will record details of non-compliance with AR 203/2005 and provide this information to the MIB Inspector or to other appropriate provincial and/or federal authorities.

When a sick, injured or otherwise compromised animal arrives at an abattoir the operator will ensure that the animal(s) is handled, slaughtered, or euthanized in a manner that does not subject the animal to any further avoidable distress, or pain.

Seriously injured animals will be slaughtered as soon as possible after arrival.

Note: In situations where these animals arrive when a MIB Inspector is NOT on duty, an attempt could be made to contact the Area Manager or the regularly appointed MIB Inspector to see if arrangements can be made for an emergency slaughter. If this is not possible, an appointed veterinarian could be contacted to provide inspection for an emergency slaughter.

Sick, or compromised animals capable of walking, with or without assistance, will be moved to a holding pen where they will be segregated from healthy animals and tagged appropriately.

Non-ambulatory (downers), that are too heavy to be moved, in a conscious state without causing additional suffering, can be:

1. Stunned on the vehicle and immediately removed to the kill floor to be bled.
2. Stunned and bled, in a sanitary manner in, or immediately outside of, the vehicle.
3. Euthanized on the vehicle.

Note: A non-ambulatory animal must **NEVER** be dragged.

A MIB Inspector must conduct an ante-mortem inspection before any animals can be stunned and bled (when present).

All stunning must be irreversible.

Animals that are euthanized must be condemned and cannot enter the kill floor, or any other part of the abattoir where edible meat products are processed or handled. Animals that are euthanized when an inspector is not on duty must be reported to the inspector the next time he/she is on duty at the abattoir. It is highly recommended that the abattoir develop a euthanasia consent form for the animal owner or trucker to sign.

Truckers will **NOT** be **permitted to leave** the abattoir **with** any sick or **compromised animals in the vehicle**.

Note: An exception to this prohibition would be granting of permission by the Division Veterinarian of the Regulatory Services Division, or a private veterinary practitioner, to transport the sick animal to a veterinary clinic for appropriate treatment.

RELATED SECTIONS OF TIPM

05-B-07 Procedures for Condemned, Dead & Suspect Animals Prior to Slaughter

SUBJECT: Stunning & Bleeding Practices	05-B-06
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 8, 21(1), 22 & 22.1	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Humane slaughter procedures accomplish two primary goals:

1. The prevention of needless suffering by animals.
2. Improving the quality of meat products.

Note: Excessive stress, in the pre-slaughter period, can have a significant effect on the quality of meat. A prime example of this is Pale Soft Exudative (PSE) Pork.

Humane slaughter requires the use of procedures that cause an immediate state of unconsciousness that is maintained until death occurs from blood loss.

Note: Section 21(1) of AR 42/2003 makes it illegal for the operator, of a "Licensed Meat Facility" (abattoir), to inflict unnecessary pain on an animal. The skills (knowledge and physical condition) of individuals doing the stunning and the condition of the stunning equipment are important factors. Section 22 makes it mandatory to keep the stunning equipment in good repair.

Section 21.1(1) of AR 42/2003 requires animals to be properly restrained and rendered unconscious prior to slaughter.

Efficient and humane stunning requires:

1. Suitable restraint
2. Trained and knowledgeable abattoir personnel
3. Suitable equipment that is in good repair

Common causes of a return to sensibility after electric stunning are:

1. Improper positioning of electrode(s)
2. Insufficient amperage (current)
3. Poor bleed out
4. Poor electrical contact from electrode to animal

   Note: Poor contact is often due to excessively dirty, or long, hair, or wool.
5. Insufficient wetness of hair or wool
6. Insufficient electrode contact area

More Detailed information concerning the animal welfare aspects of stunning and bleeding can be found at: **http://www.grandin.com/index.html**

OBJECTIVE/OUTCOME

All animals slaughtered in the abattoir will be stunned in a manner which causes an immediate state of unconsciousness that is maintained until death occurs from the loss of blood.

Note: This is essential to meet the humane slaughter requirements of AR 42/2003 to ensure that there is no undue suffering inflicted on animals.

Section 8 of AR 42/2003 allows an application, to the Director of the Regulatory Services Division (RSD), for an exemption on religious grounds, from the need to render an animal unconscious. An exemption does not absolve the individual from performing the slaughter as humanely as possible.

All animals will be properly restrained prior to stunning.

Note: To ensure proper restraint, without causing undue pain and distress, all restraint devices must be properly designed and maintained in good working condition.

Only approved methods of stunning will be **allowed.**

Note: In accordance with section 21(2)(c) of AR 42/2003 the following methods of stunning have been approved:

a) a blow to the head by a mechanical stunning device (e.g. captive bolt);
b) use of concentrated carbon dioxide gas;
c) application of an electric current to the head in a manner that produces rapid unconsciousness;
d) shooting with a rifle

Alternative methods may be approved, by the Director of the RSD, for the purpose of developing, or testing, new procedures, or equipment, that are intended to improve humane methods of slaughter.

When electrocution is used as a method of stunning sufficient current will be applied to the animal for adequate results.

Note: 1.25 Amperes (Amps) of current is considered to be sufficient for market pigs, 2 or more Amperes (Amps) is required for mature sows and boars, and a minimum of 1 Amp is sufficient for sheep and poultry.

All stunning equipment will be properly maintained.

No food animals will be hoisted, or shackled, before they are rendered unconscious with the exception of poultry and rabbits.

All stunned animals will be closely observed for signs of consciousness, or improper stunning.

Note: Signs of proper stunning, that can be observed from a distance include:

a) a loose and floppy head and neck (the legs may kick);
b) a limp tongue which hangs straight down;
c) a straight back;
d) lack of vocalization (the making of sounds, typical of the type of animal being slaughtered, such as mooing, or squealing);

Vocalization is an indication of inadequate, or improper, stunning;

e) a wide open eye and a blank stare with no eye movements (captive bolt) or a clamping of eyes shut followed by a blank stare (electrical stunning);
f) no blinking or eye reflexes in response to touch;
g) absence of rhythmic breathing (intermittent gasping is acceptable);
h) a relaxed tail that hangs straight down;
i) no “nose pinch” reflex

Animals showing signs of incomplete, or improper, stunning will be stunned again immediately.

All animals must be bled out as quickly as possible.

Note: Rapid bleeding is essential regardless of the method of stunning because it ensures maximum loss of blood and helps ensure that the state of unconsciousness will be maintained until the animal dies.

Rapid bleeding is particularly important when the animal is stunned by electrocution. This method of stunning doesn't cause any significant physical damage to the brain thus the animal is more likely to regain consciousness than when methods that damage the brain, such as gunshot, are used to stun the animal.

It is "Common Industry Practice" to strive for a "Stun to Stick" interval of less than 30 seconds in the case of electrical stunning. For head only stunning of hogs, the stun to stick interval should be within 15 seconds. When head only stunning is used for cattle or sheep the animal should be bled within 10 seconds.

When stunned animals recover they regain their sense of feeling before they are able to struggle, or vocalize. For this reason the absence of reflexes cannot be relied upon as an absolute indication that the animal isn't feeling pain.

Abattoir personnel that are responsible for sticking (cutting the throat) will be knowledgeable about the best location for sticking the animal.

Note: This knowledge is essential to ensure that animals bleed out quickly and to ensure that there is no accumulation of blood in the tissues of the neck.

The optimum location for sticking varies with each species.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Stunning & Bleeding Practices"** will be met when*:*

1. Written **"Dressing Procedures"**, for the abattoir, include provisions for humane and safe stunning, sticking and bleeding.
2. Written **"Preventative Maintenance Procedures and/or Records"** include stunning equipment.

   Note: Maintenance records should demonstrate that appropriate actions have been taken to address any deficiencies that were detected.
3. Abattoir personnel responsible for stunning and bleeding have received proper training.
4. On site observations demonstrate that stunning and bleeding is being conducted in a satisfactory manner.

RELATED SECTIONS OF TIPM

03-C-04 Preventative Maintenance Procedures - Records of
03-G-01 Dressing Procedures - Red Meat Animals
03-G-02 Dressing Procedures - Poultry
05-A-05 Stunning & Bleeding Area
07-A-03 Ritual Slaughter

SUBJECT: Procedures for Condemned, Dead & Suspect Animals Prior to Slaughter	05-B-07
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 27(1), 27(2) 45, 46 (1), 46(2), 50 & 51 Meat Facility Standards (MFS) Section A.2.5.3	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Sick and/or injured animals, particularly those that are affected with contagious diseases pose a serious threat to food safety. For this reason AR 42/2003 requires that all animals be subjected to an ante-mortem (before death) inspection.

Upon completion of the ante-mortem (AM) inspection a Meat Inspection Branch (MIB) Inspector will determine that an animal or group of animals:

1. Is fit for slaughter;
2. Requires immediate slaughter for humane reasons;
3. Is fit for slaughter but needs to be held until the end of the kill;
4. Needs to be held for further examination;
5. Must be condemned because it is unfit for slaughter

This document outlines the responsibilities of the "Licensed Meat Facility (abattoir) operator relating to animals that are "held" or condemned following the AM inspection.

Animals condemned on the AM inspection and any that are found dead must be disposed of in a manner that does not compromise food safety.

Note: It is for this reason that section 27(1) of AR 42/2003 prohibits the taking of a dead animal into the abattoir and section 27(2) requires the operator to remove and dispose of, in a timely manner, any animal(s) that dies in the abattoir.

"Held" animals must be handled in a humane manner and in accordance with the instructions of a MIB Inspector.

Note: Depending on their condition an animal(s) may need to be slaughtered immediately, for humane reasons, or held until the end of the kill because of concern that their condition may lead to contamination of other carcasses.

Section 46 of AR 42/2003 gives the MIB Inspector the authority to determine how "held" animals will be handled including separation and segregation before slaughter.

OBJECTIVE/OUTCOME

The operator of the abattoir will develop and implement procedures for the handling of animals that are held, or condemned, on the AM inspection.

Note: In accordance with AR 42/2003, a MIB Inspector must clearly identify any animals that are held, or condemned, on the AM inspection.

For condemned animals a MIF – 8 Condemned Tag, or other device that shows the word ALBERTA CONDEMNED on it will be used. For held animals a

MIF – 7 Held Tag will be used.

Held tags may be applied directly to the animal, or to the container, or pen, in which the animal is located.

For condemned animals, in addition to using appropriate tags, the MIB Inspector will record full details including animal identification, owner's name and address, reason for condemnation, etc. on the MIF – 13 “Ante-mortem Inspection Report” and the MIF – 4 “Certificate of Condemnation”.

The MIB Inspector’s record of condemned animals serves to provide:

(a) a written record of all condemnations and reason(s) for the condemnation;

(b) a document that the abattoir operator can give to the producer, to verify that a carcass or portion thereof has been condemned;

(c) record of condemnations for statistical purposes

Held and Condemned animals will be handled as described in the following text.

Held Animals

All held animals will be handled in accordance with the instructions of the MIB Inspector.

Note: The MIB Inspector has the authority to order held animals to be:

a) slaughtered after all other animals have been slaughtered on that day;

b) slaughtered immediately for humane reasons;

c) held indefinitely for further examination

Held animals will be moved to appropriate holding pens in accordance with the instructions of the MIB Inspector.

Note: If a MIB Inspector deems that an animal cannot be moved, without causing undue suffering, that animal may be irreversibly stunned in the pen then dragged into the kill floor for bleeding. In these situations, providing it can be done in a sanitary manner, the animal may be bled in the pen, or live animal receiving area.

Held animals will only be removed from the holding area with permission from a MIB Inspector.

Note: Section 51 or AR 42/2003 prohibits the removal of a “Held Tag” without the permission of the MIB Inspector.

Condemned Animals

Condemned animals or animals found dead, during the AM inspection, **can’t be taken** into any part of the abattoir **where edible product is handled** or processed.

Note: Salvage of hides, etc., from these animals must take place in the yards, or inedible area, of the abattoir.

Live condemned animals will be killed in the yards.

Note: Section 45(a) requires that condemned live animals be slaughtered (killed) apart from all other animals. This means that kill floor facilities can’t be used to kill

these animals.

Abattoir operators will ensure that condemned and/or dead animals are properly disposed of, as soon as possible, and denatured (treated in a manner that makes a substance unfit for human consumption) in a manner approved by a MIB Inspector.

Note: This must be done to comply with sections 45(c) and (d) of AR 42/2003.

If, for any reason, the MIB Inspector requires a dead animal to be held the operator shall be notified and the MIB Inspector should identify the animal(s) with a MIF – 7 Held Tag.

Dead cattle determined to be **over 30 months of age will be handled as SRM**.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Condemned, Dead or Suspect Animals"** will be met when;

1. The operator of the abattoir is given a:
   a) **Certificate of Condemnation** (MIF - 4);

      Note: This certificate must be filled out, in its entirety and signed by the MIB Inspector. It should describe how many carcasses, or portions of carcasses, were condemned, and the reasons for the condemnation.

   b) Copy of the **Inspector's Daily Report** (MIF - 5);

      Note: This report must be signed by the MIB Inspector. When properly completed it will summarize how many carcasses, or portions, were condemned and the reasons why.

   c) Copy of the **Control Sheet for MIF - 2 and MIF - 7 Held Tags** (MIF - 3)

      Note: This form should indicate corrective action, if any, is required to deal with held carcasses, or equipment.

      The **MIB Inspector** is **responsible** for **filling out the** above **forms** completely and in a legible manner.

2. On site observations demonstrate that held and condemned animals are handled in an appropriate manner.

RELATED SECTIONS OF TIPM

05-B-05 Sick or Non-ambulatory Animals
06-A-09 AM Condemnations
06-A-10 AM Care of Animals - General
06-A-12 Maintenance of Identity during the AM Inspection
06-A-13 Dispositions following the AM Inspection
10-A-04 SRM Removal & Control Program

SUBJECT: Feed & Water Withdrawal	05-B-08
REGULATORY REFERENCE AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 21 (3)	**Initial Release** Sept 1, 2009 **Page 1 of 1**

RATIONALE

In addition to the moral and ethical responsibility of treating animals in a humane manner section 23(3) of AR 42/2003 requires that animals not be held, in a "Licensed Meat Facility" (abattoir) for longer than 24 hours without adequate feed, water and bedding.

Note: When assessing the length of time, without feed or water, the operator of the abattoir should take into consideration the amount of time an animal may have been without feed, or water, during transportation.

It should also be recognized that 24 hours is too long for an animal to be deprived of water during hot weather.

Prolonged periods without food, or particularly water, may have a negative impact on the quality of the meat products from these animals.

Conflicting with the need to handle animals in a humane manner is the matter of withholding feed, to empty the gut, in order to prevent contamination of the carcass.

There will be less contamination, of the carcass, if feed is withheld, particularly for pigs and poultry.

Note: It is generally accepted that a fasting period of 6 to 12 hours is optimal.

For poultry the proper time for feed withdrawal by the producer, on farm, is affected by the:

a) feeding program (type of feed);
b) size of the bird;
c) scheduled time for catching the birds;
d) length of time the birds will be in transport;
e) length of time the birds will have to wait at the abattoir before slaughter

OBJECTIVE/OUTCOME

Animals that will be **held,** at the abattoir, for **more than 24 hours will receive** adequate **feed, water and bedding.**

Note: This is necessary to comply with the requirements of AR 42/2003.

The length of time an animal has been in transport, or waiting to be unloaded should be included in the 24 hour limitation.

In warm environmental conditions animals will require water more frequently than every 24 hours.

Animals that are known to have been off feed or water for more than 24 hours will be slaughtered immediately upon their arrival.

To minimize the chance of contamination of the carcass abattoir operators can withhold feed and water for a period of time before slaughter**.**

Note: Current information indicates that the **optimum** period of feed withdrawal, **in poultry and hogs is 6 to 12 hours** before evisceration.

RELATED SECTIONS OF TIPM

05-A-04 Livestock Yards & Holding Pens
06-A-10 AM Care of Animals - General
06-A-11 Time Requirements for AM Inspection

SUBJECT: Poultry - Catching, Loading & Transport	05-C-01
REGULATORY REFERENCES AR 203/2005 *Animal Protection Regulation* Sections 11, 12(1), 12(3), 12,(4), 12(5) & 14(2)	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

While a "Licensed Meat Facility" (abattoir) may, or may not, be directly responsible for catching, loading, or transportation, of poultry, to the abattoir, operators often have to deal with birds that have been stressed, injured, or otherwise compromised, during transportation.

Note: MI – 40, the Meat Inspection Branch Directive on Compromised Animals, requires Meat Inspection Branch (MIB) Inspectors to report any contraventions to their Regional Supervisor and/or Area Manager who in turn will decide whether the issue is serious enough to investigate further and possibly report to the S.P.C.A.

The abattoir operator has a responsibility to notify transporters about any contraventions of AR 203/2005 that may be observed when transport vehicles arrive at the abattoir.

Careless, or rough, catching and loading of birds is a common cause of injury.

Note: Not only are injured birds more susceptible to suffering adverse effects during transportation many injuries also result in the loss of marketable product.

Careless and rough handling is also inhumane.

To minimize stress, birds must be protected from adverse temperature variations during transportation.

Note: Extremely hot, or cold, conditions can have equally devastating effects.

The intent of this document is to provide an outline of what are considered to be acceptable methods of catching, loading and transporting poultry.

Note: The methods outlined in the Objective/ Outcome section of this document also apply to the unloading of birds at the facility.

OBJECTIVE/OUTCOME

Birds will be received in good condition with minimal injury, or stress.

The following methods and procedures are considered to be "Common Industry Practice".

Catching and Loading

1. The catching and loading crew will be knowledgeable and skilled in the proper methods of catching and loading poultry.

   Note: Proper training and experience are critical factors in the development of knowledgeable and skilled personnel. Training is the responsibility of the employer.

2. Piling up in corners will be avoided.

   Note: Methods of reducing piling up include:

   a) reducing the lighting intensity in the barn;

   b) using blue lights;

   c) corralling birds with a net, or a screen, at the loading door

3. Birds will be caught in a proper manner.

   Note: The proper way to catch a bird is by the legs. Catching them by the **wings** or the **neck** is **not acceptable**.

4. An appropriate number of birds will be caught at the same time.

   Note: The number of birds that can be caught safely, at the same time, varies with the size of the birds. A maximum of 5 birds per hand is recommended for birds weighing up to 4 pounds each.

5. Only properly designed crates that are in a good state of repair and cleanliness will be used.

6. An appropriate number of birds will be placed in each crate.

   Note: The number of birds that can be put in a crate, or bin, depends on the size of the birds and weather conditions at the time of transport.

   There should be enough space to allow all birds to rest on the floor at the same time.

   The following maximum total weights are recommended for winter transportation:

   a) chickens: 63 kg/m^2 (139 lb/10 ft^2);

   b) broiler turkeys: 98 kg/m^2 (216 lb/10 ft^2);

   c) heavy hens: 98 kg/m^2 (216 lb/10 ft^2);

   d) heavy toms: 98 kg/m^2 (216 lb/10 ft^2)

   These weights should be reduced during the summer months.

   When temperatures exceed 32^0 C (90^0 F), birds should not be loaded unless they are scheduled for same-day delivery.

   On hot summer days, turkeys should not be loaded at midday.

7. Loaded crates will be moved onto the transport vehicle in a manner that doesn't cause injury, or undue stress, on the birds.

   Note: Loaded crates should be moved smoothly, and in a horizontal position. They should not be thrown or dropped.

   If a conveyor is used the conveyor angle should prevent tilting of crates at an angle that causes the birds to pile up.

Transportation

1. Transport drivers will be aware of their responsibility to provide proper care of poultry during transportation.

2. Protection, from adverse weather conditions, will be provided.

   Note: Covers should be used to protect birds from wind, rain and adverse weather conditions. The covers should be adjusted to allow the birds to warm up, or cool off, as required.

3. Poultry will be transported to the abattoir immediately after loading.

4. Birds will not be required to sit in a parked vehicle for more than two hours unless there is protection from adverse weather conditions.

   Note: Acceptable transportation temperatures are between 5^0 C (42^0 F) and 30^0 C (86^0 F). In cases of extreme temperatures transportation may not be advisable.

5. The transportation vehicle and/or containers will be designed to minimize injury or sickness during transportation.

   Note: The design of the vehicle and containers (crates) should ensure that birds:

   a) are not exposed to exhaust fumes;

   b) are completely contained within the crates;

   c) have adequate space to lie down comfortably;

   d) are not exposed to any sharp protruding objects

6. Transportation vehicles and containers will be kept clean.

   Note: The vehicle and containers should be clean at the time of loading and they should be cleaned and sanitized as soon as possible after they have been unloaded.

RELATED SECTIONS OF TIPM

05-C-02 Poultry Receiving & Handling

05-B-01 Animal Transport Vehicles - Design & Maintenance

SUBJECT: Poultry Receiving & Handling	05-C-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 21	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

In addition to the ethical and moral requirement of handling animals in a manner that will not cause any undue suffering there is also a legislated requirement to do so under section 21 of AR 42/2003.

Note: Section 21(2) of AR 42/2003 also requires the operator of a "Licensed Meat Facility" (abattoir) to ensure that animals arriving at an abattoir be provided with immediate shelter. This implies that they must be unloaded from the transport vehicle as soon as possible after arrival.

Implementation of the measures outlined in this document will minimize the stress and intentional, or unintentional, abuse of poultry during unloading, holding and eventual movement to slaughter.

OBJECTIVE/OUTCOME

Birds will be handled in a humane manner from the time of arrival until slaughter.

Arrangements will be made for holding and monitoring birds upon their arrival.

Live birds will be protected from adverse weather conditions while waiting to be unloaded.

Note: Forced-air circulation, or other means of ventilation, must be provided, as required, to prevent live poultry from overheating.

Crates of live birds will be moved smoothly and kept in a horizontal position while being unloaded, or moved.

Note: If a conveyor is used to unload crates, of live birds, the angle should kept at a level that prevents the birds from piling up.

Crates containing live birds **must not be thrown or dropped**.

Care will be taken, to avoid injury, to birds, as they are removed from transport crates, or liner trucks.

Note: Birds must **never** be **lifted by the head, neck, or wings**.

Birds that escape during unloading should be caught as soon as possible.

Reduced lighting levels, in the receiving area, will help keep birds calm.

Care will be taken to properly hang birds on shackling devices.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Poultry Receiving & Handling"** will be met when*:*

1. Up-to-date written **"Poultry Receiving and Handling Procedures"** are on file.
   Note: These procedures should be specific to the abattoir.
2. On site observations demonstrate that the **"Receiving and Handling of Poultry Procedures"** are being implemented.
   Note: Implementation of these procedures will ensure that birds are handled in a humane manner.

RELATED SECTIONS OF TIPM

05-B-01 Animal Transport Vehicles - Design & Maintenance
05-B-02 Delivery & Prompt Unloading
05-B-04 Timely Slaughter
05-C-01 Poultry Catching, Loading & Transport

SUBJECT: Poultry Bleeding & Stunning Practices	05-C-03
REGULATORY REFERENCES: AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 21, 22 & 22.1	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2011 **Page 1 of 2**

RATIONALE

Every "Licensed Meat Facility" (abattoir) has an ethical, moral and legal requirement to conduct slaughter in a humane manner.

Note: The legal requirements, for humane slaughter, are found in Sections 21 22 and 22.1 of AR 42/2003.

Section 21(1) requires abattoir operators to minimize pain and distress on animals (including birds) during slaughter.

Section 22 mandates the need to keep stunning equipment in good repair.

Section 22.1 outlines all of the other conditions of humane slaughter.

Humane slaughter procedures:

1. Prevent needless animal suffering.
2. Improve the quality of meat products.

Note: To be considered humane, slaughter methods must cause an immediate state of unconsciousness that is maintained until death occurs from blood loss.

Efficient and humane stunning requires:

1. Suitable restraint.
2. Trained and knowledgeable staff.
3. Suitable equipment that is in a good state of repair.

OBJECTIVE/OUTCOME

All poultry will be stunned and bled in a humane manner.

Note: To meet the humane slaughter requirements of AR 42/2003 and prevent undue suffering, all poultry will be stunned in a manner which causes immediate unconsciousness and ensures that this state of unconsciousness is maintained until death occurs from the loss of blood.

It is "Common Industry Practice" to use electrocution as the method of choice for stunning poultry.

All personnel involved with stunning and bleeding will be properly trained in the required procedures.

Sufficient current will be applied to ensure adequate results.

Note: An amperage of anywhere between 0.1 to 1.0 maximum is generally sufficient

for poultry.

Lower cost stunners (e.g. knives) are generally effective with amperages of between 0.25 to 0.5 amperes with a voltage adequate to ensure the amperage requirements are met (usually between 100-400 volts.)

Newer technology stunners (e.g. water baths/plate) are generally effective with amperages of between 0.13 to 0.19 amperes with a voltage of between 17-30 volts. Salt is recommended to be added to improve consistency.

Birds will be observed following application of the electric current to ensure adequate results.

Note: It is expected that birds should be rendered insensible 99% of the time after the first electrical stun.

A rigid body with an arched neck and tucked in wings, with the head held vertically, is expected in a proper stun. Poultry will be rigid during the stun, and may show detectable constant, rapid body tremors, but the bird's body is expected to be loose and there is to be no rhythmic breathing.

As poultry bleed out, the head will start to drop, the eyelids may close, and the wings will slowly come away from the body. A proper bleed out must show a constant stream of blood, and the bird is generally bled out within 45-90 seconds.

The operator ("kill" boss) will cease stun and bleed operations and take immediate corrective action when poultry is not being effectively stunned and/or bled.

Note: An additional abattoir employee should be assigned to the killing station and given the responsibility of killing, by hand, any bird that has not been properly stunned or that has regained consciousness.

A **live**, or conscious, bird **must not** be allowed to **enter the scalding vat**.

Bleeding and stunning equipment will be properly maintained.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Stunning & Bleeding Practices"** will be met when*:*

1. Up-to-date written **"Poultry Dressing Procedures"** are on file.

   Note: These procedures must:

   a) be specific for the abattoir;

   b) include safe and humane stunning and bleeding practices

2. The written **"Preventative Maintenance Procedures**", for the abattoir include stunning and bleeding equipment.
3. **"Preventative Maintenance Records"** are on file.

   Note: These records should show:

   a) that stunning and bleeding equipment is monitored regularly;

   b) details on any corrective actions that were required and instituted

4. On site observations demonstrate that poultry are being stunned and bled in an

acceptable and humane manner.

RELATED SECTIONS OF TIPM

03-C-04 Preventative Maintenance Procedures - Records of
05-B-06 Stunning & Bleeding Practices
07-B-06 Dressing Procedures - Poultry

SUBJECT: Animal Welfare Audits - Red Meat Abattoirs	05-D-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 21, 22 & 22.1	**Initial Release** Sept 1, 2009 **Page 1 of 9**

RATIONALE

Section 21(1) of AR 42/2003 imposes a legal requirement, upon the operator of a "Licensed Meat Facility (abattoir) and abattoir personnel, to minimize pain and distress in any animal being prepared for, or being slaughtered.

Note: In addition to this legal requirement there is also a moral and ethical requirement to handle animals in a humane manner.

Mishandling of animals may be intentional, or unintentional. **Intentional abuse will not be tolerated**.

Note: Un-intentional abuse can be prevented through the training of abattoir personnel to ensure they have sufficient knowledge about animal behaviour patterns so that they can be moved with a minimum of frustration, both for the animals and the animal handlers.

The **Meat Inspection Branch** (MIB) of Alberta Agriculture and Rural Development (ARD) is fully committed to animal welfare and **will conduct** regular **"Animal Welfare Audits"**.

The intent of these audits is to promote continuous improvement of animal welfare through the observation of and measuring various objective indicators in order to correct any problems that may exist.

Note: **"Animal Welfare Audits"** have three components:

a) Animal Handling & Care (Core Criteria)
b) Condition of the Handling Facilities in the Abattoir
c) A General Questionnaire

Objective criteria, relating to animal handling and the condition of facilities will be assessed during an on site visit. The intent of the general questionnaire is to gather supplementary information about the abattoir.

The purpose of this document is to provide information on the conduct of **"Animal Welfare Audits"**.

OBJECTIVE/OUTCOME

Regular **"Animal Welfare Audits"** will be conducted at the abattoir.

Note: The MIB will determine the frequency of the audits. Normally there will be **partial** audits conducted each year. At least **one** of these **will deal with animal welfare**.

There may be a **greater frequency of "Animal Welfare Audits"** in abattoirs with animal welfare **issues in the past**.

Under ideal conditions the following "**Core Criteria**" **for the handling of animals** will be met:

1. All animals will be rendered insensible with the first shot, or application of an electric stunner.

Note: All abattoirs should strive to meet this ideal but it is recognized that 100% success is not possible. There is a small allowance, in the audit criteria, for not always meeting this ultimate ideal.

It is critical that all animals be observed for signs of effective stunning and if there is **any indication of sensitivity** the **animal** should be **re-stunned immediately**.

Signs of a properly stunned animal include the following:

a) a loose floppy neck and a head that hangs right down;

Kicking of the legs is not a sign of an improperly stunned animal. This is a sign that the lower nerve centers, in the spinal cord, responsible for automatic reflex actions, are no longer being controlled by the brain.

It is normal for muscle spasms to cause some animals to flex their neck immediately after stunning but the neck should be loose and floppy within 20 seconds. If flexing continues the eye reflexes should be checked for signs of sensitivity.

Continuous kicking movement in an electrically stunned animal is a sign of insufficient amperage, or poor contact.

b) a straight and limp tongue;

Stiff curling of the tongue, or moving of the tongue in and out, is indications of at least partial sensibility. In a properly stunned animal the tongue will hang out of the mouth and it will be straight and limp.

c) hanging head and straight back and a limp tail when hung on the rail;

When a properly stunned animal is hung on the rail its back will be straight and the head will hang straight down.

There must not be any arching of the back or attempts to lift the head. These are both signs of what is called a righting reflex (attempt to get up). **Momentary flopping** of the head is **not** a **righting reflex**.

d) open eyes with a blank stare;

This effect should be immediate when a bullet, or captive bolt, is used.

With electrical stunning the animals will clamp its eyes shut briefly then they should relax into a blank stare.

e) loss of blink and eye preservation reflexes;

Animals that are **shot correctly**, with either a bullet, or captive bolt, **will not blink**. Rolling back of the eyes and nystagmus may be a sign of partial sensitivity. Nystagmus is an eye movement where the eye gradually moves in one direction then suddenly snaps back in the opposite direction.

It is advisable to observe electrically stunned animals, particularly pigs, rather than indiscriminately poking at the eyes. If a pig has a natural blink (where the eye closes and then re-opens) it has not been stunned properly. Nystagmus is not a sign of regained sensitivity in electrically stunned animals particularly those stunned with frequencies higher than 50 or 60 cycles.

Vibration of the eyelids is an indication of a poor stun with a captive bolt pistol but is not a sign of sensitivity in animals stunned electrically.

f) loss of rhythmic breathing;

Gasping is a sign of a dying brain and is acceptable. Twitching of the nose (like a rabbit) might be a sign of partial sensibility.

g) lack of vocalization;

Vocalization is defined as the making of sounds that are normal for the species, e.g. a squealing pig, a bleating lamb, etc. Any vocalization is a sign of sensitivity.

h) lack of response to external stimuli;

In a properly stunned animal there will be no reflex response to actions such as pinching the nose, touching the eyeball, making contact with hot water, etc.

Auditors will use the following **criteria to evaluate stunning**:

Captive Bolt or Rifle

a) Was the animal rendered insensible with a single shot?

Miss-firing, or shots in the air, with pneumatic units, are not counted but if the operator double stuns the animal the effectiveness of the first shot is the one that will be assessed.

b) Is the captive bolt or caliber of the bullet, appropriate for the size of animal being stunned?

c) Are the eyes completely relaxed and wide open within 15 seconds of stunning?

Electrical Stunning

a) Are the voltage and/or amperage settings adequate to cause immediate unconsciousness as soon as the electrodes are energized?

A minimum of 1.25 Amps is generally required for market hogs and 1.00 for sheep.

Broken backs and blotchy hemorrhages (bleeding) in the muscle tissues may result if the voltage and/or amperage are too high.

Electrical Stunning will render the animal unconscious either by causing a loss of consciousness, from current passing through the brain, or from a lack of oxygen from stopping the heart.

To stop the heart the current must pass through the body. This is accomplished by placing one electrode on the body and the other on the forehead, or side of the head, or top of the head, or in the hollow directly behind the ears.

To make the current pass through the brain, causing a grand mal seizure (convulsion), there must be sufficient amperage and the electrodes must be placed in one of the following ways:

i. one on each side of the head;
ii. one on the top of the head and the other on the bottom of the head;
iii. one on the top of the head and the other on the neck in the hollow behind the ears;
iv. one under the jaw and the other on the back of the neck

The electrodes must not be placed on the same side of the head and neck, or jaw, because the current will bypass the brain.

b) Were the tongs, or wand, properly applied to the animal?

Electrodes must be placed firmly on the animal before they are energized. They must not be applied to sensitive areas of the body such as the eyes, inside the ears, in the rectum, etc.

"Hot Wanding", which is the application of energized electrodes, should be discouraged because poor contact is often made and the animal suffers a shock that causes pain and distress and in most cases vocalization.

c) Does the stunning effect last until the animal has been bled out?

Electrical stunning does not damage the brain physically so the animal could regain consciousness if bleeding is delayed.

2. Animals on the rail will not show any signs of sensibility (consciousness).

Note: All animals should be observed, from a distance, for signs of sensibility**.**

As stated in the previous section the most important signs indicating proper stunning are a floppy head, tongue hanging straight down, back and head hanging straight down, and no arching of the back.

Animals showing any **signs of sensibility** must be **re-stunned immediately**. It is absolutely essential that procedures such as shackling, hoisting, skinning, head removal, etc. be delayed until the animal is completely insensitive.

As an animal regains sensitivity the following signs will appear in order:

a) return of eye reflexes;

Touching the cornea (surface of the eyeball) will cause a sensitive animal to blink. This is called the corneal reflex.

Touching the edge of the eyelids will also cause a sensitive animal to blink. This is called the palpebral reflex.

b) return of rhythmic breathing;

On occasion rhythmic breathing may come back before any of the eye reflexes come back. This is a primary indication of poor stunning.

c) spontaneous blinking;

Here we are talking about an animal that makes normal blinking movements without stimulation of the palpebral, or corneal, reflexes.

d) response to a painful stimulus;

The presence of a pain response during any dressing procedure is a clear indication that the animal is sensitive.

If there is any doubt, about the sensitivity of an animal, following the observation of other signs, a painful stimulus, such as a pin prick to the nose, should be administered to determine the state of sensitivity.

e) righting reflex;

Any attempt to get up is a clear indication that the animal is conscious.

On the rail the righting reflex is shown by arching of the back and bending of the neck in a manner that brings the head up and back.

f) vocalization

Vocalization is another clear cut sign of a sensitive animal.

3. There will be a short interval between stunning and bleeding.

Note: From a humane perspective the time between stunning and bleeding is not as critical in animals that have been stunned with a captive bolt, or a bullet. The severe and permanent physical damage to the brain will cause these animals to die without regaining consciousness. For this reason the stunning to bleeding time is not measured in an “Animal Welfare Audit” when this method of stunning is used.

There is no physical damage to the brain with electrical stunning thus the animal will return to consciousness unless it dies from being bled out.

For animals that are stunned with the electrodes only applied to the head bleeding should start within 20 seconds. Animals that have been put into cardiac arrest should be bled within 60 seconds.

In addition to humane considerations there are other reasons for prompt bleeding. Excessive stun to bleed intervals may cause dark cutters and other quality issues with the carcass.

4. Fewer than 3% of cattle, pigs, sheep, or alternative livestock will slip and less than 1% will suffer a fall.

Note: For audit purposes a slip is defined as a situation where the animal’s foot loses contact with the ground in a non-walking manner.

A fall is defined as a situation where the animal suddenly loses its upright position resulting in a part of the body, other than a limb, making contact with the ground.

Slipping and falling is usually caused by a combination of poor footing and too much excitement as animals are being moved.

During an audit animals will be observed during all phases of the operation including unloading, penning, movement through the chute system and while standing in the stunning box or pens. Observed slips and falls will be recorded.

5. There will be a minimal amount of vocalization.

   Note: In general less than 5% of pigs and 3% of ruminants should vocalize.

   Vocalization, by undisturbed animals, in their pens, or in the chute system is not counted.

   Vocalization is considered to be a sign of distress when it is associated with handling or in response to an injury.

   Multiple vocalizations, by the same animal, in a defined area, are only counted as one instance of vocalization.

6. There will be limited and judicious use of electric prods.

   Note: Electric prods should not be the primary tools used to move animals. Using a prod on **more than 25%** of animals is clearly **unacceptable**.

   Electric prods should only be used on stubborn animals. They should not be applied continuously, or repetitively, on animals that are not responding as expected. Only one jolt should be given at a time and then the animal should be given a chance to respond. Most animals will move ahead after being given a moment to respond. Excessive and/or continuous use only serves to cause panic and gets the animal so riled up that it doesn't know how it is supposed to respond.

   The **repeated use of paddles**, sticks, or other non-electrical instruments, in a forceful, driving manner, applied directly on the animal, is also considered **unacceptable**.

7. There will be no willful acts of abuse.

   Note: Willful acts of abuse are totally unacceptable and will be addressed with immediate corrective action.

   Examples of willful acts of abuse include, but are not limited to:

   a) dragging a conscious animal;
   b) applying prods to sensitive parts of the animal;
   c) excessive use of prods;
   d) hitting animals with various instruments;
   e) slamming gates on livestock;
   f) purposefully driving livestock on top of one another;
   g) hoisting sensible animals;
   h) lifting sheep by the wool or hide

8. Animals being held for more than 24 hours must have access to feed and water.

   Note: It is desirable for animals to have access to clean drinking water at all times while in the holding pens.

The **Facility Criteria** will meet the following requirements:

1. The unloading facilities will be of suitable design and maintained in a manner that allows for the safe handling of animals with minimal opportunities for injury to the animals.

   Note: There should not be any gaps between the deck of the transport vehicle and the unloading dock.

   The first part of the unloading dock should be level. In other words animals should not have to move onto an inclined plane immediately upon leaving the transport vehicle.

   The incline will not be greater than 20 to 25^0. The less slope the better.

   Inclines should have cleats, or there should be steps, to prevent slipping and falling. For adjustable ramps a spacing of 20 cm (8") is recommended between the cleats.

   Concrete stepped inclines provide the best traction for livestock. For cattle the steps should have a 30 to 45 cm (12 to 18") tread and an 8 to 9 cm (8") rise. For hogs the tread may be reduced to 25 cm (10") and the riser to 6cm (2½").

2. There will be sufficient space in the holding pens for the number of animals.

   Note: Animals should not have to remain on the transport vehicles for lack of space in the holding pens.

   Animals should only take up 75% of available space in each pen. The following are offered as guidelines:

   a) 1.87 sq meters (20 sq ft) for each 550 kg (1,200 lb) ruminant;

   b) 0.55 sq meters (6 sq ft) for each market hog;

   c) 1.03-1.12 square meters (11-12 sq ft) for sows;

   d) 3.74 sq meters (40 sq ft) for boars

   There should be enough pens to allow separation of incompatible animals, e.g. separation of young from old, aggressive animals from docile animals, etc.

3. There will be non-slip flooring throughout the animal handling area.

   Note: This is required to prevent falls and possible crippling injuries.

4. There will be smooth edges and surfaces on all gates and walls throughout the animal handling area.

   Note: Sharp edges (e.g. angle iron) and small diameter piping will cause bruises. Round pipes with a diameter of more than 8 cm (3") are less likely to bruise.

   Protruding bolts and sharp metal must be eliminated.

   Gate tracks should be recessed into the wall of the chute.

   There should be padding on the bottom edge of vertical sliding gates. They should also be counter weighted. Cut tires or belting provide sufficient padding.

5. Chutes will be properly illuminated.

    Note: Proper lighting will actually attract animals into a chute.

    The front area of the chute or the entire chute should be lit.

    Light should not glare directly into the eyes of an approaching animal.

6. Visual distractions, for the animals, will be minimized.

    Note: Examples of distractions that will cause animals to balk if they are in the way of the animals include:

    a) puddles of water;
    b) cups;
    c) pieces of paper;
    d) shadows;
    e) drains;
    f) a pipe running across the floor of a chute or alley;
    g) hanging and flapping objects, e.g. chains

7. Crowding pens and chutes will have solid sides and rounded corners.
8. Noise will be kept to a minimum in animal handling areas.

    Note: Noises that are particularly irritating to animals include:

    a) high-pitched motor and hydraulic system noise;
    b) banging;
    c) reverberation;
    d) hissing air;
    e) yelling and shouting

Abattoir personnel will be trained in and employ the principles of good animal handling methods.

Note: Training in the proper handling of compromised animals (e.g. downers) should be provided.

There will be written protocols for the handling of animals.

Note: Abattoir personnel must be aware of and follow these policies, or protocols, particularly those dealing with the handling of compromised animals.

Personnel doing the stunning will be proficient.

Note: A proficient stunner will

a) be successful on the vast majority of stunning attempts;
b) constantly monitor stunned animals for incomplete stunning, or return to sensitivity;
c) promptly re-stun any animal requiring it

Stunning equipment will be properly maintained.

Regular inspections of animal holding areas will be conducted.

Note: It is recommended that the animal holding area be checked at least once a week and that prompt action be taken to deal with anything that might cause an animal to be injured or uncomfortable.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Animal Welfare Audits - Red Meat Abattoirs"** will be met when:

1. Written **"Animal Welfare Procedures"** have been developed and implemented.
2. Responsible abattoir personnel have been properly trained in the humane handling of the types of animals handled at the facility.
3. The abattoir has successfully passed an **"Animal Welfare Audit"**.

   Note: Any noted deficiencies will be corrected in time for the next audit or as directed.

4. On site observations demonstrate that:

   a) animals are handled and slaughtered in an acceptable humane fashion;

   b) animal handling facilities are kept in a good state of repair

RELATED SECTIONS OF TIPM

03-H-01 Audits - General
03-H-02 Annual Audits
03-H-03 Partial Audits
05-A-04 Livestock Yards & Holding Pens
05-A-05 Stunning & Bleeding Area
05-A-06 Segregation of Animals
05-B-01 Animal Transport Vehicles - Design & Maintenance
05-B-02 Delivery & Prompt Unloading
05-B-03 Handling of Live Animals in the Abattoir
05-B-04 Timely Slaughter
05-B-05 Sick or Non-ambulatory Animals
05-B-06 Stunning & Bleeding Practices

Attachment - TIPM 05-D-01

Agriculture and Rural Development

Meat Inspection Branch
Regulatory Services Division

Animal Welfare Audit Report for Red Meat Abattoirs

Name of Facility	Region
Facility Number	Date
Plant Representative	Phone
Slaughtered Species	Fax

Audit History

	DATE	AUDITOR	
Current			

To ensure animal welfare in abattoirs, a number of objective criteria can be utilized. By regularly measuring welfare indicators, problems can be detected and continuous improvements can be achieved.

Alberta Agriculture and Rural Development (ARD) is committed to animal welfare. When any criteria is not acceptable, the plant operator must take steps to correct the problems in a timely manner. A follow-up audit may be performed to evaluate corrective actions.

Please review Welfare Audit Checklist for More Detail

Ref No	Observations	Expected Correction Date	Status or **Date** Completed

Comments

Plant Representative		Branch Auditor	
Date		Resident Inspector	
Reviewed by		Date	

P2 Attachment - TIPM 05-D-01

Welfare Audit Checklist

Part 1 - Core Criteria

Item	The following critical control points are assessed while observing handling and slaughter.	
C 1	**Effective Stunning**	**Acceptable or Unacceptable**
	Animals are stunned correctly on the first attempt. Cattle and alternative livestock should be rendered insensible with one shot or first electrical stun at least 95% of the time. Pigs and sheep should be rendered insensible 99% of the time after the first try.	
Comments		
C 2	**Bleed Rail Insensibility**	
	Any sensible animal on the bleed rail is unacceptable. It is critical that animals showing signs of a return to sensibility are re-stunned immediately. Stun to bleed time should be as short as possible. All animals must be completely insensible before procedures such as scalding, skinning, head removal or dehorning.	
Comments		
C 3	**Slipping and Falling**	
	No animals observed should slip or fall anywhere in the facility during all phases of handling. A slip is when a knee touches the ground or a foot loses contact with the ground.	
Comments		
C 4	**Vocalization**	
	Animals which moo, squeal, or bellow during handling will be scored. Vocalization should be minimal while individual animals are in the chute or entering the restrainer. Vocalization in sheep is not scored.	
Comments		
C 5	**Electric Prod/ Instrument Use**	
	Electric prods should be used as a last resort. Up to 25% is acceptable for cattle, pigs, sheep and alternative livestock.	
Comments		
C 6	**Willful Acts of Abuse**	
	Any willful act of abuse, like dragging a conscious animal, applying prods to sensitive parts of the animal, slamming gates on livestock, picking up sheep by the pelt/wool, purposefully driving livestock on top of one another, or hitting or beating an animal is not acceptable.	
Comments		
C 7	**Access to Water and Feed After 24 hours**	
	Do animals in all holding pens have access to clean drinking water and feed after being held for 24 hours?	
Comments		

Section 2 - Facility Criteria

Item	The following infrastructure features will be observed at each provincial plant.	
F 1	**Unloading Area** Is the unloading area adequate for the operations of the facility?	
	Comments	
F 2	**Stocking Density and Condition of Holding Pens** Pens should be only 75% full. Are there adequate pens to allow separation for animals for humane considerations? (Examples, boars, cripples, immature animals) Are pens kept clean and dry? Is bedding provided if animals are held? Are animals sheltered from the elements?	
	Comments	
F 3	**Non Slip Flooring** Does the plant have non-slip flooring? Non slip flooring is essential to prevent falls and crippling injuries.	
	Comments	
F 4	**Smooth Edges and Surfaces** Gates, fences and chutes should have smooth surfaces to prevent bruises.	
	Comments	
F 5	**Slide gates in Chutes** The use of vertical slide gates should not cause harm or injury of animals. The gate tracks should be recessed into the chute wall. The gates should be counter-weighted.	
	Comments	
F 6	**Lighting** Is lighting being used to attract animals into chutes? Light should illuminate the chute up ahead or illuminate the entire chute area. It should never glare directly into the eyes of approaching animals.	
	Comments	
F 7	**Visual Distractions** Are visual distractions at animal level present?	
	Comments	
F 8	**Sides of Chutes and Crowd Pens** Crowd pens (and gate), and drive chutes should have solid sides.	
	Comments	
F 9	**Noise Reduction** Animals are very sensitive to noise. Is the noise level reduced as much as possible?	
	Comments	

P4 Attachment - TIPM 05-D-01

Section 3 - General Questions

Item	The following questions will be helpful in gathering information about the facility. Simple yes or no answers are required.	
Q 1	Does the facility have a training program for its employees in the principles of good animal handling?	
	Comments	
Q 2	Does the facility have a written protocol or widely understood policy for handling non-ambulatory animals?	
	Comments	
Q 3	Are facility personnel trained in handling non-ambulatory animals?	
	Comments	
Q 4	Does the facility provide training to stunner operators to ensure proper equipment use and stunning efficacy? Are the stunning procedures monitored?	
	Comments	
Q 5	Does the facility have a written procedure or widely understood protocol to handle a sensible animal on the bleed rail? Are the workers trained in the protocol?	
	Comments	
Q 6	If mounting behaviors were observed, are animals that are chronically mounted removed from the pen?	
	Comments	
Q 7	Are non-electrical devices the primary tool used to move livestock?	
	Comments	
Q 8	Does the facility have a protocol for maintenance of stunning equipment?	
	Comments	
Q 9	Does the company perform weekly inspections of the livestock handling areas and equipment for damage or sharp protrusions that may injure animals?	
	Comments	
Q 10	Does the company have an emergency management plan for livestock?	
	Comments	

SUBJECT: Animal Welfare Audits - Poultry Abattoirs	05-D-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 21, 22 & 22.1	**Initial Release** Sept 1, 2009 **Page 1 of 6**

RATIONALE

Section 21(1) of AR 42/2003 imposes a legal requirement, upon abattoir operators and personnel, to minimize pain and distress on animals, including poultry, while they are being slaughtered or prepared for slaughter.

Note: In addition to this legal requirement there is also a moral and ethical requirement to handle birds in a humane manner.

Mishandling of birds may be intentional, or unintentional. **Intentional abuse will not be tolerated**.

Note: Un-intentional abuse can be prevented with training of abattoir personnel to ensure they have sufficient knowledge about humane handling of birds

The **Meat Inspection Branch** (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD) is fully committed to animal welfare and **will conduct** regular **"Animal Welfare Audits"**.

The intent of these audits is to promote continuous improvement of animal welfare through the observation of and measuring various objective indicators in order to correct any problems that may exist.

Note: **"Animal Welfare Audits"** have three components:

a) Animal Handling & Care (Core Criteria)

b) Condition of the Animal Handling Facilities in the Abattoir

c) A General Questionnaire

Objective criteria, relating to the handling of birds and the condition of facilities will be assessed during an on site visit. The intent of the general questionnaire is to gather supplementary information about the abattoir.

The purpose of this document is to provide information on the conduct of **"Animal Welfare Audits"** in poultry abattoirs.

OBJECTIVE/OUTCOME

Regular **"Animal Welfare Audits"** will be conducted at the abattoir.

Note: The MIB will determine the frequency of the audits. Normally there will be **partial** audits conducted each year. At least **one** of these **will deal with animal welfare**.

There may be a **greater frequency of "Animal Welfare Audits"** in abattoirs with animal welfare **issues in the past**.

Part one (1) of the audit process consists of an evaluation of the following "**Core Criteria**":

1. **Stunning**

   Stunning will meet the requirement of rendering 99% of birds insensible with the first application of an electric stunner.

Note: It is critical that birds be observed for signs of effective stunning and if there is **any indication of sensitivity** they should be **re-stunned immediately**.

Visual evidence of a proper, or effective, stun is an arched neck and wings tucked in followed by complete relaxation, open eyes with a blank stare and loss of blink reflexes.

Birds showing any **signs of sensibility** must be **re-stunned immediately**.

It is absolutely essential for birds to be completely insensitive before entry into the scalding vat.

The stunning of at least **50 broilers**, or **foul** and at least **25 turkeys**, **ducks** or **geese** will be observed at **low volume abattoirs** (generally those located on a Hutterite Colony). At **high volume** abattoirs a minimum of **100 broilers**, or **foul** and **50 other types** of birds will be observed.

The same numbers will be observed in the evaluation of the next 4 criteria.

2. **Bleeding**

Following stunning the throats will be cut quickly and efficiently in a manner that induces a complete bleed out of the bird.

Note: For manual operations the bleeding knives must be sharp at all times.

To ensure efficient and effective operation of an automated throat slitting device the assembly must be adjusted frequently.

It is expected that a maximum of 2 out of 50 birds might miss the slitting machine thus back-up personnel must be situated immediately after the slitting machine to cut the throat of birds that are missed.

During the audit process the same number of birds will be observed as stated for high and low volume abattoirs as were observed for stunning.

3. **Scalding**

100% of birds will be bled out before entering the scalding vat.

Note: The entry of a single sensitive bird, into the scalding vat is totally unacceptable and will lead to failure of the audit.

4. **Crate Pick-up/Dumping, Bird Hanging**

The process of picking up loaded crates, removing, or dumping, of birds from them and hanging the birds on shackles will meet acceptable standards of humane care leading to minimal injuries and crate damage.

Note: Acceptable standards consist of:

a) keeping crates in a horizontal position when they are moved;
b) **not** throwing, or dropping the crates;
c) lifting birds out of the crate by grasping their legs rather than by their wings, or neck;
d) being gentle while hanging birds in shackles

5. **Carcass Inspection**

Carcasses will be evaluated for any evidence of dislocated, or broken legs, and wings.

Note: This evaluation provides a critical evaluation of the gentleness with which the birds were handled.

No more than 3% of birds (regardless of weight) should show these types of injuries.

Breaks and dislocations deemed to have occurred after the bird was dead will not be counted. When breaks, or dislocations, occur after the bird is dead there won't be any bleeding.

6. **Willful Acts of Abuse**

Willful acts of abuse will not be tolerated. If any are observed there will be automatic failure of the audit and corrective measures will be implemented immediately.

Note: Examples of willful acts of abuse include, but are not restricted to:

a) throwing birds;
b) kicking birds;
c) stomping on birds;
d) hitting, or beating, etc

Part two (2) of the audit process will consist of observing various aspects of catching, loading and transportation.

Note: Only some of the following categories will apply to every audit. For example it will be impossible to observe catching methods in an abattoir where the birds are trucked in from another location. Transportation is not a factor at Hutterite Colonies where the birds are stunned and bled in the barn then moved into the abattoir.

1. **Catching**

All birds must be caught in a manner that minimizes any chance of injury.

Note: Unacceptable practices include but are not restricted to:

a) Picking up too many birds. Only 2 to 5 birds (depending on size) should be picked up, in each hand, at a time.
b) Picking birds up by their wings, or necks.
c) Rough handling while placing birds in cages, or crates.

The use of nets, or a screen, to corral birds at the loading door is an effective method of minimizing injuries.

2. **Barn Lighting**

Barn lighting should be low, or blue bulbs should be used to prevent injuries from piling up.

Note: The ideal is to provide adequate illumination for humans but not for the birds.

3. **Cage Cleanliness**

   All cages must be clean before they are used.

4. **Ventilation**

   Cages must be positioned in the transportation vehicle, or trailer, in a manner that allows the movement of air into the cages located in the center of the load.

5. **Cage Protection**

   Birds must be protected from extremes of weather during transportation.

   Note: Covers should be used to protect birds from wind, rain and cold temperatures.

   Air temperatures should be maintained between 5^0 C (42^0 F) and 30^0 C (86^0 F).

   Protective covering must be used to prevent the temperature from dropping below 5^0 C.

   When temperatures exceed 30^0 C the truck has to be periodically moved a short distance, at a minimum speed of 30 km/hr. Alternatively the truck should be kept in the shade or in an area where the air is being circulated mechanically.

6. **Cage Maintenance**

   All cages must be designed, constructed and maintained in a manner that allows birds to be loaded, conveyed and removed without injury.

   Note: To be acceptable 95% of cages, or crates, must be in a good state of repair with no loose ends of wire, or broken plastic.

   Cages, or crates, must be constructed in a manner that provides adequate, uniform ventilation but prevents protrusion of heads, wings, or legs.

7. **Cage Stocking Levels**

   The number of birds in a cage, or crate, must be controlled so that there is room for all birds to lie down, at the same time, without piling up.

   Note: The number of birds that can be put in a crate will vary with the size of the crate and the size of the birds. Prevailing environmental conditions, at the time of transportation, are also factors.

   Loading of turkeys, at mid-day, on a hot day should be avoided and when temperatures exceed 32^0 C birds should not be loaded unless they are scheduled for same day delivery.

Part three (3) of the audit process will consist of observing the following aspects of live receiving and slaughter.

1. **Ventilation in the Holding Shed**

   There should be sufficient fans to ensure appropriate air movement during warm weather and there should be sufficient protection, from temperature extremes, during cold weather.

2. **Loose Bird Control**

   Loose birds must be put back into cages, or onto the kill line, in an expedient and gentle manner.

Note: This is required to ensure that birds are not injured by moving trucks, or other moving hazards.

3. **Birds Dead on Arrival (DOA)**

   The number of birds that are DOA must be within acceptable limits.

   Note: A maximum acceptable level is 0.5%.

4. **Lighting**

   There should be subdued lighting in the receiving area.

   Note: Birds will settle down better with subdued lighting.

5. **Bleed Time**

   A period of 90 to 120 seconds of bleeding time must elapse before birds enter the scalding vat.

   Note: The lower time is for smaller birds. This time lapse is essential to ensure that birds are completely bled out before entering the scalding vat. An incompletely bled bird could regain consciousness.

6. **Stunner/Electric Knife Function**

   All instruments used to stun and bleed poultry must be of an approved type and must be maintained in a manner that ensures they function properly.

   Note: Proper maintenance of approved equipment provides greater assurance that birds will be killed in a humane manner.

   The amount of current required will vary with the type of stunner, electric knife, or stunning cabinet in use. Generally a minimum of 120 miliamps of current is required for online stunners.

   Salinity concentrations, if applicable, must be maintained.

Part four (4) of the audit process consists of the following general questions:

Does the abattoir:

1. Have a training program, in the principles of good handling of live birds?

   Note: The purpose of this training is to ensure that responsible abattoir personnel understand how to properly handle live birds.

2. Provide training for stunner operators?
3. Have a written protocol for handling sensible birds on the bleeding rail?

   Note: It is important to know whether responsible personnel know what to do in this situation.

4. Have a protocol for monitoring and maintaining stunning equipment?
5. Have an emergency plan in place?

   Note: The purpose of this plan is to address the welfare of birds in the event of a mechanical or electrical failure leading to a shutdown, or extended stoppage of the line.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Animal Welfare Audits - Poultry Abattoirs"** will be met when:

1. Written **"Poultry Handling Procedures"** are on file.
2. Responsible personnel have been properly trained in the humane handling of poultry.
3. The abattoir has successfully passed an **"Animal Welfare Audit".**

   Note: Any noted deficiencies will be corrected in time for the next audit, or as directed.
4. On site observations demonstrate that:
   a) birds are handled and slaughtered in an acceptable humane fashion;
   b) crates are kept in a good state of repair

RELATED SECTIONS OF TIPM

03-H-01 Audits - General
03-H-02 Annual Audits
03-H-03 Partial Audits
05-A-04 Livestock Yards & Holding Pens
05-A-05 Stunning & Bleeding Area
05-A-06 Segregation of Animals
05-B-01 Animal Transportation Vehicles - Design & Maintenance
05-B-02 Delivery & Prompt Unloading
05-B-03 Handling of Live Animals in the Abattoir
05-B-04 Timely Slaughter
05-B-05 Sick or Non-ambulatory Animals
05-B-06 Stunning & Bleeding Practices

Attachment #1 - TIPM 05-D-02

Alberta Agriculture and Rural Development	Meat Inspection Branch Regulatory Services Division	Animal Welfare Audit Report for Poultry Abattoirs	
Name of Facility		Region	
Facility Number		Date	
Plant Representative		Phone	
Slaughtered Species		Fax	

Audit History

	DATE	AUDITOR	
Current			
Last:			

To ensure animal welfare in abattoirs, a number of objective criteria can be utilized. By regularly measuring welfare indicators, problems can be detected and continuous improvements can be achieved.

Alberta Agriculture and Rural Development (ARD) is committed to animal welfare. When any criteria is not acceptable, the plant operator must take steps to correct the problems in a timely manner. A follow-up audit may be performed to evaluate corrective actions.

Please review Welfare Audit Checklist for More Detail

Ref No	Observations	Expected Correction Date	Status or **Date** Completed
Comments			

Plant Representative		Branch Auditor	
Date		Resident Inspector	
Reviewed by		Date	

Part 1 Core Criteria

Item	The following critical control points are assessed while observing handling and slaughter.
C 1	**Effective Stunning** Birds are stunned correctly on the first attempt. Birds should be rendered insensible 99% of the time after the first electrical stun.
Comments	
C 2	**Bleeding** Bleed cut must be effective.
Comments	
C 3	**Scalding** Under no circumstances shall a live bird enter the scalder. There must be no uncut red birds. All birds that miss the bleed machine must be cut by the backup bleeder person.
Comments	
C 4	**Crate Pickup/Dumping, Bird Hanging** Crates must be lifted and moved from the trailers in a careful manner as not to injure the birds or cause damage to crates. When birds are removed from the crates, they must not be handled by the wings or neck. Birds should be hung in a gentle manner to prevent leg breakage.
Comments	
C 5	**Carcass Inspection** Monitor broken wings, broken or bruised legs, dislocated joints.
Comments	
C 6	**Willful Acts of Abuse** Any willful act of abuse, like throwing birds, stomping on birds, broken plant equipment that causes visible bird injury, or crushes them, or hitting or beating a bird, or putting live birds in the trash is not acceptable.
Comments	

Part 2 - Catching/Loading/Transportation

Item	The following features will be observed at catching and loading (if applicable).	
F 1	Catching Is catching causing injury to birds? It is recommended that catchers should handle no more than 2-5 birds depending on their size. Birds should never be caught or carried by their wings or neck.	
	Comments	
F 2	Barn Light Levels Are lighting levels in the barn reduced to aid in bird catching?	
	Comments	
F 3	Cage Cleanliness Are cages clean prior to being loaded?	
	Comments	
F 4	Ventilation Are cages placed on the trailer in a way to move air through the centre?	
	Comments	
F 5	Cage Protection Are cages adequately covered in the event of inclement weather, either hot or cold?	
	Comments	
F 6	Cage Maintenance Must have 95% of the chicken compartments in good repair. No loose wire ends or broken plastic parts.	
	Comments	
F 7	Cage Stocking Levels Birds have enough room to all lie down at the same time without being on top of each other.	
	Comments	

Part 3 - Plant Live Receiving/Slaughter

Item	The following infrastructure features will be observed at each provincial plant.	
P 1	Holding shed/Live Receiving Ventilation The holding shed/live receiving should have sufficient fans to ensure all birds are exposed to proper air movement in hot conditions and protected from the cold in adverse weather conditions.	
	Comments	
P 2	Loose Bird Control Loose birds are to be placed back into cages/kill line in a expedient and gentle manner.	
	Comments	
P 3	DOA's The number of Dead On Arrival birds at the plant should be minimized. A maximum of 0.5% is acceptable.	
	Comments	
P 4	Lighting The lighting in the live-receiving area must be subdued to allow the birds to settle during hanging.	
	Comments	
P 5	Bleed Time Bleed time should be adjusted to ensure proper bleeding prior to scalding. Time should be adjusted according to bird size. Typically this is 90-120 seconds.	
	Comments	

Section 4 - General Questions

Item	The following questions will be helpful in gathering information about the facility. Simple yes or no answers are required.	
Q 1	Does the facility have a training program for its employees in the principles of good animal handling?	
	Comments	
Q 2	Does the facility provide training to stunner operators to ensure proper equipment use and stunning efficacy? Are the stunning procedures monitored?	
	Comments	
Q 3	Does the facility have a written procedure or protocol to handle a sensible bird on the bleed rail? Are the workers trained in the protocol?	
	Comments	
Q 4	Does the facility have a protocol for the monitoring and maintenance of stunning equipment?	
	Comments	
Q 5	Does the facility have an emergency plan in place to address bird welfare in the event of a mechanical or electrical failure leading to a shutdown or extended line stoppage?	
	Comments	

SUBJECT: Operator Responsibilities re AM Inspection	06-A-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 40(1)(a), 40(2), 40(3)(a), 40(3)(b) & 64(1)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

"Ante-mortem" (AM) **means "before death"** therefore, in its' simplest terms the AM inspection is the visual inspection of animals before slaughter.

Note: AM and post-mortem (after death) inspections form the basis of scientific meat inspection.

AM inspections must be performed in accordance with section 40(1)(a) of AR42/2003.

Note: This section states "no animals will be slaughtered until such time as a meat inspector has completed a full ante-mortem inspection".

Four other sections of AR 42/2003 refer to the responsibilities of the operator of a "Licensed Meat Facility" (abattoir) in relation to AM Inspections.

1. Section 40(2) requires the operator to make arrangements with the inspector for the ante-mortem inspection.
2. Section 40(3)(a) requires the to make reasonable arrangements to expedite AM inspections.
3. Section 40(3)(b) requires the operator to give the inspector full cooperation and active assistance in the performing of an ante-mortem inspection where due to exceptional circumstances, such assistance is needed and the inspector requests it.
4. Section 64(1) requires the operator to assemble poultry so they are available for the ante-mortem inspection

Note: The purpose of this document is to outline, in general terms, the responsibilities that the abattoir operator and abattoir personnel have with respect to AM inspections.

OBJECTIVE/OUTCOME

Abattoir operators will recognize and assume their responsibilities, in regard to the AM inspection, by**:**

1. Conducting an initial screening of all animals upon their arrival at the abattoir.

   Note: This activity does not replace the AM inspection by a Meat Inspection Branch (MIB) Inspector in accordance with section 40(1)(a) of AR 42/2003 and in the case of poultry the operator still has to assemble the birds in the receiving area for the MIB Inspector [s. 64(1) of AR 42/2003].

2. Segregating animals that have any deviation from normal behavior, or appearance and placing them in designated (suspect) pens or areas upon their arrival.

   Note: This requirement does not apply to rabbits or poultry.

3. Recording the lot identity, the number screened and the number of suspects.

   Note: It is preferable to have the pre-screening findings recorded in the "Abnormalities Observed" column of the MIF - 13. The MIF - 13 is the AM Inspection Form that has been designed by the MIB.

4. Training of plant personnel in the ante-mortem screening methods.

   Note: All animals must be handled during unloading and the AM screening in a manner that minimizes any discomfort and/or excitement.

   A document entitled "Introduction to Ante-mortem for Plant Employees" is available from the MIB of Alberta Agriculture & Rural Development.

5. Provide assistance, to the MIB Inspector, as requested

RELATED SECTIONS OF TIPM

06-A-02 Facility Requirements for AM Inspections
06-A-03 Purpose & Conduct of AM Inspection - Red Meat Animals
06-A-04 AM Abnormalities in Red Meat Animals
06-A-05 Purpose & Conduct of AM Inspection - Poultry
06-A-07 AM Pre-screening by Abattoir Personnel
06-A-08 Suspect Animals on AM Inspection
06-A-09 AM Condemnations
06-A-11 Time Requirements for AM Inspection
06-A-12 Maintenance of Identity During the AM Inspection
06-A-13 Dispositions Following the AM Inspection

SUBJECT: Facility Requirements for AM Inspections	06-A-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 122/2009) Section 40(1)(a), 40(3)(a) & 64(1)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

"Ante-mortem" (AM) **means "before death"** therefore, in its' simplest terms the AM inspection is the visual inspection of animals before slaughter.

Note: AM and post-mortem (after death) inspections form the basis of scientific meat inspection.

A number of sections, in AR 42/2003 relate to the conduct of AM Inspections.

1. Section 40(1)(a) states "no animals will be slaughtered until such time as a meat inspector has completed a full AM inspection".
2. Section 40(3)(a) of AR 42/2003 states that "The abattoir operator shall make reasonable arrangements to expedite AM inspections" and
3. Section 64(1) states that "the operator of an abattoir shall assemble poultry that is to be slaughtered in the receiving area and make it available for AM inspection".

The purpose of this document is to outline, in general terms, the types of facilities that are needed to safely perform an AM inspection.

OBJECTIVE/OUTCOME

The live animal holding area in the "Licensed Meat Facility" (abattoir) will have the following characteristics to facilitate the AM inspection of **red meat animals**:

1. Good lighting.
2. Ample space & equipment to safely move and observe animals.

   Note: There must be sufficient room to move the animals around so they can be observed individually from each side.

   Facilities should be designed with the safety of the inspector, abattoir personnel and animals as a primary concern
3. Flooring of pens and alleyways provide good footing.
4. Freedom from sharp projections such as broken boards, nails, etc. in pens and alleyways.
5. Sufficient pens to allow for segregation of different species, ages and classes of animals.

   Note: It is impossible to properly observe smaller animals when they are mixed in with larger ones.
6. Pens to hold sick, injured or suspect animals.

In **poultry abattoirs** the following will be available:

1. Good lighting.
2. Good ventilation.
3. Enough space for the MIB Inspector to move around transport vehicles in order to see all crates.

RELATED SECTIONS OF TIPM

06-A-01 Operator Responsibilities re AM Inspection
06-A-08 Suspect Animals on AM Inspection
06-A-09 AM Condemnations
06-A-10 AM Care of Animals - General
06-A-12 Maintenance of Identity During the AM Inspection

SUBJECT: Purpose & Conduct of AM Inspection - Red Meat Animals	06-A-03
REGULATORY REFERENCE AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 40(1)(a)	**Initial Release** Sept 1, 2009
	Page 1 of 3

RATIONALE

"Ante-mortem" (AM) **means "before death"** therefore, in its' simplest terms the AM inspection is the visual inspection of animals before slaughter.

Note: AM and post-mortem (after death) inspections form the basis of scientific meat inspection.

AM inspections must be performed in accordance with section 40(1)(a) of AR42/2003.

Note: This section states "no animals will be slaughtered until such time as a meat inspector has completed a full ante-mortem inspection".

The **purpose** of this document is to **explain** the **reasons why and how AM inspections** should be **conducted**.

OBJECTIVE/OUTCOME

An AM inspection will be conducted on all red meat animals and ratites that are to be slaughtered in provincially licensed abattoirs.

Note: Because of their size, ratites (ostriches, emus and rheas) are handled the same as red meat animals.

The **purpose** of the AM Inspection will be to:

1. Identify animals that may require a more detailed post-mortem inspection.

   Note: The AM inspection may reveal signs that point to a problem with a particular organ or system. Forewarned with this knowledge, the inspector will conduct a more thorough inspection of that organ or system during the post-mortem inspection.

2. Reduce the chance of contamination on the kill floor.

   Note: Prohibiting the entry of animals, to the kill floor, that are obviously going to be condemned will totally eliminate any chance of cross contamination of other carcasses.

   Another method of preventing cross contamination is to hold diseased animals, still considered to be fit for slaughter, until the end of the kill.

3. Prevent the entry of dead or dying animals onto the kill floor.

4. Observe disease conditions that are not readily apparent on the post-mortem examination.

   Note: A number of disease conditions have no post-mortem changes. The most notable of these include diseases of the nervous system, metabolic diseases such as milk fever, and many poisonings. It would be impossible to detect any of these conditions without conducting an AM inspection.

5. Ensure humane treatment of animals during the pre-slaughter period.

   Note: Meat Inspection Branch (MIB) Inspectors are required to initiate corrective actions whenever they observe any instances of inhumane treatment of pre-slaughter animals.

6. Identify animals that are reactors or that may have been used in research projects, or trials.

Sufficient abattoir personnel will receive sufficient training to be able to assist MIB Inspectors in the conduct of AM inspections.

Note: A document entitled "Introduction to Ante-mortem for Plant Employees" is available from the MIB of Alberta Agriculture and Food.

All animals will be handled during unloading, AM screening and AM Inspection in a manner that minimizes any discomfort and/or excitement to the animal.

Designated abattoir personnel will:

1. Perform an initial AM screening of animals upon their arrival at the abattoir.

   Note: The practice of allowing livestock owners to drop off animals in the absence of any plant personnel should be discouraged however; if animals are delivered over night designated abattoir personnel will perform a screening examination immediately upon arrival at the plant.

2. Place any animals showing any deviation from normal behavior, or appearance in designated (suspect) pens, or areas, in order to segregate them from other animals.
3. Record the identity of the lot, the number of animals screened and the number of suspects.

   Note: It is preferable for this information to be recorded in the “Abnormalities Observed” column of the MIF - 13. The MIF - 13 is the AM Inspection form that has been designed by the MIB.

4. Provide assistance to the MIB Inspector as requested.

An MIB Inspector will:

1. Observe all animals at rest.
2. Move, or have abattoir personnel move, the animals out of the pen then back into the pen.

   Note: This is done so that the inspector can observe both sides of the animal. If there is sufficient room in the pen to move the animals one way then the other this part of the ante-mortem inspection can be done without removing the animals from their pens.

3. Direct that animals with abnormalities be placed in a separate holding pen, or area.

   Note: Generally animals with abnormalities will be segregated but at the discretion of the MIB Inspector those with very minor, or insignificant, abnormalities may not require segregation (e.g. minor cuts or abrasions”).

1. As deemed necessary place an animal in a chute, or other suitable restraint device, in order to conduct a closer examination including taking the animals temperature.

   Note: The MIB Inspector will consult with the Division Veterinarian, Area Manager, or Regional Supervisor, if necessary.

2. Identify animals that have been subjected to an AM inspection.

   Note: Animals may be identified with a marking crayon or a card could be placed on the gate to signify that they have been inspected. When dealing with small numbers of animals and only one MIB Inspector is on duty it may not be necessary to identify animals as having been inspected.

3. Record all findings on a MIF - 13.

   Note: Details about any animals that are found dead, on the AM inspection, must also be recorded on the MIF -13.

RELATED SECTIONS OF TIPM

06-A-02 Facility Requirements for AM Inspections
06-A-04 AM Abnormalities in Red Meat Animals
06-A-08 Suspect Animals on AM Inspection
06-A-09 AM Condemnations
06-A-11 Time Requirements for AM Inspection
06-A-12 Maintenance of Identity During the AM Inspection
06-A-13 Dispositions Following the AM Inspection
12-B-05 Safe Handling of Livestock

SUBJECT: AM Abnormalities in Red Meat Animals	06-A-04
REGULATORY REFERENCE AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 40(1)(a)	**Initial Release** Sept 1, 2009
	Page 1 of 5

RATIONALE

"Ante-mortem" (AM) **means "before death"** therefore, in its' simplest terms the AM inspection is the visual inspection of animals before slaughter.

Note: AM and post-mortem (after death) inspections form the basis of scientific meat inspection.

AM inspections are a requirement of section 40(1)(a) of AR42/2003, which states "no animals will be slaughtered until such time as a meat inspector has completed a full ante-mortem inspection".

The purpose of this document is to explain **WHAT** the inspector looks for during the AM inspection of red meat animals.

OBJECTIVE/OUTCOME

An AM inspection will be conducted on all animals presented for slaughter at provincially licensed abattoirs.

MIB Inspectors will look for the following during the AM inspection of mammals (red meat animals):

1. Respiratory (breathing) abnormalities;

Note: Common respiratory abnormalities include:

a) increased breathing rates;

Normal Breathing Rates	
Cattle	12-28
Sheep	12-24
Goats	12-20
Pigs	13-24

Factors that affect the respiratory rate include:

i) high environmental temperatures;

ii) excitement;

iii) fever;

iv) pneumonia;

v) emphysema;

vi) heart conditions

b) coughing;

c) abdominal breathing;

d) difficult breathing;

Difficulty during the inspiratory phase (breathing in) usually indicates a problem in the upper respiratory tract (nose, throat, or windpipe).

Difficulty during the expiratory phase (breathing out) usually suggests a problem in the lungs.

If the expiratory difficulty is severe enough the animal may grunt.

e) discharges from the nose;

f) runny eyes;

g) abnormal breathing patterns

Normally there are three equal phases to breathing. These phases are inspiration, expiration and a pause. As the rate of breathing increases the length of the pause will decrease, sometimes to the point of disappearing altogether.

Also, in a normal animal, both the chest and abdomen will move. If the animal only moves its' abdomen it likely has a painful congestion in the chest and when it only moves its' ribs it likely has pain in the abdomen.

2. Behavioral Abnormalities

Note: Common behavioral abnormalities include:

a) head pressing;

Head pressing suggests pressure on the brain. It is a common feature of lead poisoning.

b) walking in circles;

Circling could indicate a specific type of brain infection called Listeriosis or it could indicate a problem with the middle ear.

c) pushing against a solid object such as a fence or wall for extended periods of time;

d) charging at objects or people;

e) anxious facial expression;

f) dull facial expression;

Changes in behavior often indicate disease of the central nervous system (CNS). Generalized infections (fever & septicemia) may also cause changes in behavior.

CNS diseases will cause excitation or depression. These are the only two ways the brain can respond. Excitement may range from minor irritation to frenzy while depressive states may range from mild dullness to unconsciousness.

Diseases of the CNS may also cause changes in gait (way of walking). They may also result in involuntary muscular activity such as twitching, convulsions or paralysis.

With many CNS diseases there are minimal or no post-mortem changes thus re-enforcing the need for a thorough ante-mortem inspection.

g) excessive rubbing, scratching and licking;

Most of these types of behavioral changes have local causes (e.g. lice or mange) and usually has no effect on the suitability of the carcass.

h) abnormal gait (way of walking);

Changes in gait usually indicate of pain. Common causes include arthritis, footrot or injury. These changes may also indicate a nervous system abnormality (e.g. dragging a limb could be a sign of nerve paralysis).

i) Abnormal postures;

Examples of abnormal postures include:

i) standing humped up with the abdomen tucked in

ii) lying with the head turned back to one side

iii) standing with the front feet stretched out

iv) standing with the head extended (neck stretched out)

v) downers

"**Downers**" **are** defined as **animals that can't get up or can only stand with difficulty**, or for a very short time. They should be segregated so that they don't suffer undue pain or distress. Downers may be stunned and bled in the pen if moving would cause undue hardship.

3. Abnormal Discharges or Protrusions from Body Openings

Note: **Body openings** include:

a) ears

b) eyes

c) nose

d) mouth

e) anus

f) urinary and/or reproductive tract

Abnormal discharges generally consist of fluids causing:

a) runny eyes

b) runny nose

c) excessive salivation (slobbering)

d) diarrhea

e) fluid from the reproductive tract

Protrusions include:

a) prolapsed rectum

b) prolapsed vagina

c) afterbirth

d) tumors (e.g. cancer eye)

4. Changes in the Mucous Membranes

Note: Mucous membranes are the tissues that line body openings.

Examples include tissue:

a) under the eyelids

b) on the surface of the gums

c) inside lining of the cheeks

d) inside lining of the female reproductive tract

Changes in the mucous membranes may provide clues about the general health of the animal for example: pale membranes could indicate anemia (lack of red blood cells), yellow membranes (jaundice) suggest liver disease.

4. Conformational Abnormalities

Note: Animals should be bilaterally symmetrical. This means that the same structures on the left and right side of the body should be identical in size, shape, consistency, etc. To determine whether a conformational abnormality exists the part in question should be compared with its' counterpart on the other side of the body.

Examples of conformational abnormalities include swellings caused by:

a) abscesses

b) hematomas (blood clots)

c) accumulations of serum (clear yellow fluid)

d) swellings in the umbilical (navel, or belly button) area

e) bloated abdomen

f) edema (accumulations of watery fluid)

g) deformities of the jaw

h) cancer eye, etc.

5. Abnormalities of Color

Note: Abnormalities of color are not seen very often, but examples include:

a) black areas in the skin of pigs which could indicate a malignant tumor (cancer) called a melanoma;

b) red, or purple, discoloration of the skin in pigs which could indicate septicemia (blood poisoning);

c) red diamond shaped areas on the skin of pigs which indicate a disease called erysipelas;

d) dark blue cold areas, in any species, which is suggestive of gangrene.

6. Body Temperature

Note: It is recommended that MIB Inspectors take an animals temperature in the following situations:

a) Multiple abscesses;

b) Large single abscesses;

c) Arthritis in more than one joint;

d) All downers;

e) Animals with labored breathing.

Normal Body Temperatures	
Cattle	38.5^{0}C (101.5^{0}F)
Sheep	39.0^{0}C (102.0^{0}F)
Pigs	39.0^{0}C (102.0^{0}F)
Goats	39.5^{0}C (103.0^{0}F)

Animals are considered to be unfit for slaughter if their temperature is sustained over 40.5^{0}C (105.0^{0}F). A temperature is considered to be sustained if it does not go down after an hour. These animals should be referred for veterinary examination and possible treatment or they should be condemned.

RELATED SECTIONS OF TIPM

06-A-02 Facility Requirements for AM Inspections
06-A-03 Purpose & Conduct of AM Inspection - Red Meat Animals
06-A-08 Suspect Animals on AM Inspection
06-A-09 AM Condemnations
06-A-11 Time Requirements for AM Inspection
06-A-12 Maintenance of Identity During the AM Inspection
06-A-13 Dispositions Following the AM Inspection

SUBJECT: Purpose & Conduct of AM Inspection - Poultry	06-A-05
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 40(1)(a) & 64(1)	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

"Ante-mortem" (AM) **means "before death"** therefore, in its' simplest terms the AM inspection is the visual inspection of animals before slaughter.

Note: AM and post-mortem (after death) inspections form the basis of scientific meat inspection.

AM inspections must be performed in accordance with section 40(1)(a) of AR42/2003.

Note: This section states "no animals will be slaughtered until such time as a meat inspector has completed a full ante-mortem inspection". Birds are animals thus all poultry and ratites (emus, rheas and ostriches) are covered by this section

Section 64(1) also refers directly to the AM inspection of poultry. This section states that "the operator of an abattoir shall assemble poultry that is to be slaughtered in the receiving area and make it available for AM inspection".

The purpose of this document is to provide the reader with the reasons why and how AM inspections should be conducted in poultry.

OBJECTIVE/OUTCOME

An AM inspection will be conducted on all poultry including ratites (emus, rheas and ostriches) that are to be slaughtered in provincially licensed abattoirs including those located at Hutterite Colonies.

Note: Because of their size, ratites (ostriches, emus and rheas) are handled the same as red meat animals.

The **purpose** of the AM Inspection will be to:

1. Identify flocks with conditions that may render the birds unfit for human consumption.
2. Determine the general condition of the birds and thereby determine whether any groups require special handling such as scheduling them for immediate slaughter.

   Note: Birds exposed to temperature extremes, or inclement weather during transport, should be slaughtered immediately.

3. Identify birds that may require a more detailed post-mortem inspection.

   Note: The AM inspection also provides the MIB Inspector with additional information upon which to determine the proper disposition of the carcass.

4. Reduce the chance of contamination on the kill floor.

    Note: Preventing entry of sick, dead or dying birds, to the kill floor, that are obviously going to be condemned, will eliminate any chance of cross contamination of other carcasses.

    Holding diseased birds, which are considered to be fit for slaughter, until the end of the kill is another method of preventing cross contamination.

    A properly conducted AM inspection will identify flocks with conditions that are likely to result in heavy contamination during evisceration.

5. Observe disease conditions that are not readily apparent on the post-mortem examination.

    Note: There are no post-mortem changes in a number of disease conditions particularly diseases of the central nervous system (brain and spinal cord).

6. Identify flocks which may have been treated with antibiotics, or other drugs.

    Note: As part of the AM process the shipper is required to record a list of drugs that have been used and the withdrawal times that have been observed in a section of the MIF - 34 Flock Health Declaration and AM Inspection Report form.

7. Identify flocks suspected of having a reportable or exotic disease.
8. Ensure humane treatment of birds during the pre-slaughter period.

    Note: Meat inspectors are expected to initiate corrective actions whenever they observe any instances of inhumane treatment of pre-slaughter birds.

Sufficient abattoir personnel will receive sufficient training to be able to assist MIB Inspectors in the conduct of AM inspections.

Note: A document entitled "Introduction to Ante-mortem for Plant Employees" is available from the MIB of Alberta Agriculture and Food.

Designated abattoir personnel will:

1. Provide the consignor with a copy of the MIF – 34 Flock Health Declaration and Ante-mortem Inspection Report and ensure that all pertinent information is recorded on the first page of this document

    Note: The first page of the MIF – 34 has space for recording the following:

    a) number and type of birds submitted;
    b) time of feed and water withdrawal;
    c) owners name and address;
    d) disease history;
    e) medication history including drug withdrawal dates;
    f) producer declaration of accuracy;
    g) method of transportation;
    h) description of bio-security measures taken by the producer.

2. Segregate flocks with visible abnormalities from normal flocks.
3. Ensure that the birds are in a location suitable for the AM Inspection.

Note: No birds will be slaughtered until a MIB Inspector has completed the AM Inspection. Normally AM inspections will be conducted at the start of the shift but other inspections will be done during the day as required.

The MIB Inspector will:

1. Perform a visual examination of all lots of birds.
2. Record the number of birds found dead.
3. Record the types of abnormalities observed and the number of affected birds.
4. Make a determination on the disposition of the birds.

Note: Routine AM inspections of poultry are more superficial than those conducted on red meat animals. Observation of the flock is more important than observations that only relate to individual birds. Generally it is usually sufficient to observe the birds in their crates. It is particularly important to observe the characteristics of the droppings in the crates.

When confronted with significant abnormalities, in a number of birds, it is recommended that the MIB Inspector consult with the Regulatory Services Division Veterinarian (DV) or with a veterinary pathologist in the Food Safety Division

Groups of birds that exhibit significant evidence of disease, or deviation from normal must be segregated and set aside for a more detailed inspection and/or consultation with the DV, Area Manager or Regional Supervisor.

RELATED SECTIONS OF TIPM

06-A-01 Operator Responsibilities re AM Inspection
06-A-02 Facility Requirements for AM Inspections
06-A-06 AM Abnormalities in Poultry
06-A-08 Suspect Animals on AM Inspection
06-A-09 AM Condemnations
06-A-11 Time Requirements for AM Inspection
06-A-12 Maintenance of Identity During the AM Inspection
06-A-13 Dispositions Following the AM Inspection

SUBJECT: AM Abnormalities in Poultry	06-A-06
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 40(1)(a) & 64(1)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

"Ante-mortem" (AM) **means "before death"** therefore, in its' simplest terms the AM inspection is the visual inspection of animals before slaughter.

Note: AM and post-mortem (after death) inspections form the basis of scientific meat inspection.

AM inspections must be performed in accordance with section 40(1)(a) of AR42/2003 *Meat Inspection Regulation,* which states "no animals will be slaughtered until such time as a meat inspector has completed a full ante-mortem inspection".

Note: By definition birds are animals thus all poultry and ratites (emus, rheas and ostriches) are covered by section 40(1)(a) of AR 42/2003

Section 64(1) also refers directly to the AM inspection of poultry. This section states that "the operator of an abattoir shall assemble poultry that is to be slaughtered in the receiving area and make it available for ante-mortem inspection".

The purpose of this document is to let the reader know **WHAT** the inspector looks for during the AM inspection of poultry.

OBJECTIVE/OUTCOME:

An AM inspection will be conducted on all poultry including ratites (emus, rheas and ostriches) that are presented for slaughter at provincially licensed abattoirs including those located at Hutterite Colonies.

Note: Because of large numbers and means of transportation individual birds cannot be examined. The overall health of the flock is the most important observation that can be made.

Meat Inspection Branch (MIB) Inspectors will look for the following during the AM inspection of poultry:

1. Overcrowding
2. Number of dead or dying birds
3. Size of birds (uniformity)
4. Alertness

   Note: Dull and lethargic birds may be the only indication of certain conditions.

5. Respirator disorders

6. Cannibalism
7. Leg Disorders
8. Frostbite
9. Heat exhaustion
10. Symptoms characteristic of specific conditions

    Note: Examples of specific conditions include but are not restricted to

    a) sinusitis
    b) pendulous crops
    c) joint problems

11. Characteristics of droppings]

Upon completion of the AM inspection the MIB Inspector will record all findings on a MIF – 34 Flock Health Declaration and AM Report form.

Note: A copy of the MIF – 34 will be made available to the inspector performing the post-mortem inspection.

RELATED SECTIONS OF TIPM

06-A-02 Facility Requirements for AM Inspections
06-A-05 Purpose & Conduct of AM Inspections - Poultry
06-A-08 Suspect Animals on AM Inspection
06-A-09 AM Condemnations
06-A-11 Time Requirements for AM Inspection
06-A-12 Maintenance of Identity During the AM Inspection
06-A-13 Dispositions Following the AM Inspection

SUBJECT: AM Pre-screening by Abattoir Personnel	06-A-07
REGULATORY REFERENCE AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 21(1) & 40(3)(b)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

"Ante-mortem" (AM) **means "before death"** therefore, the AM period, at a "Licensed Meat Facility" (abattoir), is the period of time between delivery and slaughter of the animal.

Note: AM and post-mortem (after death) inspections form the basis of scientific meat inspection.

The operator of an abattoir has a legal responsibility to:

1. Provide assistance in conducting an AM Inspection.
2. Ensure that animals are handled in a human manner.

Note: Sections 21(1) and 40(3)(b) and of AR 42/2003 are the basis of the operators legal responsibilities.

Section 40(3)(b) states "The abattoir operator shall give the inspector full cooperation and active assistance in the performing of an ante-mortem inspection where, due to exceptional circumstances, such assistance is needed and the inspector requests it.

Section 21(1) states, "A person shall minimize pain and distress of any animal that is being prepared for slaughter or slaughtered.

In order to ensure the humane care of animals, from their time of arrival at the abattoir, it is necessary for abattoir personnel to protect obviously distressed or diseased animals from injury and further distress from other animals in the facility.

Note: This can only be done by ensuring that abattoir personnel observe all animals upon their arrival and take appropriate steps to minimize the chance of injury, or further discomfort, to animals with abnormalities.

The purpose of this document is to clarify the responsibilities of abattoir operators and personnel for the pre-screening of red meat animals in the AM period.

OBJECTIVE/OUTCOME

Abattoir operators will assign qualified personnel to pre-screen animals for evidence of disease and/or distress upon their arrival at the abattoir.

Note: Qualified personnel will be familiar with the content of a training guide entitled "Introduction to Ante-mortem Screening for Plant Employees".

This guide is available from the Meat Inspection Branch (MIB) of the Regulatory Services Division of Alberta Agriculture and Rural Development.

Designated employees will also be familiar with the content of the following TIPM documents:

a) 06-A-03 Purpose & Conduct of AM Inspection - Red Meat Animals

b) 06-A-04 AM Abnormalities in Red Meat Animals

Animals with obvious abnormalities will be segregated for other animals.

Note: A MIB Inspector must be notified about the detection of any abnormalities as soon as possible.

RELATED SECTIONS OF TIPM

06-A-01 Operator Responsibilities re AM Inspections
06-A-02 Facility Requirements for AM Inspections
06-A-08 Suspect Animals on AM Inspection
06-A-10 AM Care of Animals- General
06-A-11 Time Requirements for AM Inspection
06-A-12 Maintenance of Identity During the AM Inspection
06-A-13 Dispositions Following the AM Inspection

SUBJECT: Suspect Animals on AM Inspection	06-A-08
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 40(1)(a) and 57(a) & (b)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

"Ante-mortem" (AM) **means "before death"** therefore, in its' simplest terms the AM inspection is the visual inspection of animals before slaughter.

Note: AM and post-mortem (after death) inspections form the basis of scientific meat inspection.

AM inspections must be performed in accordance with section 40(1)(a) of AR42/2003.

Note: This section states "no animals will be slaughtered until such time as a meat inspector has completed a full ante-mortem inspection".

Section 57 of AR 42/2003 states, "Where, under this Regulation, a live red meat animal is to be held the inspector shall:

a) identify the animal in the manner specified by the Director, and

b) order that the animal be removed to and kept in an area designated for the purposes of this section by the inspector apart from other animals

Situations arise where a Meat Inspection Branch (MIB) Inspector cannot make an immediate decision on the suitability of an animal, or group of animals, for slaughter. These suspect animals must be handled appropriately until such time as they are approved for slaughter or condemned.

The purpose of this document is to outline how these animals need to be handled.

OBJECTIVE/OUTCOME

Animals exhibiting evidence of disease, or deviation from normal will be:

1. "HELD" as suspects.
2. Segregated and set aside for a more detailed examination.

Note: A detailed examination may require the animal to be suitably restrained. Animals may also have to be held until the MIB Inspector has had a chance to consult with the Division Veterinarian or his/her Area Manager, or Regional Supervisor.

Until a final decision is made, on the final disposition, these animals will be identified by a MIF – 7 Alberta Held Tag - General. This tag will be placed on the pen, or crate.

Depending on the findings of the detailed inspection and/or results of consultations the MIB Inspector may:

1. Allow the animal to proceed for normal slaughter.
2. Set the animal aside for rest and/or treatment, or to go through an appropriate withdrawal time if a veterinary medication residue is a cause of concern, prior to slaughter, and further ante-mortem inspection, as appropriate.
3. Set the suspect animal aside for separate slaughter, along with other suspects, preferably at the end of normal slaughter.
4. Allow the animal, even though it has been deemed to be a suspect, for humane reasons, to proceed for immediate slaughter.

RELATED SECTIONS OF TIPM

06-A-02 Facility Requirements for AM Inspections

06-A-03 Purpose & Conduct of AM Inspection - Red Meat Animals

06-A-05 Purpose & Conduct of AM Inspection - Poultry

SUBJECT: AM Condemnations	06-A-09
REGULATORY REFERENCE AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 40(1)(a)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

"Ante-mortem" (AM) **means "before death"** therefore, in its' simplest terms the AM inspection is the visual inspection of animals before slaughter.

Note: AM and post-mortem (after death) inspections form the basis of scientific meat inspection.

AM inspections must be performed in accordance with section 40(1)(a) of AR42/2003.

Note: This section states "no animals will be slaughtered until such time as a meat inspector has completed a full ante-mortem inspection".

Animals deemed to be unfit for human consumption, based on the AM inspection will be condemned.

These animals must be handled appropriately.

The purpose of this document is to outline what has to be done with these animals.

OBJECTIVE/OUTCOME

The Meat Inspection Branch (MIB) Inspector will fill out an MIF – 4 Certificate of Condemnation whenever an animal, or a group of animals, are condemned on the AM inspection.

Note: The completed MIF – 4 will contain the following information:

a) identification of the animal(s);

b) owner's name and address;

c) reason for the condemnation

A copy of the MIF - 4 will be given to the abattoir operator who in turn can use it as verification of condemnation for the owner of the animal.

Condemned animals will be stunned or killed in the yards or live animal receiving area.

An MIF – 8 Condemned tag or other device containing the words ALBERTA CONDEMNED will be affixed to the condemned animal(s).

Note: It is not practical for the MIB Inspector to place an MIF – 8 tag on small animals (e.g. poultry or BBQ hogs). In these cases the MIF - 8 will be placed on the container that the animals are put in.

Condemned animals will be removed, from the holding pens, or receiving area, to the inedible section of the abattoir.

Note: Condemned animals are not allowed to pass through the slaughter floor, or other areas of the abattoir where edible meat products are handled, or processed.

Condemned cattle over 30 months of age will be handled as SRM.

RELATED SECTIONS OF TIPM

06-A-02 Facility Requirements for AM Inspections

06-A-03 Purpose & Conduct of AM Inspection - Red Meat Animals

06-A-05 Purpose & Conduct of AM Inspection - Poultry

10-A-04 SRM Removal & Control Program

SUBJECT: AM Care of Animals - General	06-A-10
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 21	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

"Ante-mortem" (AM) **means "before death"** therefore, the AM period, at an abattoir, is the period of time between delivery and slaughter of the animal.

The operator of a "Licensed Meat Facility" (abattoir) has a legal responsibility to provide humane care for animals that have been delivered and are being held for slaughter.

Note: These responsibilities are found in s**ections 21(1), (2) and (3) of AR42/2003.**

Section 21(1) states, "A person shall not inflict unnecessary pain or discomfort on any animal that is being prepared for slaughter or slaughtered".

Section 21(2) states, "The operator of an abattoir shall ensure that animals being received by the abattoir are provided with immediate shelter".

Section 21(3) states, "A person shall not keep an animal in a pen for more than 24 hours without providing it with adequate feed water and bedding".

The purpose of this document is to clarify the responsibilities of abattoir operators regarding the humane care of animals in the AM period.

OBJECTIVE/OUTCOME

The following principles will be followed to ensure the humane care of animals, in the abattoir, during the AM period:

1. Livestock handling facilities will be properly designed, maintained and operated.

   Note: The physical characteristics and behavioral traits of each species of animal, to be handled in the abattoir, must be considered when handling facilities are built, maintained and/or operated.

2. The truck, or conveyance device, will be flush with the chute when animals are being unloaded.

   Note: This is essential in order to avoid openings, or unevenness, that may result in injury as animals are unloaded.

3. All pens must be kept reasonably clean and bedded.

   Note: Reasonable means to the satisfaction of a Meat Inspection Branch (MIB) Inspector.

   Pens should be disinfected with an approved disinfecting agent on a regular basis or when requested by a MIB Inspector.

4. Different species of animals will be penned separately from other species.
5. Larger animals (of the same species), or those likely to injure other animals (e.g. bulls, boars, cows with horns, etc.) will be penned separately.

6. Clean water must be provided in all livestock holding pens.
7. Feed will be provided for animals that are held for more than 24 hours.
8. Animals will have shelter from inclement weather.
9. Animals will be moved and handled in a humane manner.

Note: The use of canvas slappers is preferred to canes, sticks or electric prods.

Electric prods, if used, must be used sparingly. When used, prods must only be applied to the legs or body of the animal. The use of **prods on sensitive parts of the body**, particularly the genitals or nose **will not be tolerated.**

RELATED SECTIONS OF TIPM

05-D-01 Animal Welfare Audits - Red Meat Animals
05-D-02 Animal Welfare Audits - Poultry
06-A-01 Operator Responsibilities re AM Inspection
06-A-02 Facility Requirements for AM Inspections
06-A-07 AM Pre-screening by Abattoir Personnel

SUBJECT: Time Requirements for AM Inspections	06-A-11
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 40(1)(a), 40(3)(a) & 40 (3)(b)	**Initial Release** Sept 1, 2009 **Page 1 of 1**

RATIONALE

"Ante-mortem" (AM) **means "before death"** therefore, in its' simplest terms the AM inspection is the visual inspection of animals before slaughter.

Note: AM and post-mortem (after death) inspections form the basis of scientific meat inspection.

AM inspections must be performed in accordance with section 40(1)(a) of AR42/2003.

Note: This section states "no animals will be slaughtered until such time as a meat inspector has completed a full ante-mortem inspection".

AM inspections must be done reasonably close to the time of slaughter.

Note: This must be done because it is possible for diseases, or injuries, to develop between the AM inspection and slaughter if the interval between is too long.

This document establishes the maximum time that can elapse between the AM inspection and slaughter.

OBJECTIVE/OUTCOME

An AM inspection will be conducted, on all animals, **within 24 hours** of the time that they are to be slaughtered in provincially licensed abattoirs.

Note: Under ideal conditions the AM inspection will be done shortly before slaughter.

Usually the best time to conduct an AM inspection is when the inspector first arrives at the abattoir. An inspection should also be conducted, as required, if animals arrive during the day. The best time to do these additional inspections is when the animals are being unloaded.

If, for any reason, the slaughter of inspected animals is delayed, beyond 24 hours, another AM inspection will be performed.

RELATED SECTIONS OF TIPM

06-A-03 Purpose & Conduct of AM Inspection - Red Meat Animals

06-A-05 Purpose & Conduct of AM Inspection - Poultry

SUBJECT: Maintenance of Identity during the AM Inspection	06-A-12
REGULATORY REFERENCE AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 40(1)(a)	**Initial Release** Sept 1, 2009 **Page 1 of 1**

RATIONALE

"Ante-mortem" (AM) **means "before death"** therefore, in its' simplest terms the AM inspection is the visual inspection of animals before slaughter.

Note: AM and post-mortem (after death) inspections form the basis of scientific meat inspection.

AM inspections must be performed in accordance with section 40(1)(a) of AR42/2003.

Note: This section states "no animals will be slaughtered until such time as a meat inspector has completed a full ante-mortem inspection".

To ensure that all animals receive an AM inspection appropriate methods must be used, by the "Licensed Meat Facility" (abattoir) to keep track of which animals have been inspected and which ones haven't.

Note: There is a greater chance of missing animals in abattoirs:

a) that handle large numbers of animals;

b) where more than one inspector is on duty

The purpose of this document is to outline acceptable methods of identifying animals that have been subjected to an AM inspection.

OBJECTIVE/OUTCOME

The identity of animals that have been subjected to an AM inspection will be maintained in one, or more of the following ways:

1. By memory of the inspector;

   Note: This method is only acceptable when small numbers of animals are presented for slaughter and only one MIB Inspector is on duty.

2. Through the use of a crayon, or paint;
3. Placement of a card on the pen indicating the type and number of animals inspected.

RELATED SECTIONS OF TIPM

06-A-03 Purpose & Conduct of AM Inspection - Red Meat Animals

06-A-05 Purpose & Conduct of AM Inspection - Poultry

SUBJECT: Dispositions Following the AM Inspection	06-A-13
REGULATORY REFERENCE AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 40(1)(a)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

"Ante-mortem" (AM) **means "before death"** therefore, in its' simplest terms the AM inspection is the visual inspection of animals before slaughter.

Note: AM and post-mortem (after death) inspections form the basis of scientific meat inspection.

AM inspections must be performed in accordance with section 40(1)(a) of AR42/2003.

Note: This section states "no animals will be slaughtered until such time as a meat inspector has completed a full ante-mortem inspection".

The purpose of this document is to explain **WHAT** disposition choices are available to Meat Inspection Branch (MIB) Inspectors following the AM inspection.

OBJECTIVE/OUTCOME

Following the AM inspection the MIB Inspector will make one of the following disposition choices:

1. Normal and fit for slaughter.
2. Requires immediate slaughter for humane reasons.

   Note: Animals in this category would include spread hogs, animals with recently broken legs, lacerations, etc. Basically these are non-infectious conditions, which have no effect on other animals.

3. Fit for slaughter but need to be held until the end of the kill.

   Note: Animals in this category would include those that have infectious conditions such as arthritis, abscesses, etc. which could lead to contamination of other carcasses.

4. Held for further examination.

   Note: In some instances MIB Inspectors need to consult with the Division Veterinarian, their Area Manager, or Regional Supervisor to determine the best course of action including laboratory testing.

   Upon completion of the consultation the animal(s) will be placed in one of the other disposition categories.

5. Unfit for slaughter and condemned.

Note: Condemned animals should be identified with an "MIF – 8 Condemned Tag", or other device, showing the words "ALBERTA CONDEMNED". In addition, the owner's name, or the manifest #, or other means of identifying the owner will be entered on the "MIF – 13 Ante-mortem Inspection Report along with the animal identification and reason for condemnation. An "MIF – 4 Certificate of Condemnation" will also be completed.

Condemned animals are to be stunned or killed in the yards, or live animal receiving area, and removed to the inedible section of the establishment. Stunned animals may be bled in the yards, or live animal receiving area, provided there are adequate facilities to allow sanitary procedures.

Any cattle over 30 months of age that are condemned on the AM inspection and subsequently euthanized must be handled as SRM.

RELATED SECTIONS OF TIPM

06-A-03 Purpose & Conduct of AM Inspections - Red Meat Animals
06-A-05 Purpose & Conduct of AM Inspections - Poultry
06-A-08 Suspect Animals on AM Inspection
06-A-09 AM Condemnations
10-A-04 SRM Removal & Control Program

SUBJECT: Scheduling of Slaughters	07-A-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 40 and 41	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

The slaughter of food animals in a "Licensed Meat Facility" (abattoir) must meet all of the requirements in AR 42/*2003 Meat Inspection Regulation*.

AR 42/2003 has two main purposes:

1. Ensuring that animals are handled in a humane manner throughout the entire process.
2. Ensuring the production of safe meat products.

Scheduling more animals than can be handled efficiently may:

1. Affect the accuracy of inspection.
2. Increase food safety hazards such as poor handling procedures, inadequate cooling rates, poor temperature control, and improper sanitation.

This document deals primarily with the responsibility of the abattoir operator under sections 40 & 41 of AR 42/2003.

Note: Section 40 specifies that a Meat Inspection Branch (MIB) Inspector must be present for any slaughter that is conducted at the abattoir. It also requires the abattoir operator to provide assistance to the inspector as required and requires that slaughtering and dressing operations are conducted with reasonable speed.

Section 41 outlines the days and hours that inspection may be provided and squarely places the onus on the operator of the abattoir to ensure the presence of a MIB Inspector. There are also provisions for exceptions to the days that inspection services are normally available.

The **intent** of this document is to **outline <u>how</u> slaughters are** to be **scheduled**.

OBJECTIVE/OUTCOME

An MIB Inspector will be present during the slaughter and dressing of each food animal.

The abattoir operator will assume responsibility for contacting the Regional Supervisor (RS) of the MIB to schedule inspection services prior to setting slaughter dates.

Note: The responsibility for the scheduling of inspection services has been delegated to the RS.

There will be adequate space, equipment, and personnel to handle all animals humanely and to carry out slaughtering, dressing and evisceration procedures in a timely and sanitary manner.

Note: Before consideration will be given to providing more hours, or days, of inspection service the abattoir operator will be required to demonstrate that they are making full and efficient use of their current allotment of time.

Depending on the situation the RS will handle scheduling requests in one, or more of the following ways.

Regularly Scheduled Inspection Services

The initial schedule for regular inspection services on a weekly, monthly, or annual basis is established through a consultation process between the RS and the abattoir operator.

Note: There may be a need for a trial period before a permanent schedule is finalized.

Any change to a permanent schedule requires a verbal, or written, request from the abattoir operator.

Note: The RS, or a designate, will determine whether the changes are justified and whether there is sufficient manpower to cover the change in service.

All changes to a regular schedule, including starting times, will be confirmed with the operator either verbally, or in writing.

Requests for Overtime

Overtime requests will only be granted if:

1. The abattoir operator can demonstrate effective utilization of scheduled time that has already been allocated, or
2. The request is due to circumstances beyond their control and
3. The regularly scheduled MIB Inspector agrees to the overtime, or
4. Arrangements can be made of another inspector to come in and
5. Sufficient cooler space is available to allow the extra carcasses to be chilled in accordance with the MFS.

Note: The RS reserves the right to refuse overtime to abattoirs that bring in more animals than the number that can be reasonably slaughtered and processed in 7.25 hours.

Irregularly Scheduled Inspection Services

Note: Irregular scheduling of inspection services primarily applies to Hutterite colonies.

Irregular scheduling will only be done on an ad hoc basis. It will be on a first come first served basis depending on manpower availability.

Written confirmation will be provided for irregularly scheduled slaughter dates.

Note: Any changes to these, once established, will be done in accordance with policies established for regularly scheduled inspection.

Unforeseen, or Uncontrollable, Circumstances

Whenever possible the RS will try to accommodate, by rescheduling alternate days, for time lost due to uncontrollable situations.

Note: Uncontrollable circumstances include such things as power outages, poor water samples, bereavement, mechanical failures, adverse weather, etc.

There is no responsibility to adjust schedules for time lost through the fault of the abattoir operator or any abattoir personnel (e.g. failure to pass a pre-op inspection).

RELATED SECTIONS OF TIPM

05-B-04 Timely Slaughter

SUBJECT: Blood Collection	07-A-02
REGULATORY REFERENCE M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Section 6	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Blood is considered to be a by-product that can be used for human consumption providing it is collected and processed in a hygienic and safe manner.

Note: There are four fundamental principles that must be observed while harvesting any by-products, from slaughtered animals, including blood:

a) The identity of the by-products must be maintained until the corresponding carcass is inspected and approved.

b) Rapid, hygienic handling and chilling of the by-product is required to prevent contamination and decomposition.

c) If a particular type of by-product, from more than one animal, is placed in a single container and one of the carcasses is condemned, all by-products harvested in that particular container will also be condemned.

d) All by-products must be prepared, packaged and stored in an acceptable sanitary manner.

OBJECTIVE/OUTCOME

The following conditions will apply to the collection of blood, for human consumption, from read meat animals in a “Licensed Meat Facility” (abattoir):

1. Blood will only be taken from clean, dry animals.
2. Collection will be done in a manner that ensures the blood does not become contaminated from hair, or body fluids.

   Note: It is “Common Industry Practice” to harvest blood with a hollow knife, which must be cleaned and sanitized between animals.

3. Blood from condemned carcasses will also be condemned and discarded in a proper manner.

   Note: In order to comply with the requirements of section 6 of the *Meat Inspection Act* the Meat Inspection Branch (MIB) Inspector must be able to match blood to the carcass, or carcasses, that it came from until such time as the post-mortem inspection has been completed.

   The best method of doing this is to collect the blood into individually labeled containers that identify the carcass the blood came from.

   The placement of blood from more than one animal in the same container is allowed but, if any of the carcasses fail to pass inspection all of the blood in that container will be condemned.

4. Only approved anticoagulants will be used.

   Note: Anti-coagulants are chemical agents that will stop blood from clotting.

   Mechanical defibrination (removal of fibrin from the blood) is an alternative to the use of anti-coagulants.

   Suitable metal, or plastic, beaters must be used for mechanical defibrination. Removal of fibrin by hand is not allowed. The beaters must be sanitized after each use.

5. SRM cross contamination prevention procedures must be in place if blood is going to be salvaged from cattle that are OTM (over thirty months).

   Note: Cross contamination prevention procedures must be approved by the Area Manager.

6. Blood not intended for human consumption will be removed from the processing area immediately and placed in the inedible area, or room.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Blood Collection"**, for human consumption, will be met when:

1. **Written,** abattoir specific, **procedures** for the **collection of blood** are on file.
2. On site observations demonstrate that the blood collection procedures are being followed.

RELATED SECTIONS OF TIPM

07-B-08 Meat By-Product Harvesting - Beef
07-B-09 Meat By-Product Harvesting - Pork
07-B-11 Meat By-Product Harvesting - Miscellaneous Species
10-A-04 SRM Removal & Control Program

SUBJECT: Ritual Slaughter	07-A-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 8 & 21(1)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Various religious groups, primarily Jewish and Islamic, have specific requirements for the way animals are slaughtered.

In recognition of the constitutional right to freedom of religion AR 42/2003 allows the conduct of ritual, or religious, slaughter providing certain conditions have been met.

Note: These conditions are intended to ensure that all animals are handled and slaughtered with a minimum of pain and distress including those subjected to ritual, or religious, slaughter.

In addition to ensuring humane handling of animals, during the slaughter process it is also important, for meat quality and safety reasons that any ritual, or religious slaughter, results in rapid unconsciousness and optimum bleeding.

The **intent** of this document is to **outline** the **conditions** for ritual, or religious, slaughter in a "Licensed Meat Facility" (abattoir).

OBJECTIVE/OUTCOME

Religious, or ritual, slaughter will be done in accordance with the conditions approved by the Director of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

Note: The approval of the Director is authorized under Section 8 of AR 42/2003.

Approval to conduct ritual, or religious, slaughters does not absolve the abattoir operators from responsibility for humane stunning and slaughter of food animals in accordance with section 21(1) of AR 42/2003 and other pieces of Canadian and Provincial legislation including the Animal Protection Act (Alberta) and Health of Animals Act (Canada).

Prior to granting approval the Director will require assurance from the Area Manager, for the area where the abattoir is located, to provide assurance that the physical facilities and the skill of the individual(s) performing the slaughter are such that all animals will be rendered unconscious in a timely fashion and to the satisfaction of the resident MIB Inspector.

In summary the conditions for ritual, or religious, slaughter include:

a) a requirement that only experienced individuals perform the slaughter;

b) receipt, by the operator of the abattoir, written permission to conduct this particular type of slaughter;

c) restraining animals by a method prescribed and approved by the Meat Inspection Branch (MIB) of the RSD

Ritual slaughter methods involving cutting of the throat, without stunning, will be accomplished with a single cut that results in rapid, simultaneous and complete severance of the jugular vein and carotid arteries so as to cause rapid unconsciousness of the animal.

Note: Regardless of the type of ritual, or religious, slaughter being conducted MIB Inspectors have the authority to require the use of alternative slaughter methods if, in their opinion, animals are being subjected to undue suffering.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Ritual Slaughter"** will be met when:

1. The abattoir's specific, written **"Dressing Procedures" include** specific **procedures for ritual, or religious, slaughter**.
2. **"Training records"** are available that confirm that the person performing the slaughter is proficient.
3. On site observations, by a MIB Inspector, demonstrate that the ritual, or religious, slaughters are being conducted in a humane and sanitary manner.

RELATED SECTIONS OF TIPM

05-B-06 Stunning & Bleeding Practices

SUBJECT: Dressing Procedures - Cattle & Calves	07-B-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 58.1 Meat Facility Standards (MFS) Section 3.3	**Initial Release** Sept 1, 2009 **Page 1 of 7**

RATIONALE

A significant challenge for the production of safe food from animal sources is preventing contamination of edible products with the micro-organisms (bacteria, molds, fungi, etc.) that are on the surface of the skin and in the intestinal tract of live animals.

Note: Studies have indicated that there is a very large population of micro-organisms on the surface of beef hides therefore sanitary skinning is one of the most important steps in the dressing of a beef carcass.

The implementation of proper sanitary dressing procedures is one of the most important methods of minimizing the contamination of edible meat products.

Note: Dressing refers to all of the actions taken from the time the animal has been stunned until the carcass and all other edible products are removed from the kill floor for further storage and/or processing.

Proper conduct of each phase of dressing requires skill on the part of plant personnel.

Note: All personnel involved in the dressing process must be adequately trained and/or supervised.

The surfaces of the carcass and edible organs must not be allowed to come into contact with the surface of the skin, intestinal contents or dirty equipment.

Note: This is particularly important during the skinning and evisceration processes.

Any contaminated areas of the carcass must be trimmed out.

Note: Washing is not sufficient for the removal of visible contamination.

The intent of this document is to **outline** the **procedures for** the **proper dressing** of **beef and veal carcasses**.

OBJECTIVE/OUTCOME

Written **"Dressing Procedures"** will be on file.

All carcasses will be dressed in a manner that:

1. Reduces the risk of contamination of the carcass and its parts or other meat products.
2. Ensures that that all parts of the carcass retain their identity throughout the dressing procedure.

Note: Until such time as the inspection process has been completed the Meat Inspection Branch (MIB) Inspector must be able to match all organs and other parts with the carcass they came from at all stages of the dressing procedure. This is necessary in order to ensure an accurate post-mortem inspection is conducted and to ensure that all parts are properly disposed of in the event of a condemnation.

3. Results in the production of an unadulterated meat product.

The abattoir operator will assume responsibility for monitoring the performance of personnel to ensure that proper dressing procedures are conducted.

Note: The MIB Inspector is also responsible for monitoring dressing procedures and ensuring that the abattoir operator takes appropriate steps to correct any deficiencies.

The various steps, in the dressing procedure, will be conducted, as described in this document.

Note: Normal dressing procedures for cattle, other than veal calves, consist of:

a) bleeding;
b) removal of the head;
c) preparation of the head for inspection;
d) harvesting edible product from the head;
e) removal of the feet & hide;
f) removal of the udder or pizzle (penis);
g) opening of the brisket;
h) rodding or tying of the wesand (esophagus);
i) dropping the bung (anus and rectum);
j) evisceration (removal of internal organs);
k) splitting the carcass;
l) trimming;
m) washing

The following dressing procedures are considered to be “Common Industry Practice”.

Note: The reader is also referred to **TIPM document 10-A-04** “SRM Removal & Control Program” **for additional requirements** respecting the removal of Specified Risk Materials (SRMs) during the **dressing** of **cattle** aged **30 months and older**.

Bleeding

Bleeding must occur immediately following stunning.

Note: All animals must be rendered unconscious, prior to bleeding, by an approved method.

Removal of the Head

Once the head has been skinned it should be removed from the carcass immediately.

Note: Care must be taken to avoid contaminating exposed tissues.

Employees who remove heads must wash their hands, and adequately rinse and sanitize their knives after each animal.

Note: Using a “two knife” system allows one knife to be used for cutting the hide while

the second knife remains clean for sticking and blood collection.

Preparation of the Head for Inspection

The head must be skinned in a manner that prevents the outer surface of the skin flaps from contacting the underlying tissues.

Note: Facilities must be provided for the removal of any remaining pieces of skin which must be done before the head is washed.

The entire head, including the oral (mouth) and nasal (nose) cavities must be thoroughly washed before any incisions can be made in the muscles.

The tongue must be dropped and the palatine tonsils must be removed before the head is presented for inspection.

Note: This is done in order to expose the retropharyngeal lymph nodes.

Further rinsing of the mouth cavity, if required [e.g. to remove any remaining ingesta (food or stomach contents)], must be performed without splashing other heads.

Head hooks must be rinsed and sanitized, after every use, with water at 82^0 C.

Harvesting Edible Products from the Head

After the post-mortem (PM) inspection has been completed and the corresponding carcass has been approved the tongue and head meat can be salvaged.

Note: All harvested material must be washed so that it is free of blood and chilled as quickly as possible.

When the head is transferred to the head boning station it must not be allowed to become contaminated from contact with other heads.

Note: Boning of the heads must not be done on the same surface unless that surface is cleaned and sanitized between each head. It is “Common Industry Practice” to bone the head done on the hook, or rack, to ensure that liquids from the nose and throat, brain, or spinal cord tissue don’t contaminate any edible portions.

The salivary glands must be trimmed away from any cheek meat that is salvaged.

Note: All cheek meat must be washed and chilled immediately after salvage.

Removal of the Feet and Hide

During removal of the feet and hide, the skin must be cut from inside out to prevent contact between the surface of the hide (hair, dirt and manure) and the underlying surface of the carcass.

Note: Cutting from the inside out only applies after the starting cuts have been made.

Feet harvested for edible purposes must remain identified with the carcass.

They won’t be approved for human consumption until the carcass has been approved.

The hair (outer) side of the hide must be rolled, or reflected away, from the carcass during the skinning process.

Knives and other equipment used for the removal of the feet and hides must be cleaned and sanitized on an ongoing basis.

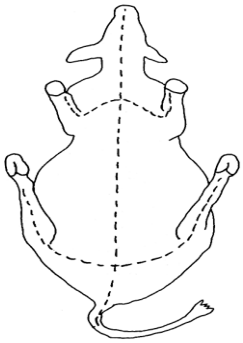
Note: A separate knife may be used make the starting cuts in order to eliminate the need for frequent rinsing and sanitizing during the skinning process.

Unless skinning is performed on the rail the carcass is placed on a skinning bed following removal of the head.

Note: Care must be taken to avoid contamination of neck tissue as the carcass is being placed on the bed. Exposed neck tissue must not contact the floor, cradle, or outside skin, surfaces.

Any fecal (manure) contamination from the anus should be washed off at this point before the hide is opened to reduce the potential of spreading of bacteria onto the carcass through aerosols.

The following picture illustrates the cut lines for hide removal using the cradle/bed system



Note: When done on the rail skinning should begin at the hind shanks and proceed downward, reflecting the hide away from the carcass.

Following hide removal, carcasses must be kept separated from each other to avoid contact.

Note: This separation must be maintained until each carcass has passed inspection.

Removal of the Udder, or Pizzle (penis)

In cows and heifers lactating (milking) udders must be removed in a manner that prevents contamination of the carcass, facilities, or equipment, from any liquid in the udder.

Note: Any areas of contamination, on the carcass must be removed by trimming.

In bulls and steers the penis and prepuce (external opening for the penis) must also be removed in a manner that prevents contamination of the carcass.

Opening the Brisket

Clean saws must be used to split the brisket.

Note: The saw must be adequately rinsed and sanitized after each animal.

The brisket can be opened before, or after, complete hide removal.

Note: If it is opened before hide removal has been completed the hide must be adequately reflected away from the midline to prevent contamination.

After the brisket is opened, care must be taken to avoid puncturing the viscera, which invariably results in carcass contamination.

Note: Water must never be allowed to enter the abdominal or thoracic cavities during the washing of an un- eviscerated carcass.

Rodding and/or Tying of the Wesand (esophagus)

It is "Common Industry Practice" to rod wesand when the abdominal viscera (organs) are going to be removed separately from the thoracic viscera.

Note: Rodding separates the esophagus from the trachea, lungs and surrounding tissue and permits it to be removed through the diaphragm and thoracic cavity without rupturing.

After rodding, the esophagus must be tied (e.g. with clean butcher string), or clipped.

Note: This is done to prevent contamination of the carcass with rumen (stomach contents) during evisceration.

The rod must be adequately rinsed and sanitized between carcasses.

If rodding is not performed the esophagus must be clipped or tied before the head is removed.

Dropping the Bung

During removal of the hide, a circular cut must be made around the anus (rectal opening), taking care to leave the anal sphincter (muscle) intact. The subsequent cut to free the anus and rectum from the surrounding tissue must be done with a clean knife.

Note: The process of cutting around the anus and freeing the rectum from the surrounding tissue is called "Dropping the Bung".

It is "Common Industry Practice" for the rectum to be tied along with the neck of the bladder and bagged (and tied) to prevent contamination. The bag can then be dropped into the pelvic cavity.

Evisceration (removal of internal organs)

Any visible contamination must be trimmed from the midline before opening the abdominal cavity in order to prevent contamination of the viscera.

Note: Skinning must be completed before evisceration is carried out.

Care must be taken during evisceration to prevent accidental puncture of the stomach or intestines.

Note: This is generally accomplished by opening the abdomen 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.

Should a carcass or any of its edible organs be accidentally contaminated by stomach contents (ingesta), manure (fecal matter), pus, or any other foreign material, at any stage during the evisceration process the employee performing the procedure must immediately trim the contaminated area(s).

Unless already condemned all viscera must be placed in a clean tote, or viscera bin.

Note: If any viscera, or the carcass, is condemned the surface of the tote, truck, or bin, is considered to be contaminated as well and must be adequately rinsed and sanitized with water at a minimum temperature of 82^0 C before reuse.

The uro-genital organs (bladder, ovaries and uterus) should be removed entirely without incising them.

Note: Until such time as the inspection process has been completed the MIB Inspector must be able to match all of the viscera with the carcass it came from.

Pathological lesions (disease conditions) must not be removed (unless permitted by an inspector) until the post-mortem inspection has been completed.

Splitting the Carcass

The carcass can be split with a saw, or cleaver.

Note: Splitting saws, or cleavers, must be sanitized any time they are used on a condemned, or held, carcass, or when the instrument becomes contaminated by pus, or any other type of debris.

Any visible contamination must be trimmed from the back of the carcass before splitting.

Carcasses that hang within 15–30 cm (6”) of the floor must be quartered/trimmed or pinned to ensure that they do not contact the floor

To prevent cross-contamination, on the kill floor, exposed carcasses must not be allowed to come in contact with unclean equipment (high benches, retaining bars, etc.) or any other carcasses, prior to the final carcass inspection.

Note: Visible contamination must be removed by trimming. Washing is not considered to be as effective.

Trimming

Any defects or areas or contamination must be removed by trimming before the final carcass wash.

Note: Trimming must be done by abattoir personnel in a designated area.

The abattoir operator must implement a process control to make sure that trimming is complete and consistent.

Note: Proper trimming will leave the carcass free of stick wounds, residual pieces of hide bruises, pathological defects, contamination, blood clots or any other dressing defects.

Edible products may only be removed, from the kill floor, after final post-mortem inspection and approval.

Carcasses must be checked for cleanliness, by abattoir personnel, before washing.

Note: This check must be closely monitored by the MIB Inspector.

The spinal cord must be completely removed from split carcasses before the final carcass wash.

Note: The operator must implement a control program to make sure that removal is complete and consistent. In the case of carcasses that are split after chilling (i.e. veal carcasses), the spinal cord must be removed during boning/cutting operations. This is required to prevent the incorporation of spinal cord tissue into any meat products, ensuring compliance with established meat product standards.

Final Wash

All approved carcasses must receive a final wash, with clean potable water, to remove blood and/or bone dust.

Note: It is "Common Industry Practice" to use warm water (approximately 54^0 C).

MISCELLANEOUS CONSIDERATIONS FOR DRESSING CALVES (Veal)

Veal is defined as the meat of a bovine animal that has the following maturity characteristics and a warm dressed carcass weight of less than 180 kg (396 lbs):

1. bones that are soft and reddish in color;
2. ribs that are narrow and slightly rounded;
3. sternal (breast) bones that show distinct divisions;
4. aitch (pelvic bones) that are covered by cartilage.

Note: There must a scale on the killing floor to allow dressed veal carcasses to be weighed to ensure that their weight does not exceed the maximum weight standard for veal. The scale must be located so that the carcass can be weighed immediately after evisceration.

Based on current marketing practices in Canada, grain-fed veal dressed carcasses weighing 180 kg, or less, are derived from animals estimated to be between 6.5 – 7.0 months of age.

Note: Milk-fed veal are marketed even younger than grain-fed veal. These carcasses may also be marketed as beef.

Veal carcasses are dressed using the same dressing procedures as described for cattle, except that carcass splitting is not required.

Note: **The hide cannot be left on** a dressed veal carcass.

Dressed veal carcasses that could be mistaken for a dressed beef carcass must be properly identified with a stamp (using blue ink), or a hot brander, and segregated from beef carcasses in order to prevent labeling errors.

Note: There should be a written control program covering the boning, packaging, labeling and shipment of veal carcasses and their products. This control program must be approved by the Area Manager.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Dressing Procedures-Cattle & Calves"** will be met when:

1. Written **"Dressing Procedures"** are on file.
2. Personnel responsible for conducting the dressing procedures are properly trained.
3. On site observation demonstrates that the written **"Dressing Procedures"** are being implemented and that carcasses are being dressed in a hygienic manner.

RELATED SECTIONS OF TIPM

02-N-08 Carcass Washing & Dressing Equipment
03-G-01 Dressing Procedures - Red Meat Animals
07-B-08 Meat By-Product Harvesting - Beef
07-B-12 Intervention Strategies - Red Meat Animals
10-A-04 SRM Removal & Control Program

SUBJECT: Dressing Procedures - Hogs	07-B-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 58.1 Meat Facility Standards (MFS) Section 3.3	**Initial Release** Sept 1, 2009 **Page 1 of 5**

RATIONALE

A significant challenge for the production of safe food from animal sources is preventing contamination of edible products with the micro-organisms (bacteria, viruses, etc.) on the surface of the skin and in the intestinal tract of live animals.

The implementation of proper sanitary dressing procedures is one of the most important methods of minimizing the contamination of edible meat products.

Note: Dressing refers to all of the actions taken from the time the animal has been stunned until the carcass and all other edible products are removed from the kill floor for further storage and/or processing.

Proper conduct of each phase of dressing requires skill on the part of "Licensed Meat Facility" (abattoir) personnel.

Note: All personnel involved in the dressing process must be adequately trained and/or supervised.

The surfaces of the carcass and edible organs must not be allowed to come into contact with the surface of the skin, intestinal contents or dirty equipment.

Note: This is particularly important during the skinning and evisceration processes.

Any contaminated areas of the carcass must be trimmed out.

Note: Washing is not sufficient for the removal of visible contamination.

The intent of this document is to **outline** the **procedures for** the **proper dressing** of **hog carcasses**.

OBJECTIVE/OUTCOME

Written **"Dressing Procedures"** will be on file.

All carcasses will be dressed in a manner that:

1. Reduces the risk of contamination of the carcass and its parts or other meat products.
2. Ensures that all parts of the carcass retain their identity throughout the dressing procedure.

   Note: Until such time as the inspection process has been completed the Meat Inspection Branch (MIB) Inspector must be able to match all organs and other parts with the carcass they came from at all stages of the dressing procedure. This is necessary in order to ensure an accurate post-mortem inspection is conducted and to ensure that all parts are properly disposed of in the event of a condemnation.

3. Results in the production of an unadulterated meat product.

The abattoir operator will assume responsibility for monitoring the performance of personnel to ensure that proper dressing procedures are conducted.

Note: The MIB Inspector is also responsible for monitoring dressing procedures and ensuring that the abattoir operator takes appropriate steps to correct any deficiencies.

The various steps, in the dressing procedure, will be conducted, as described in this document.

Note: Normal dressing procedures for hogs consist of:

a) bleeding;
b) scalding;
c) hair removal;
d) head dropping, or removal;
e) evisceration (removal of internal organs);
f) splitting of the carcass;
g) trimming;
h) washing

The following dressing procedures are considered to be “Common Industry Practice”.

Bleeding

Bleeding must occur immediately following stunning.

Note: All hogs must be rendered unconscious, by an approved method, before they are bled.

The stick wound must be as small as possible and care must be taken to avoid shoulder sticking.

Scalding

There are two critical factors involved in proper scalding:

1. Water temperature.
2. Length of time in the scalding solution.

It is “Common Industry Practice” to immerse hogs, for 4 to 5 minutes in water that has been heated to 60^0 C (140^0 F).

Note: A proper scald will result in sufficient loosening of bristles, scurf, dirt and hoof shells (toe nails) to facilitate hair removal and cleaning of the skin.

Clean potable water must be used for scalding and an adequate amount of overflow of water is required.

Only approved scald water additives can be used.

Skinning

Skinning is an alternative to scalding.

Note: An approved method of washing the skin must be used before skinning.

The feet must be removed after carcass washing and before skinning.

Note: The hide must be completely removed prior to bunging or any other operations that involve opening of the body cavity.

Dehairing, Singeing and Polishing

In most plants the hair is removed mechanically.

Note: Hair removal equipment should be kept in good repair.

A tool called a "bell scraper" can be used to manually remove the hair but in most plants this tool is only used to remove hair missed by the machine.

Note: The outer hoof shells must be removed if they are still present. A hook on the upper part of the bell scraper can assist with removal of the hoof shell.

The feet must also be free of dirt, scurf and bristles.

Note: Special attention has to be given to the space between the toes (inter-digital clefts) whether the feet are being harvested as edible product or not.

A polisher may be used following removal of the hair.

Note: Polishers usually consist of a rotating shaft with hard rubber beaters, plastic brushes, or steel chains.

Washing

All carcasses should be washed with clean potable water prior to removal of the head and evisceration.

Note: This wash is done to ensure the complete removal of any loose dirt, bristles, or scurf, from the carcass. The carcass should not be washed again until after the final inspection.

Head Removal, or Dropping

Note: Dropping refers to partial removal of the head from the rest of the carcass.

Heads must be free of all bristle, dirt and scurf.

Note: If this can't be accomplished by scalding, de-hairing, singeing and shaving, then it is necessary to skin the head. This should be done after the initial carcass wash to minimize contamination of exposed head tissue.

The head can either be dropped, or removed, for inspection.

Note: This is done to expose the mandibular lymph nodes for inspection. When the head, tongue, or both, are removed, the MIB Inspector must be able to match them with the carcass that they came from until inspection is completed.

Whether the head is dropped or removed equipment used must be sanitized between each use.

Note: Even when it is obvious that a portion will be condemned, the MIB Inspector is still required to conduct a full routine inspection which in the case of the head includes incision of the lymph nodes and masseter muscles.

Evisceration (removal of internal organs)

The bung is dropped by cutting around the anus with a clean knife.

Note: Leakage, of manure, is not a large problem in pigs particularly if they have been off feed for 18 hours before slaughter. The bung can be tied to provide assurance that there will not be any leakage.

The brisket (chest) may be opened with a long sharp knife, saw, or cleaver.

Note: Regardless of what is used to open the chest all instruments must be sanitized after each use.

Care must be taken during evisceration to prevent accidental puncture of the stomach or intestines.

Note: This is generally accomplished by opening the abdomen with the point of the knife pointing away from the carcass and the handle is held from inside the abdomen. The fist can be used to hold the abdominal organs back as the cut is being made.

Should a carcass or any of its edible organs be accidentally contaminated by stomach contents (ingesta), manure (fecal matter), pus, or any other foreign material, at any stage during the evisceration process the employee performing the procedure must immediately trim the contaminated area(s).

Splitting the Carcass

The carcass can be split with a saw, or cleaver.

Note: Splitting saws, or cleavers, must be sanitized any time they are used on a condemned, or held, carcass, or when the instrument becomes contaminated, by pus, or any other type of debris.

Trimming

Any defects, or areas of contamination, must be removed by trimming before the final carcass wash.

Note: Trimming must be done by plant personnel in a designated area.

The abattoir operator must implement process control measures to make sure that trimming is complete and consistent.

Note: Proper trimming will leave the carcass free of stick wounds, bruises, pathological defects, contamination, blood clots or any other dressing defects.

Edible products may only be removed, from the kill floor, after final post-mortem inspection and approval.

Final Wash

All approved carcasses must receive a final wash, with clean potable water, before being placed in a cooler or hot boning room.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Dressing Procedures- Hogs"** will be met when:

1. Written **"Dressing Procedures"** are on file.
2. Personnel responsible for conducting the dressing procedures are properly trained.
3. On site observation demonstrates that the written **"Dressing Procedures"** are being implemented and that carcasses are being dressed in a hygienic manner.

RELATED SECTIONS OF TIPM

02-N-08 Carcass Washing & Dressing Equipment

03-G-01 Dressing Procedures - Red Meat

07-B-09 Meat By-Product Harvesting - Pork

07-B-12 Intervention Strategies - Red Meat Animals

SUBJECT: Dressing Procedures - Sheep, Goats & Deer	07-B-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 58.1 Meat Facility Standards (MFS) Section 3.3	**Initial Release** Sept 1, 2009 **Page 1 of 6**

RATIONALE

A significant challenge for the production of safe food from animal sources is preventing contamination of edible products with the micro-organisms (bacteria, viruses, etc.) that are on the surface of the skin and in the intestinal tract of live animals.

Note: Studies have indicated that there is a very large population of micro-organisms on the surface of beef hides therefore sanitary skinning is one of the most important steps in the dressing of sheep, goat and deer carcasses.

The implementation of proper sanitary dressing procedures is one of the most important methods of minimizing the contamination of edible meat products.

Note: Dressing refers to all of the actions taken from the time the animal has been stunned until the carcass and all other edible products are removed from the kill floor for further storage and/or processing.

Proper conduct of each phase of dressing requires skill on the part of plant personnel.

Note: All personnel involved in the dressing process must be adequately trained and/or supervised.

The surfaces of the carcass and edible organs must not be allowed to come into contact with the surface of the skin, intestinal contents or dirty equipment.

Note: This is particularly important during the skinning and evisceration processes.

Any contaminated areas of the carcass must be trimmed out.

Note: Washing is not sufficient for the removal of visible contamination.

The intent of this document is to **outline** the **procedures for** the **proper dressing** of **sheep, goat and deer carcasses**.

OBJECTIVE/OUTCOME

Written **"Dressing Procedures"** will be on file.

All carcasses will be dressed in a manner that:

1. Reduces the risk of contamination of the carcass and its parts or other meat products.
2. Ensures that that all parts of the carcass retain their identity throughout the dressing procedure.

Note: Until such time as the inspection process has been completed the Meat Inspection Branch (MIB) Inspector must be able to match all organs and other parts with the carcass they came from at all stages of the dressing procedure. This is necessary in order to ensure an accurate post-mortem inspection is conducted and to ensure that all parts are properly disposed of in the event of a condemnation.

3. Results in the production of an unadulterated meat product.

The abattoir operator will assume responsibility for monitoring the performance of personnel to ensure that proper dressing procedures are conducted.

Note: The MIB Inspector is also responsible for monitoring dressing procedures and ensuring that the abattoir operator takes appropriate steps to correct any deficiencies.

The various steps, in the dressing procedure, will be conducted, as described in this document.

Note: Unless the carcass is going to be partially dressed, normal dressing procedures for sheep, goat and deer carcasses consist of:

a) bleeding;
b) removal of the head;
c) preparation of the head for inspection;
d) harvesting edible product from the head;
e) removal of the feet & hide;
f) removal of the udder or pizzle (penis);
g) opening of the brisket;
h) dropping the bung (anus and rectum);
i) evisceration (removal of internal organs);
j) splitting the carcass;
k) trimming;
l) washing

The following dressing procedures are considered to be “Common Industry Practice”.

Bleeding

Bleeding must occur immediately following stunning.

Note: All animals must be rendered unconscious, by an approved method, before they are bled.

Removal of the Head

Once the head has been skinned it should be removed from the carcass immediately.

Note: Care must be taken to avoid contaminating exposed tissues.

Personnel that remove heads must wash their hands, and adequately rinse and sanitize their knives after each animal.

Note: Using a “two knife” system allows one knife to be used for cutting the hide while the second knife remains clean for sticking and blood collection.

Preparation of the Head for Inspection

The head must be skinned in a manner that prevents the outer surface of the skin flaps from contacting the underlying tissues.

Note: Facilities must be provided for the removal of any remaining pieces of skin, which must be done before the head is washed.

The entire head, including the oral (mouth) and nasal (nose) cavities must be thoroughly washed before any incisions can be made in the muscles.

The tongue must be dropped and the palatine tonsils must be removed before the head is presented for inspection.

Note: This is done in order to expose the retropharyngeal lymph nodes.

Further rinsing of the mouth cavity, if required e.g. to remove any remaining ingesta (food or stomach contents), must be performed without splashing other heads.

Head hooks must be rinsed and sanitized, after every use, with water at 82^0 C.

Removal of the Feet and Hide

During removal of the feet and hide, the skin must be cut from inside out to prevent contact between the surface of the hide (hair, dirt and manure) and the underlying surface of the carcass

Note: Cutting from the inside out only applies after the starting cuts have been made. Extensive hand to carcass contact is required while skinning sheep, goat and lamb carcasses thus care must be taken to prevent carcass contamination from dirty hands, knives, and the outer surface of the skin.

Knives and other equipment used for the removal of the feet and hides must be cleaned and sanitized on an ongoing basis.

Note: A separate knife may be used make the starting cuts in order to eliminate the need for frequent rinsing and sanitizing during the skinning process.

The hair (outer) side of the hide must be rolled, or reflected away, from the carcass during the skinning process.

The skin can be left on goat carcasses providing the abattoir is properly equipped to remove all of the hair in a sanitary manner.

Note: With the exception of partially dressed carcasses all of the hair must be removed from goats that are not skinned out and the skin surface must be washed before evisceration. The hair is removed by scalding, scraping (mechanical or manual) and singing. Scald tanks must meet the same requirements for those used for hogs and must be maintained in a similar manner (see TIPM document 07-B-02 Dressing Procedures – Hogs).

Following hide removal, carcasses must be kept separated from each other to avoid contact.

Note: This separation must be maintained until each carcass has passed inspection.

Removal of the Udder or Pizzle (penis)

In females lactating (milking) udders must be removed in a manner that prevents contamination of the carcass, facilities, or equipment, from any liquid in the udder.

Note: Any areas of contamination, on the carcass must be removed by trimming.

In males the penis and prepuce (external opening for the penis) must also be removed in a manner that prevents contamination of the carcass.

Opening the Brisket

Clean saws, or cleavers, must be used to split the brisket.

Note: The saw, or cleaver, must be adequately rinsed and sanitized after each use.

The brisket can be opened before, or after, complete hide removal.

Note: If it is opened before hide removal has been completed the hide over the midline must be adequately reflected to prevent contamination.

After the brisket is opened, care must be taken to avoid puncturing the viscera, which invariably results in carcass contamination.

Note: Water must never be allowed to enter the abdominal or thoracic cavities during the washing of an un- eviscerated carcass.

Dropping the Bung

During removal of the hide, a circular cut must be made around the anus (rectal opening), taking care to leave the anal sphincter (muscle) intact. The subsequent cut freeing the anus and rectum from the surrounding tissue must be done with a clean knife.

Note: The process of cutting around the anus and freeing the rectum from the surrounding tissue is called “Dropping the Bung”.

The rectum should be tied together along with the neck of the bladder and bagged (and tied) to prevent contamination. The bag can then be dropped into the pelvic cavity.

Evisceration (removal of internal organs)

Any visible contamination must be trimmed from the midline before opening the abdominal cavity in order to prevent contamination of the viscera.

Note: Skinning must be completed before evisceration is carried out.

Care must be taken during evisceration to prevent accidental puncture of the stomach, or intestines.

Note: This is generally accomplished by opening the abdomen with the point of the knife facing 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.

Should a carcass or any of its edible organs be accidentally contaminated by stomach contents (ingesta), manure (fecal matter), pus, or any other foreign material, at any stage during the evisceration process abattoir personnel performing the procedure must immediately trim the contaminated area(s).

Unless already condemned all viscera must be placed in a clean tote, or viscera bin.

Note: If any viscera, or the carcass, is condemned the surface of the tote, truck, or bin, is considered to be contaminated as well and must be adequately rinsed and sanitized with water at a minimum temperature of 82^0 C before reuse.

The uro-genital organs (bladder, ovaries and uterus) should be removed entirely without incising them.

Note: Until such time as the inspection process has been completed the MIB Inspector must be able to match all of the viscera with the carcass it came from.

Pathological lesions (disease conditions) must not be removed (unless permitted by an inspector) until the post-mortem inspection has been completed.

Splitting the Carcass

Splitting of the carcass is optional.

Splitting can be done with a saw or cleaver.

Note: Splitting saws, or cleavers, must be sanitized any time they are used on a condemned, or held, carcass, or when the instrument becomes contaminated, by pus, or any other type of debris.

Any visible contamination must be trimmed from the back of the carcass before splitting.

To prevent cross-contamination, on the kill floor, exposed carcasses must not be allowed to come in contact with dirty equipment, or any other carcasses, prior to the final carcass inspection.

Note: Visible contamination must be removed by trimming. Washing is not considered to be as effective.

Trimming

Any defects or areas or contamination must be removed by trimming before the final carcass wash.

Note: Trimming must be done by abattoir personnel in a designated area.

The abattoir operator must implement a process control to make sure that trimming is complete and consistent.

Note: Proper trimming will leave the carcass free of stick wounds, residual pieces of hide bruises, pathological defects, contamination, blood clots or any other dressing defects.

Edible products may only be removed, from the kill floor, after final post-mortem inspection and approval.

Carcasses must be checked for cleanliness, by abattoir personnel, before washing.

Note: This check must be closely monitored by the MIB Inspector.

Final Wash

All approved carcasses must receive a final wash, with clean potable water, to remove blood and/or bone dust.

Note: It is “Common Industry Practice” to use warm water at approximately 54^0 C.

Partial Dressing (Lambs & Kid Goats)

Partial dressing, of lamb and kid carcasses, consists of not removing the skin, head, heart, liver, lungs, or kidneys.

Partial Dressing (Lambs & Kid Goats) (cont.)

Partial dressing is only allowed if:

1. The carcass weighs 25 kg, or less.
2. The skin is clean, dry and free of disease.
3. Dressing is done in a clean manner without, or only minimal, contamination.

   Note: Proper procedure requires the midline, of the skin over the belly, to be free of long hairs. This area may have to be shaved before the carcass is opened for evisceration.

4. The carcass is kept segregated from fully dressed carcasses.

   Note: This is done to prevent cross contamination of fully dressed carcasses. Unless there is a separate cooler for partially dressed carcasses a distance of 2 meters, from fully dressed carcasses, must be maintained.

5. Heart, liver, lungs and kidneys are sufficiently exposed for inspection.

   Note: These organs must be clean and free of disease and in the case of partially dressed carcasses where the sternum (breast bone) is not split the attached pluck must be hanging by the skirt to adequately expose it for inspection so that conditions such as pleuritis, adhesions and pneumonia, which are common in young animals, can be readily visualized.

Partial dressing procedures must permit a complete inspection of the carcass and all parts.

Note: If at any time during the inspection a MIB Inspector feels that the animal may have a disease condition that may not be visible on a partially dressed carcass, or if there is excessive contamination, the inspector will direct that the carcass be skinned and fully eviscerated.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Dressing Procedures-Sheep, Goats & Deer"** will be met when:

1. Written **"Dressing Procedures"** are on file.
2. Personnel responsible for conducting the dressing procedures are properly trained.
3. On site observation demonstrates that the written **"Dressing Procedures"** are being implemented and that carcasses are being dressed in a hygienic manner.

RELATED SECTIONS OF TIPM

02-N-08 Carcass Washing & Dressing Equipment

03-G-01 Dressing Procedures - Red Meat

07-B-11 Meat By-product Harvesting - Miscellaneous Species

07-B-12 Intervention Strategies - Red Meat Animals

SUBJECT: Dressing Procedures - Elk & Bison	07-B-04
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 58.1 Meat Facility Standards (MFS) Section 3.3	**Initial Release** Sept 1, 2009 **Page 1 of 6**

RATIONALE

A significant challenge for the production of safe food from animal sources is preventing contamination of edible products with the micro-organisms (bacteria, viruses, etc.) that are on the surface of the skin and in the intestinal tract of live animals.

Note: Studies have indicated that there is a very large population of micro-organisms on the surface of beef hides therefore sanitary skinning is one of the most important steps in the dressing of a beef carcass.

The implementation of proper sanitary dressing procedures is one of the most important methods of minimizing the contamination of edible meat products.

Note: Dressing refers to all of the actions taken from the time the animal has been stunned until the carcass and all other edible products are removed from the kill floor for further storage and/or processing.

Proper conduct of each phase of dressing requires skill on the part of plant personnel.

Note: All personnel involved in the dressing process must be adequately trained and/or supervised.

The surfaces of the carcass and edible organs must not be allowed to come into contact with the surface of the skin, intestinal contents or dirty equipment.

Note: This is particularly important during the skinning and evisceration processes.

Any contaminated areas of the carcass must be trimmed out.

Note: Washing is not sufficient for the removal of visible contamination.

The intent of this document is to **outline** the **procedures for** the **proper dressing** of **elk and bison carcasses**.

OBJECTIVE/OUTCOME

Written **"Dressing Procedures"** will be on file.
All carcasses will be dressed in a manner that:

a) Reduces the risk of contamination of the carcass and its parts or other meat products.

b) Ensures that all parts of the carcass retain their identity throughout the dressing procedure.

Note: Until such time as the inspection process has been completed the Meat Inspection Branch (MIB) Inspector must be able to match all organs and other parts with the carcass they came from at all stages of the dressing procedure. This is necessary in order to ensure an accurate post-mortem inspection is conducted and to ensure that all parts are properly disposed of in the event of a condemnation.

c) Results in the production of an unadulterated meat product.

The abattoir operator will assume responsibility for monitoring the performance of personnel to ensure that proper dressing procedures are conducted.

Note: The MIB Inspector is also responsible for monitoring dressing procedures and ensuring that the abattoir operator takes appropriate steps to correct any deficiencies.

The various steps, in the dressing procedure, will be conducted, as described in this document.

Note: Normal dressing procedures for elk and bison consist of:

a) bleeding;
b) removal of the head;
c) preparation of the head for inspection;
d) harvesting edible product from the head;
e) removal of the feet & hide;
f) removal of the udder or pizzle (penis);
g) opening of the brisket;
h) rodding or tying of the wesand (esophagus);
i) dropping the bung (anus and rectum);
j) evisceration (removal of internal organs);
k) splitting the carcass;
l) trimming;
m) washing.

The following dressing procedures are considered to be “Common Industry Practice”.

Bleeding

Bleeding must occur immediately following stunning.

Note: All animals must be rendered unconscious, by an approved method, before they are bled.

Removal of the Head

Once the head has been skinned it should be removed from the carcass immediately.

Note: Care must be taken to avoid contaminating exposed tissues.

Personnel who remove heads must wash their hands, and adequately rinse and sanitize their knives after each animal.

Note: Using a “two knife” system allows one knife to be used for cutting the hide while the second knife remains clean for sticking and blood collection.

Preparation of the Head for Inspection

The head must be skinned in a manner that prevents the outer surface, of the skin flaps, from contacting the underlying tissues.

Note: Facilities must be provided for the removal of any remaining pieces of skin which must be done before the head is washed.

The entire head, including the oral (mouth) and nasal (nose) cavities must be thoroughly washed before any incisions can be made in the muscles.

The tongue must be dropped and the palatine tonsils must be removed before the head is presented for inspection.

Note: This is done in order to expose the retropharyngeal lymph nodes.

Further rinsing of the mouth cavity if required [e.g. to remove any remaining ingesta (food or stomach contents)], must be performed without splashing other heads.

Head hooks must be rinsed and sanitized, after every use, with water at 82^0 C.

Harvesting Edible Products from the Head

After inspection has been complete and the corresponding carcass has been approved the tongue and head meat can be salvaged.

Note: All harvested material must be washed so that it is free of blood and chilled as quickly as possible.

When the head is transferred to the head boning station it must not be allowed to become contaminated from contact with other heads.

Note: Boning of the heads must not be done on the same surface unless that surface is cleaned and sanitized between each head. It is “Common Industry Practice” for boning of the head to be done on the hook, or rack, to ensure that liquids from the nose and throat, brain, or spinal cord tissue does not contaminate any edible portions.

The salivary glands must be trimmed away from any cheek meat that is salvaged.

Note: All cheek meat must be washed and chilled immediately after salvage.

Removal of the Feet and Hide

During removal of the feet and hide, the skin must be cut from the inside to the outside to prevent contact between the surface of the hide (hair, dirt and manure) and the underlying surface of the carcass

Note: Cutting from the inside out only applies after the starting cuts have been made.

The hair (outer) side of the hide must be rolled, or reflected away, from the carcass during the skinning process.

Knives and other equipment used for the removal of the feet and hides must be cleaned and sanitized on an ongoing basis.

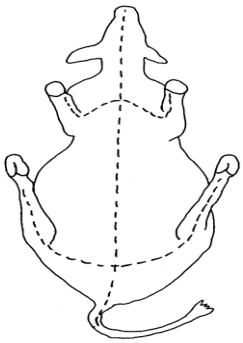
Note: A separate knife may be used to make the starting cuts in order to eliminate the need for frequent rinsing and sanitizing during the skinning process.

Unless skinning is performed on the rail the carcass is placed on a skinning bed following removal of the head.

Note: Care must be taken to avoid contamination of neck tissue as the carcass is being placed on the bed. Exposed neck tissue must not contact the floor, cradle or outside skin surfaces.

Any fecal (manure) contamination from the anus should be washed off at this point before the hide is opened to reduce the potential of spreading of bacteria onto the carcass through aerosols.

The following picture illustrates the cut lines for hide removal using the cradle/bed system.



Note: When done on the rail skinning should begin at the hind shanks and proceed downward, reflecting the hide away from the carcass.

Following hide removal, carcasses must be kept separated from each other to avoid contact.

Note: This separation must be maintained until each carcass has passed inspection.

Removal of the Udder or Pizzle (penis)

In females lactating (milking) udders must be removed in a manner that prevents contamination of the carcass, facilities or equipment from any liquid in the udder.

Note: Any areas of contamination, on the carcass must be removed by trimming.

In males the penis and prepuce (external opening for the penis) must also be removed in a manner that prevents contamination of the carcass.

Opening the Brisket

Clean saws must be used to split the brisket.

Note: The saw must be adequately rinsed and sanitized after each animal.

The brisket can be opened before, or after, complete hide removal.

Note: If it is opened before hide removal has been completed the hide over the midline must be adequately reflected to prevent contamination.

After the brisket is opened, care must be taken to avoid puncturing the viscera, which invariably results in carcass contamination.

Note: Water must never be allowed to enter the abdominal or thoracic cavities during the washing of an un- eviscerated carcass.

Rodding and/or Tying of the Wesand (esophagus)

It is "Common Industry Practice" to rod the wesand if the abdominal viscera (organs) are going to be removed separately from the thoracic viscera.

Note: Rodding separates the esophagus from the trachea, lungs and surrounding tissue and permits it to be removed through the diaphragm and thoracic cavity without rupturing.

After rodding, the esophagus must be tied (e.g. with clean butcher string), or clipped.

Note: This is done to prevent contamination of the carcass with rumen (stomach contents) during evisceration.

The rod must be adequately rinsed and sanitized between carcasses.

If rodding is not performed the esophagus must be clipped or tied before the head is removed.

Dropping the Bung

During removal of the hide, a circular cut must be made around the anus (rectal opening), taking care to leave the anal sphincter (muscle) intact. The subsequent cut freeing the anus and rectum from the surrounding tissue must be done with a clean knife.

Note: The process of cutting around the anus and freeing the rectum from the surrounding tissue is called "Dropping the Bung".

It is "Common Industry Practice" for the rectum to be tied along with the neck of the bladder and bagged (and tied) to prevent contamination. The bag can then be dropped into the pelvic cavity.

Evisceration (removal of internal organs)

Any visible contamination must be trimmed from the midline before opening the abdominal cavity in order to prevent contamination of the viscera.

Note: Skinning must be completed before evisceration is carried out.

Care must be taken during evisceration to prevent accidental puncture of the stomach or intestines.

Note: This is generally accomplished by opening the abdomen with the point of the knife facing 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.

Should a carcass, or any of its edible organs, be accidentally contaminated by stomach contents (ingesta), manure (fecal matter), pus, or any other foreign material, at any stage during the evisceration process, personnel performing the procedure must immediately trim the contaminated area(s).

Unless already condemned all viscera must be placed in a clean tote, or viscera bin.

Note: If any viscera, or the carcass, is condemned the surface of the tote, truck, or bin, is considered to be contaminated as well and must be adequately rinsed and sanitized with water at a minimum temperature of 82^0 C before reuse.

The uro-genital organs (bladder, ovaries and uterus) should be removed entirely without incising them.

Note: Until such time as the inspection process has been completed the MIB Inspector must be able to match all of the viscera with the carcass it came from.

Pathological lesions (disease conditions) must not be removed (unless permitted by an inspector) until the post-mortem inspection has been completed.

Splitting the Carcass

The carcass can be split with a saw or cleaver.

Note: Splitting saws, or cleavers, must be sanitized any time they are used on a condemned, or held, carcass, or when the instrument becomes contaminated by pus, or any other type of debris.

Any visible contamination must be trimmed from the back of the carcass before splitting.

Carcasses that hang within 15–30 cm (6”) of the floor must be quartered, trimmed, or pinned, to ensure that they do not contact the floor.

To prevent cross-contamination, on the kill floor, exposed carcasses must not be allowed to come in contact with unclean equipment (high benches, retaining bars, etc.) or any other carcasses, prior to the final carcass inspection.

Note: Visible contamination must be removed by trimming. Washing is not considered to be as effective.

Trimming

Any defects or areas or contamination must be removed by trimming before the final carcass wash.

Note: Trimming must be done by plant personnel in a designated area.

The abattoir operator must implement process control measures to make sure that trimming is complete and consistent.

Note: Proper trimming will leave the carcass free of stick wounds, residual pieces of hide, bruises, pathological defects, contamination, blood clots or any other dressing defect.

Edible products may only be removed, from the kill floor, after final post-mortem inspection and approval.

Carcasses must be checked for cleanliness, by abattoir personnel, before washing.

Note: This check must be closely monitored by the MIB Inspector.

Final Wash

All approved carcasses must receive a final wash, with clean potable water to remove blood and/or bone dust.

Note: It is “Common Industry Practice” to use warm water at approximately 54^0 C.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Dressing Procedures- Elk & Bison"** will be met when:

1. Written **"Dressing Procedures"** are on file.
2. Personnel responsible for conducting the dressing procedures are properly trained.
3. On site observation demonstrates that the written **"Dressing Procedures"** are being implemented and that carcasses are being dressed in a hygienic manner.

RELATED SECTIONS OF TIPM

02-N-08 Carcass Washing & Dressing Equipment

03-G-01 Dressing Procedures - Red Meat

07-B-11 Meat By-product Harvesting - Miscellaneous Species

07-B-12 Intervention Strategies - Red Meat Animals

SUBJECT: Dressing Procedures - Rabbits (Domestic)	07-B-05
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 58.1 Meat Facility Standards (MFS) Section 3.3	**Initial Release** Sept 1, 2009 **Page 1 of 4**

RATIONALE

A significant challenge for the production of safe food from rabbits is the prevention of contamination of edible products with the micro-organisms (bacteria, viruses, etc.) on the surface of the skin and in the intestinal tract.

The implementation of proper sanitary dressing procedures is one of the most important methods of minimizing the contamination of edible meat products.

Note: Dressing refers to all of the actions taken from the time the animal has been stunned until the carcass and all other edible products are removed from the kill floor for further storage and/or processing.

Proper conduct of each phase of dressing requires skill on the part of plant personnel.

Note: All personnel involved in the dressing process must be adequately trained and/or supervised.

The surfaces of the carcass and edible organs must not be allowed to come into contact with the surface of the skin, intestinal contents or dirty equipment.

Note: This is particularly important during the skinning and evisceration processes.

Any contaminated areas of the carcass must be trimmed out.

Note: Washing is not sufficient for the removal of visible contamination.

The intent of this document is to **outline** the **procedures for** the **proper dressing** of **domestic rabbit carcasses**.

OBJECTIVE/OUTCOME

Written **"Dressing Procedures"** will be on file.

All carcasses will be dressed in a manner that:

a) Reduces the risk of contamination of the carcass and its parts or other meat products.

b) Ensures that all parts of the carcass retain their identity throughout the dressing procedure.

Note: Until such time as the inspection process has been completed the Meat Inspection Branch (MIB) Inspector must be able to match all organs and other parts with the carcass they came from at all stages of the dressing procedure. This is necessary in order to ensure an accurate post-mortem inspection is conducted and to ensure that all parts are properly disposed of in the event of a condemnation.

c) Results in the production of an unadulterated meat product.

The abattoir operator will assume responsibility for monitoring the performance of personnel to ensure that proper dressing procedures are conducted.

Note: The MIB Inspector is also responsible for monitoring dressing procedures and ensuring that the abattoir operator takes appropriate steps to correct any deficiencies.

The various steps, in the dressing procedure, will be conducted, as described in this document.

Note: Normal dressing procedures for rabbits consist of:

a) stunning;
b) bleeding;
c) skinning;
d) evisceration (removal of internal organs);
e) final wash

Stunning

In theory any of the methods approved under section 58(2) of the AR 42/2003 can be used to stun rabbits.

Note: Section 58(2) allows animals to be stunned by:

a) a blow to the head by means of a mechanical penetrating device;
b) exposing the animal to concentrated carbon dioxide;
c) electrocution;
d) shooting;
e) other methods approved by the Director for the purpose of developing or testing a new procedure

In most facilities rabbits are rendered unconscious by a blow to the head, or neck, or by electrocution however, “Common Industry Practice” indicates that electrical stunning is the most effective method.

Note: With electrical stunning care must be taken to ensure the proper amperage is used.

Insufficient power will fail to render the animal unconscious while excessive power could cause dislocation of limbs and internal hemorrhage in the muscles.

For optimum results it is recommended that rabbits, depending on their size, be subjected to 0.5 to 0.75 Amps.

Bleeding

To ensure that the animal doesn’t regain consciousness bleeding should commence immediately after stunning.

Bleeding can be accomplished by decapitation (head removal) with a single knife cut through the atlanto-occipital joint or by cutting the throat.

Note: A bleeding time of 90 seconds is considered sufficient to ensure complete exsanguination (removal of blood).

Skinning

Skinning must be done in a manner that prevents contamination of the carcass by contact with the outside of the skin.

Note: Facility personnel doing the skinning must have clean hands and knives.

The carcass should be closely examined, during and after skinning, for any contamination. Any remaining pieces of intact pelt, or hair, should be removed by trimming.

Skinning may be done by hanging the carcass with a hook or, in the case of smaller rabbits, by using a poultry shackle.

Most rabbits are skinned in the following manner:

1. Removal of the front feet.

   Note: Removal is accomplished by cutting through the carpal (knee) joint.

2. Removal of the tail and a portion of skin around the anus.
3. Making an incision, through the skin, down the inside of one hind leg from the hock to the pubic area then extending the incision up the inside of the other leg to the level of the hock.
4. Loosening the pelt from the hind limbs and cutting it around the hocks.
5. Removal of the hide, from the hips, body and front legs, with a steady pull.
6. Removal of the un-skinned lower portion of the back legs by cutting through the tarsal (hock) joints.

Evisceration

Evisceration should proceed as follows:

1. The skinned carcass is washed prior to opening.
2. An incision is made along the mid-line from the sternum (breast bone) to the pubis (bottom of the pelvis).

   Note: The pubis and sternum can be cut easily with a knife.

3. The external genitalia (penis, or vagina) and the bladder are freed from their attachments and pulled out.
4. The intestines and stomach are then freed from their attachments and removed by continuing traction.

   Note: Following their removal the abdominal organs are placed on the inspection table, or hung over the crotch of the carcass. The kidneys may be removed, or left in the carcass.

5. The diaphragm and sternum are cut and the pluck is removed.

   Note: The pluck, which is defined as the liver, heart and lungs, may remain loosely attached to the carcass and inspected at this point or it can be removed and placed on the inspection table.

Final Wash

Following completion of the evisceration process the carcass should be closely observed for any contamination then washed.

Note: Contaminants such as fur, stomach contents, manure, etc. should be removed by trimming before the final wash.

The MIB Inspector will conduct a final inspection and may opt to tag the carcass before the final wash.

The final wash can be accomplished by hand, or by passing the carcass through a wash cabinet.

Following washing and the final inspection the carcass proceeds through the chilling process.

Note: Rabbits may be chilled by submersion in cold water or by hanging in a drip cooler.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Dressing Procedures – Rabbits (Domestic)"** will be met when:

1. Written **"Dressing Procedures"** are on file.
2. Personnel responsible for conducting the dressing procedures are properly trained.
3. On site observation demonstrates that the written **"Dressing Procedures"** are being implemented and that carcasses are being dressed in a hygienic manner.

RELATED SECTIONS OF TIPM

02-N-08 Carcass Washing & Dressing Equipment
03-G-01 Dressing Procedures - Red Meat
07-B-11 Meat By-Product Harvesting - Miscellaneous Species
07-B-12 Intervention Strategies - Red Meat Animals

SUBJECT: Dressing Procedures - Poultry	07-B-06
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1, 66(1) & 66(2) Meat Facility Standards (MFS) Section 3.3	**Initial Release** Sept 1, 2009 **Page 1 of 6**

RATIONALE

A significant challenge for the production of safe food from animal sources is preventing contamination of edible products with the micro-organisms (bacteria, molds, fungi, etc.) that are on the surface of the skin and in the intestinal tract of birds.

The implementation of proper sanitary dressing procedures is one of the most important methods of minimizing the contamination of edible meat products with dander, feathers, intestinal contents, or other extraneous material.

Note: Dressing refers to all of the actions taken from the time the bird has been stunned until the carcass and all other edible products are removed from the kill floor for further storage and/or processing.

Proper conduct of each phase of dressing requires skill on the part of plant personnel.

Note: All personnel involved in the dressing process must be adequately trained and/or supervised.

The surfaces of the carcass and edible organs must not be allowed to come into contact with the surface of the skin, intestinal contents or dirty equipment.

Note: This is particularly important during the evisceration processes.

Any contaminated areas of the carcass must be trimmed out or discarded.

Note: Washing is not sufficient for the removal of any visible contamination.

The intent of this document is to **outline** the **procedures for** the **proper dressing** of **poultry carcasses**.

OBJECTIVE/OUTCOME

Written **"Dressing Procedures"** will be on file.

All carcasses will be dressed in a manner that:

a) Reduces the risk of contamination of the carcass and its parts or other meat products.

b) Ensures that all parts of the carcass retain their identity throughout the dressing procedure.

Note: Until such time as the inspection process has been completed the Meat Inspection Branch (MIB) Inspector must be able to match all organs and other parts with the carcass they came from at all stages of the dressing procedure. This is necessary in order to ensure an accurate post-mortem inspection is conducted and to ensure that all parts are properly disposed of in the event of a condemnation.

c) Results in the production of an unadulterated meat product.

The abattoir operator will assume responsibility for monitoring the performance of personnel to ensure that proper dressing procedures are conducted.

Note: The MIB Inspector is also responsible for monitoring dressing procedures and ensuring that the abattoir operator takes appropriate steps to correct any deficiencies.

The various steps, in the dressing procedure, will be conducted, as described in this document.

Note: Normal dressing procedures for poultry consist of:

a) bleeding;

b) scalding;

c) plucking and washing;

d) removal of Oil Glands, Heads and Feet;

e) opening of the vent;

f) evisceration (removal of internal organs);

g) trimming;

h) washing of the carcass.

The following dressing procedures are “Common Industry Practice”.

Bleeding

Bleeding must take place immediately following stunning.

Note: All birds must be rendered unconscious, prior to bleeding, by an approved method. It is “Common Industry Practice” to stun poultry by electrocution.

At least 90 seconds must elapse between the bleeding knife and entering the scalding tank.

Note: This is done to ensure that the bird is dead before entering the scalding tank.

Bleeding must be conducted in a sanitary manner.

Note: A sanitizer must be available, in close proximity to the bleeding area, so that the bleeding knife can be sanitized frequently in order to minimize contamination.

Scalding

There are two critical factors involved in proper scalding:

1. Water temperature.
2. Length of time in the scalding solution.

Note: Lower temperatures or insufficient time in the scalding water is ineffective in loosening the feathers while over-scalding may result in the loss of large areas of skin during the plucking process.

For **High Capacity On-Line Scalders** "Common Industry Practice" recommendations are:

a) for **chickens**

2.5 minutes at 58^{o}C (136^{0}F) (hard scald) or 3 minutes at 52^{0}C (126^{0}F (soft scald)

b) for **ducks**

60^{0}C (140^{0}F) followed by immersion in molten wax at approximately 87 C

For **Tumbling and Kettle (Batch) Scalders** "Common Industry Practice" recommendations are:

a) for **chickens**

60 seconds at a temperature of approximately 62^{0}C (143^{0}F)

b) for **ducks & geese**

60 seconds at approximately 68^{0}C (155^{0}F) followed by immersion in molten wax at approximately 87^{0}C

Plucking and Washing

Passing the birds through the plucking machine must result in the removal of all feathers, hair, dirt, scurf, etc.

Note: For optimal performance the recommended capacity of the plucking machine should not be exceeded.

Pickers, on the plucking machine, must be set and maintained so that they do not break the skin.

All plucked carcasses must be thoroughly washed, in potable water, before any incisions are made.

Note: To reduce the attachment of Salmonella and other bacteria to the skin, spray washing of carcasses should occur within fifteen seconds after plucking and carcass transfer.

Sprays at washing stations must be of sufficient volume and pressure, to completely remove any visible foreign material, (e. g. from bleeding, or removal of the head) that may have accumulated on the surface of the carcass including the hocks.

All tables, or other surfaces, used to hold poultry waiting to be re-hung on the line must be kept as clean as possible.

Note: There must not be any buildup of extraneous material (e. g. feathers or blood) and birds must not be allowed to accumulate while waiting to be re-hung.

Removal of the Uropygial (Oil) Gland, Head and Feet

Oil glands, heads and feet may be removed before or after evisceration.

Note: These structures are not removed when the birds are "Hong Kong Dressed".

The following conditions apply to "Hong Kong (head and feet-on) Dressed" poultry carcasses:

1. Heads and feet must not present a contamination hazard.
2. The oral (mouth) and nasal (nose) cavities must be free of extraneous material before chilling.
3. The epidermis and toenails are removed before chilling.
4. Feet must be free of fecal (manure) contamination before venting and/or opening of the abdominal cavity.
5. Processing and trimming defects are removed before chilling.
6. The carcass is labeled to indicate that the oil gland is still present.

Note: The oil gland must be removed if portions of "Hong Kong Dressed" carcasses are going to be incorporated into meat products such as mechanically deboned meat.

In poultry that are not "Hong Kong Dressed" the oil glands, heads and feet must be removed following scalding and plucking.

Note: Heads must not be allowed to accumulate and there must be no build up of debris on the head puller.

Hock cutting devices must be maintained so that there is no build up of contamination that will be transferred to the cut surfaces of the hock.

Note: Water sprays, of sufficient volume and pressure, must be directed at the cutting surface of the cutting device.

Feet that are left on the carcass, when it is presented for post-mortem inspection, must be free of any visible contamination (e.g. manure).

Automatic oil sac cutters must be set so that they effectively remove the oil sacs from the majority of birds as they pass through.

Note: Oil sac cutters must be equipped with an adequate supply of water to prevent the accumulation of visible contamination.

Oil glands are inedible products.

Evisceration (removal of internal organs)

Poultry may be eviscerated manually, or mechanically.

Regardless of which method is used birds must be eviscerated in a manner that prevents fecal (manure) contamination.

Note: Automatic venting equipment must be able to consistently open birds without causing contamination and must have a spray, of adequate volume and pressure, to remove all extraneous material from the machine.

The venting incision should be no larger than what is required to permit evisceration.

Note: Any water that accumulates in the vent area must be removed prior to opening the abdomen.

Hands and/or eviscerating equipment must be visibly clean before entering the abdominal cavity.

Note: Automatic evisceration machines must have a continuous supply of water, with enough pressure and volume to keep them free of extraneous material.

Cross contamination between carcasses should be prevented.

Note: Heads and necks must not drag over equipment as the birds move along the evisceration line.

In cases where the evisceration equipment is designed to completely detach the viscera the cavity and viscera may be sprayed with water providing:

1. The venting, opening and evisceration operations are controlled as part of a written program.
2. Pressure and total volume of water applied to the carcass during venting, opening and evisceration is measured by a gauge and water meter.
3. Post-mortem examinations are not compromised from excessive matter in the cavity resulting in the lost of any significant evidence of disease.

Note**:** Abattoirs lacking equipment that fully separates the viscera from the carcass are not permitted to shower carcasses or viscera during the evisceration process.

Automatic croppers must be equipped with a sufficient volume and pressure of water to prevent the accumulation of extraneous material on them.

Carcasses must be hung in a way that allows the MIB Inspector to observe the internal cavity, viscera and external surface.

Note: All 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.

Trimming and Salvage

All processing defects and contamination must be removed before the carcasses are chilled.

Note: If trimming is done manually a sanitizer must be available for the trimmer.

Abattoir operators may elect to salvage portions of carcasses accidentally contaminated with gastrointestinal contents at an off-line salvage and/or reprocessing station.

Note: Salvage operations must meet the following requirements:

a) adequate facilities are available for the salvage operations to be conducted;

b) salvage operations are conducted in a timely and sanitary manner;

c) carcasses are handled according to disposition criteria as set by the MIB Inspector;

d) salvage/reprocessing stations do not become overloaded with carcasses;

e) edible product is not contaminated by contact with inedible product or dirty equipment.

Washing

All carcasses must be washed, internally and externally, with sufficient quantity and pressure of clean potable water to ensure the removal of any visible contamination prior to chilling.

Note: If the inside and outside of the carcass is washed manually the thoracic inlet must be penetrated to ensure adequate washing and drainage.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Dressing Procedures-Poultry"** will be met when:

1. Written **"Dressing Procedures"** are on file.
2. Personnel responsible for conducting the dressing procedures are properly trained.
3. On site observation demonstrates that the written **"Dressing Procedures"** are being implemented and that carcasses are being dressed in a hygienic manner.

RELATED SECTIONS OF TIPM

02-N-07 Evisceration Line & Equipment

02-O-02 Poultry Salvaging Station

03-G-02 Dressing Procedures - Poultry

07-B-10 Meat By-product Harvesting - Poultry

SUBJECT: Dressing Procedures - Ratites	07-B-07
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1, 66(1) & 66(2) Meat Facility Standards (MFS) Section 3.3	**Initial Release** Sept 1, 2009 **Page 1 of 6**

RATIONALE

A significant challenge for the production of safe food, from ratites, is the prevention of contamination of edible products with the micro-organisms (bacteria, molds, fungi, etc.) on the surface of the skin, feathers and in the intestinal tract.

Note: Ratites are large flightless birds. In Canada the most common species are ostriches, emus and rheas.

The implementation of proper sanitary dressing procedures is one of the most important methods of minimizing the contamination of edible meat products with dander, feathers, intestinal contents, or other extraneous material.

Note: Dressing refers to all of the actions taken from time the bird has been stunned until the carcass and all other edible products are removed from the kill floor for further storage and/or processing.

Proper conduct of each phase of dressing requires skill on the part of plant personnel.

Note: All personnel involved in the dressing process must be adequately trained and/or supervised.

The surfaces of the carcass and edible organs must not be allowed to come into contact with the surface of the skin, intestinal contents or dirty equipment.

Note: This is particularly important during the evisceration processes.

Any contaminated areas of the carcass must be trimmed out or discarded.

Note: Washing is not sufficient for the removal of any visible contamination.

A problem unique to the dressing of ratites is determining whether the bird has an E.I.D. (Electronic Identification Device). If one is present it has to be found and removed.

The intent of this document is to **outline** the **procedures for** the **proper dressing** of **ratites**.

OBJECTIVE/OUTCOME

Written **"Dressing Procedures"** will be on file.

All carcasses will be dressed in a manner that:

1. Reduces the risk of contamination of the carcass and its parts or other meat products.
2. Ensures that all parts of the carcass retain their identity throughout the dressing procedure.

Note: Until such time as the inspection process has been completed the Meat Inspection Branch (MIB) Inspector must be able to match all organs and other parts with the carcass they came from at all stages of the dressing procedure. This is necessary in order to ensure an accurate post-mortem inspection is conducted and to ensure that all parts are properly disposed of in the event of a condemnation.

3. Results in the production of an unadulterated meat product.

The abattoir operator will assume responsibility for monitoring the performance of personnel to ensure that proper dressing procedures are conducted.

Note: The MIB Inspector is also responsible for monitoring dressing procedures and ensuring that the abattoir operator takes appropriate steps to correct any deficiencies.

The various steps, in the dressing procedure, will be conducted, as described in this document.

Note: Normal dressing procedures for ratites, consist of:

a) bleeding;
b) feather removal;
c) venting;
d) shank and feet removal;
e) removal of the hide;
f) location and removal of Electronic Identification Devices (EIDs);
g) head and neck removal;
h) evisceration (removal of internal organs);
i) trimming;
j) washing of the carcass

The following dressing procedures are considered to be “Common Industry Practice”.

Ratites can be dressed on the rail or on a skinning bed. Regardless of the method used carcasses must not be allowed to make contact with each other as they move from the bleeding area to the last inspection point.

Bleeding

Bleeding must take place within 90 seconds of stunning

Note: All birds must be rendered unconscious, prior to bleeding, by an approved method.

To promote better bleeding in ostriches it is best to sever the major vessels (jugular veins and carotid arteries) in the lower part of the neck near the inlet to the thorax (chest cavity).

Note: Care must be taken to ensure that the thoracic cavity is not penetrated.

Emus and rheas are generally bled by cutting the major vessels in the upper part of the neck similar to turkeys.

Bleeding must be conducted in a sanitary manner including sanitizing the bleeding knife between each carcass.

Note: A sanitizer must be available, in close proximity to the bleeding area.

The bleeding rail must be high enough to avoid contamination of the neck and any other portion of the carcass from contact with the floor.

Feather Removal

Feathers may be left on the carcass or they may be removed after stunning and bleeding and before skinning.

Note: If the feathers are going to be left on, the midline of the abdomen has to be cleaned (plucked) before the abdomen is opened for evisceration.

Dry hand picking, or clipping, are both acceptable ways of removing feathers.

Carcasses with the feathers removed must be washed before the abdomen is opened.

Note: All evidence of feathers and dander must be removed prior to evisceration.

Damaged areas of skin areas may require trimming.

Contamination of the evisceration area with dander is unacceptable and must be prevented.

Note: To prevent this all feathers must be collected in an acceptable manner and promptly moved to the inedible area.

Venting

The vent must be carefully dissected from its attachment, encased in a plastic bag, and securely tied.

Note: This is done to prevent leakage of feces (manure) during skinning and evisceration procedures.

Shank and Feet Removal

Skinning begins with the off-hoist leg. The skin is carefully reflected at a point distal to (below) the hock joint. The tarsal-metatarsal bones are cut just below the hock joint.

The carcass can then remain on-line or it can be lowered onto a skinning bed.

The second leg is removed in the same manner as the first one.

Note: If this is done on-line the first leg should be tied or otherwise fastened to prevent the carcass from falling off the gambrel while the second foot is removed.

If metatarsal (shank) and foot tissues are going to be saved, as edible material, then the shank and feet must be presented for post-mortem inspection.

Note: Shanks and feet that are not being salvaged for edible purposes do not need to be presented for inspection unless they were found to be affected with pathological (disease) conditions during the ante-mortem (before death) inspection.

Skinning

During the process of skinning the skin must be reflected away from the carcass in a manner, which prevents contact between the tissues of the carcass and the outer surface of the hide.

Note: Filtered air may be injected under the hide to facilitate skinning. Equipment used for this purpose must be approved by the MIB. The needle must be sanitized between each use and back-siphoning must be prevented in order to prevent the introduction of contamination under the skin.

After the legs have been skinned the breast and abdomen may be skinned and reflected.

Finally, the remaining skin should be removed manually or pulled off, in a downward direction, with a mechanical hide puller.

Note: The hide from the back legs must remain reflected back as the breast and abdomen is being skinned.

Removal of Electronic Identification Devices (EIDs)

EIDs must be detected and removed from the carcass.

Note: The abattoir operator is responsible for determining whether an EID (microchip) has been implanted in the bird.

Birds should not be accepted for slaughter unless the owner provides a written statement indicating that the bird has or hasn't been implanted.

If the bird has been implanted information must be provided which would indicate the location of the implant, the type of implant and the type of scanner that is most likely to be successful in detecting the implant.

A combination of manual inspection and scanning is employed to detect any EIDs.

Note: In Canada, most EIDs are implanted close to the skull but they often migrate thus it is not unusual to find them at the level of the thoracic inlet. Inspectors must be vigilant. Some birds may have old EIDs, which are "dead" and undetectable with electronic scanners.

All EIDs must be removed either by locating them with an electronic scanner or by removing the part that was implanted (the entire neck).

Note: Any carcass that is suspected of having an EID will not pass the post-mortem inspection until the device is found. All EIDs must be properly disposed of to ensure that they don't gain access to meat products intended for use in human or animal food.

Head & Neck Removal

The skin of the neck must be reflected from the neck, by hand, or pulled down during the hide removal process.

The neck is then incised longitudinally (lengthwise) to expose, strip, and tie the esophagus.

Note: The identity of the head and neck and the carcass they came from must be maintained until all inspections have been completed. The head must be carefully handled, during removal, in order to prevent contamination of edible parts.

If the neck is going to be saved as edible product, the head is removed and placed adjacent to the viscera inspection station.

Note: The neck and trachea may remain attached to the carcass providing the rail is high enough to prevent contact with the floor. Alternatively, the neck and trachea may be removed and presented for inspection with the edible viscera.

If the neck is not going to be saved, as edible product, the neck and trachea with the head attached can be placed adjacent to the viscera inspection station after removal from the carcass.

Evisceration (removal of internal organs)

Evisceration may be done on-line, or on a dressing bed.

Evisceration begins with a midline incision into the abdomen caudal (posterior, or behind) to the breastplate.

Note: Caution should be taken to avoid perforating the intestines.

When ostriches are eviscerated on-line, it is suggested to start by removing the breastplate (rattus) then pulling it down to expose the thoracic viscera (internal organs).

Note: This is accomplished by cutting the ribs on each side of the plate.

In rheas and emus, the breastbone can be split on the midline.

Note: The MIB Inspector should be given a chance to view the air sacs before any of the thoracic viscera is removed.

The heart, lungs and liver should be removed before the rest of the abdominal organs are removed.

Note: This is done to prevent the chance of contamination from rupture of the friable (fragile) intestines.

The intestines are removed by pulling them through the vent opening in the abdominal cavity.

Note: The vent should have been bagged before the start of skinning.

The liver (if not removed already) and spleen is removed with the intestinal tract. They are then separated and placed in the viscera inspection tray.

Note: The intestinal tract must be placed in a separate tray for inspection.

The heart and lungs are removed (if not done previously) as a unit and placed with the liver and spleen in the viscera inspection tray.

Note: The kidneys must be observed in the carcass by an inspector. After this has been done they are removed from their crypts and placed in the viscera tray for further inspection.

Any portions of the carcass that are accidentally contaminated with stomach, or intestinal, contents must be trimmed without delay during the evisceration procedure.

Trimming

Any visible areas of contamination as well as stick wounds, blood clots, and bruised tissue must be removed by trimming.

Washing

The final step in the dressing procedure is a thorough wash followed by an examination, by abattoir personnel, to check for cleanliness.

Note: The MIB Inspector will supervise this activity.

Following the final wash the carcass must be promptly chilled.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Dressing Procedures- Ratites"** will be met when:

1. Written **"Dressing Procedures"** are on file.
2. Personnel responsible for conducting the dressing procedures are properly trained.
3. On site observation demonstrates that the written **"Dressing Procedures"** are being implemented and that carcasses are being dressed in a hygienic manner.

RELATED SECTIONS OF TIPM

07-B-11 Meat By-product Harvesting – Miscellaneous Species

SUBJECT: Meat By-product Harvesting - Beef	07-B-08
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section 3.3	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2010 **Page 1 of 6**

RATIONALE

All by-products intended for human consumption must be handled in a manner that ensures they are safe.

Note: To ensure that by-products are safe the following fundamental principles must be observed as they are harvested:

a) the identity of the by-products must be maintained until the corresponding carcass is inspected and approved;

b) they will be handled in a hygienic manner and chilled promptly to prevent contamination and/or decomposition;

c) if a particular kind of by-product from several animals is collected in one container and one of the carcasses is condemned, all by-products harvested in that particular container must be condemned;

d) all by-products must be prepared, packaged and stored in an acceptable sanitary manner.

The intent of this document is to **outline** the **procedures** for the **proper harvesting** of **beef by-products**.

OBJECTIVE/OUTCOME

The facility will have appropriate facilities and equipment for the separation, chilling, packaging, labeling, and storage of meat by-products.

Slaughter, dressing, trimming and washing of a carcass and its parts will be done in a manner that:

1. Reduces the risk of contamination of the carcass, all edible organs, or other meat products.
2. Ensures that a complete post-mortem inspection has been completed on the carcass and all of its parts.
3. Ensures that proper dispositions, of all edible by-products, have been made, following the post-mortem inspection.

Note: To ensure proper disposition the identity of all beef by-products must be maintained until the post-mortem inspection has been completed on the carcass from which they originated.

The abattoir operator will ensure that **all by-products** are:

1. Taken **from approved carcasses**.

2. **Free of lesions** (abnormalities).
3. **Properly prepared** to ensure freedom from contamination.

Operators shall ensure and demonstrate in an ongoing manner that they are achieving compliance with the following cooling performance standards for red meat offals:

(1) The cooling of offal is continuous at the level of it's surface of concern

(2) The surface of concern is at 7 °C or less within 12 hours after the offal is harvested;

(3) Offal temperatures must continue to go down in a continuous manner to 4 °C or less after the conditions in (2) are met. This should take place as quickly as possible, and the cooling media (during cooling from 7 °C to 4 °C) shall be maintained at a temperature of 4 °C or less.

Note: Responsible abattoir personnel must monitor the rate of chilling of by-products.

By-products must not be permitted to remain in un-refrigerated areas for any extended periods of time.

The abattoir operator will assume responsibility for monitoring the performance of abattoir personnel to ensure they follow proper procedures.

Note: The MIB Inspector is responsible for monitoring procedures and ensuring that the plant operator takes appropriate steps to correct any deficiencies.

Individual by-products will be handled as described below.

Brains

Brains may be prepared, as an edible by-product providing **THEY ARE NOT**:

1. From animals that are over thirty months (OTM) of age.
2. Contaminated with bone splinters, bullet particles, hide, hair, etc.

Note: Brains from animals stunned with a penetrating percussion pistol can be used for human consumption providing they are trimmed appropriately.

Brains cannot be used for human, or animal, food if lead, or other types of fragile bullets were used to stun the animal.

Brains that contain particles of skin, bone or blood clots can be salvaged for animal food following removal of these items.

Brains intended for human consumption must be washed and refrigerated without delay following inspection.

Casings

The intestines, bladder and esophagus can be used for the production of casings providing they are free of any pathological lesions.

Note: Preparation of casings should be done in an area separate from the kill floor.

Acceptable methods of producing casings are too numerous to get into detail in this document.

Note: Details of casing preparation including separation, cleaning, sliming, washing, testing, salting, etc. should be reviewed in appropriate textbooks on meat hygiene and documented in the facility's written salvaging procedures.

Fatty Tissues

The sanitary collection of clean fatty tissue, from approved dressed carcasses and approved detached portions, shall be carried out as quickly as possible.

Note: Fat taken from carcasses before they have been approved is not suitable for use as an edible by-product.

All fatty tissues, to be used as edible product, must be refrigerated, or rendered, immediately after collection.

Note: Fatty tissues intended to be used in the production of partially defatted tissue must not contain bone.

Feet/Hooves

Feet may be harvested for human food provided they are:

1. Taken from approved carcasses.
2. Free of any visible lesions.
3. Cleaned with hot water (scalded) to ensure the complete removal of any manure, hair, or other foreign material from the hoof and adjacent hide.

   Note: The proximal (upper) open end of the foot will become contaminated during the scalding process. This surface contamination must be removed by trimming following cleaning.

   Ethnic groups that use beef feet, as edible material, are only interested in the tissues located within the hoof; therefore the complete removal of the hoof sole, wall, and adjacent skin is an alternative method of processing.
4. Placed in a cooler as soon as processing has been completed.

   Note: If there is any concern about possible cross contamination of other edible product, in the cooler, the MIB Inspector may require that the hooves be placed in a suitable container before being placed in the cooler.

Heads

Intact heads are suitable for retail sale providing they have been skinned and are visibly clean, and the oral cavity and nasal passages are flushed.

Hearts

Hearts may be prepared, as an edible by-product providing they are properly trimmed and opened to permit the complete removal of all blood clots.

Hearts must be trimmed to remove the major blood vessels (aorta, pulmonary artery, vena cava, etc.) within 2 cm of their origin and to remove the os cordis if necessary.

Note: The os cordis is a bone located in the heart of mature beef animals. If not done at the abattoir, removal must be carried out at a suitable facility.

The term “boneless beef” can only be applied to beef hearts from which the os cordis has been removed.

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

After washing, hearts must be drained and refrigerated.

Intestines, Bungs, Reproductive Organs and Gall Bladders/Bile

Intestines, bungs, reproductive organs and gall bladder/bile are usually harvested for ethnic trade.

Note: To be harvested these by-products must be free of pathological lesions.

Mammary glands (udders) must be non-lactating (not producing milk).

Rinsed product must be examined by responsible plant personnel, prior to further handling, (e.g. bungs must be salted following cleaning).

Note: The MIB Inspector is responsible for monitoring the effectiveness of the procedures that are conducted.

Kidneys

Kidneys are suitable for human consumption providing they are free of any pathological lesions.

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

Livers

Beef livers for human consumption must be prepared as follows:

1. The gall bladder has to be removed.

   Note: Care must to be taken to avoid any spillage of bile.

2. Small lesions such as dry adhesions, parasite scars, etc. can be removed by trimming.

   Note: Livers that are more severely affected with these, or other, conditions may be salvaged for animal food.

Approved livers must be chilled by immersion in cold running water or by air chilling in a cooler.

Note: Livers are hung on racks, or placed in trays, when placed in a cooler for air chilling.

Livers may also be packed and frozen.

Lungs

Lungs are suitable for human consumption providing they are free of any pathological lesions or contamination.

Note: The trachea and main bronchi of the lungs must be opened for inspection to ensure that they are free of parasites or ingesta (stomach contents).

Lungs that have been approved for human consumption, or animal food, must be chilled before packaging, or alternatively they can be packed and frozen.

Spleens

Spleens are suitable for human consumption providing they are free of any pathological lesions or contamination.

Spleens that have been approved for human consumption, or animal food, must be chilled before packaging, or alternatively they can be packed and frozen.

Stomach [Abomasum, Omasum, Reticulum, and Rumen (Paunch/Green Tripe)]

These compartments of the bovine stomach are suitable for human consumption providing they are free of pathological lesions.

Stomachs must be handled in the following manner:

1. The stomach contents are removed.
2. The raw product is washed inside and out.

   Note: Any contamination, of the attached fat, that isn't removed by washing must be trimmed.
3. The rinsed product must be examined by responsible abattoir personnel, prior to further handling (e.g. chilling and packing in the case of raw product, or scalding in the case of other product).

   Note: The MIB Inspector is responsible for monitoring the effectiveness of the procedures being followed.
4. The mucosal (inner) lining of the rumen (processed tripe) must be entirely removed before the product is chilled.

The preparation of this material should, as far as plant facilities permit, be carried out in a location separate from the slaughter floor.

The use of automated equipment requires the prior approval of the MIB Area Manager.

Note: This approval is required to ensure that approved materials and procedures are used.

Tails

Meat from the tail of cattle, of any age, is suitable for human consumption providing it is from an approved carcass.

Note: 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.

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

Approved tails must be placed in containers, or hung on racks, for refrigeration.

Thymus (Sweetbread)

The thymus gland, of cattle, is an edible product providing it is free of any pathological (disease) lesions.

Approved thymus glands must be washed, to remove blood and blood clots, and chilled before packaging, or packed and frozen.

Tongues

The tongue must be trimmed to remove any portions of the larynx, epiglottis, or tonsils.

Note: The severed base of the tongue may also have to be trimmed if there is any contamination.

Tongues must be washed prior to chilling.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Meat By-product Harvesting- Beef"** will be met when:

1. Up-to-date, facility specific, written "**Meat By-Product Harvesting Procedures**" are on file.

   Note: These procedures must:

   (a) have detailed instructions relating to the all items being salvaged, including aspects of the collection, packaging, labeling and storage of meat by-products

   (b) detail the facilities, areas and equipment that will be used, and the operational controls that will be in place, including chilling and sanitary requirements.

2. Personnel responsible for harvesting the meat by-products are properly trained.
3. On site observation demonstrates that the written **"By-product Harvesting Procedures"** are being implemented and that by-products are harvested in a hygienic manner.

RELATED SECTIONS OF TIPM

03-G-01 Dressing Procedures - Red Meat

07-B-01 Dressing Procedures - Cattle & Calves

10-B-01 Salvage for Animal Food

10-B-02 Salvage for Miscellaneous Purposes

ATTACHMENT-TIPM DOCUMENT 07-B-08

APPENDIX 1 – DISPOSITION FOR ANIMAL FOOD

CONDITION	COMMENTS/UTILIZATION
Abscesses 001 Module 6-1-1	**LIVERS** One abscess-Condemned liver is suitable for animal food once abscess has been removed. Multiple abscesses- Condemned liver is not suitable for animal food. **CARCASS** Numerous abscess or systemic effect, carcass is suitable for animal food after removal of lesions or affected parts.
Actinobacillosis (Wooden Tongue) 401 Module 6-1-6	Individual **condemned heads** and heads from carcasses condemned for emaciation, or other systemic changes, **are not suitable for animal food**.
Actinomycosis (Lump Jaw) 403 Module 6-1-131	Condemned **livers are not suitable for animal food**. Condemned **carcasses are suitable** for animal food **following removal of the liver**.
Adhesions - 511 Peritonitis 571 Module 6-1-177	In acute peritonitis, condemned material is **suitable** for animal food **following removal of the lesions providing there is no evidence of septicemia.** Condemned **material from carcasses with a septicemia is not suitable for animal food.** Material condemned for adhesions is suitable for animal food.
Adhesions - 511 Pleuritis 577 Module 6-1-180	Material from carcasses condemned for acute pleuritis is **suitable** for animal food **following removal of the lesions** providing there is no evidence of septicemia. Condemned **material from a carcass with septicemia is not suitable for animal food**. Material condemned for adhesions is suitable for animal food.
Anemia 910 Module 6-1-10	Condemned materials are suitable for animal food provided the anemia is not accompanied by septicemia.
Arthritis 512 Module 6-1-12	Condemned materials are **suitable for animal food following removal of affected joints** providing there are no indications of a concurrent septicemia.
Ascaris suum (Milk Spots - Pig Round Worm) 790 Module 6-1-167	Condemned livers are suitable for animal food because the lesions are only scars.

Ascities 320 Module 6-1-16	Condemned materials are suitable for animal food.
Atrophic Rhinitis 455 Module 6-1-192	Condemned **heads are not suitable for animal food** primarily because of the association between cats and atrophic rhinitis.
Atrophy 210 Module 6-1-20	Condemned material is suitable for animal food.
Black Leg 410 Module 6-1-22	Condemned **material is not suitable for animal food**.
Bone Infection (Osteomyelitis) 150 Module 6-1-166	Condemned material is **suitable** for animal food **following removal of affected bones and lymph nodes.**
Bovine Squamous Cell Carcinoma (Cancer Eye) 620 Module 6-1-227	Condemned material, other than heads with abscessed or necrotic lesions, is suitable for animal food.
Bovine Virus Disease (BVD)/ Erosions 094 Module 6-1-79	Condemned material is suitable for animal food.
Bruising 051 Module 6-1-24	Condemned material is suitable for animal food.
Bursitis (Hygroma) 080/081 Module 6-1-26	Condemned material is suitable for animal food.
Calcification 710 Module 6-1-29	Condemned material is suitable for animal food.
Calculi (stones) 355 Module 6-1-210	Affected tissues are suitable for animal food.
Cannibalism 007 Module 6-1-212	Condemned material is **suitable** for animal food **following removal of abscesses**.
Caseous Lymphadenitis (CLA) 420 Module 6-1-31	Condemned material is **suitable** for animal food **following the removal of the abscessed lymph nodes.**
Cellulitis 800 Module 6-1-35	Condemned material is **not suitable for animal food**.
Cirrhosis 521 Module 6-1-37	Condemned livers are suitable for animal food.
Coccidiosis 720 Module 6-1-39	Condemned material is suitable for animal food.

Congestion 523 Module 6-1-42	Condemned material is suitable for animal food.
Congestive Heart Failure (Ascities - 320 & Edema - 340) Module 6-1-16	Condemned materials are suitable for animal food.
Cryptorchid (Ridgeling) 060 Module 6 – 1 - 195	Condemned material is suitable for animal food.
Cysticercosis 735 Module 6-1-44	**Materials condemned for C. ovis, pisiformis, or tenuicollis are not suitable for animal food.**
Cysts 092 Module 6 -1-54	Condemned materials are suitable for animal food.
Dermatitis 810 Module 6-1-56	In general **most materials**, condemned for various conditions in this section **are not suitable for animal food**.
Diamond Skin Disease (Erysipelas) 435 Module 6-1-61	Condemned material is **not suitable for animal food**.
Edema 340 Module 6-1-16	Condemned materials are suitable for animal food.
Emaciation (Serous Atrophy of Fat) 220 Module 6-1-64	Condemned materials are suitable for animal food.
Emphysema 082 Module 6-1-69	Condemned materials are suitable for animal food.
Endocarditis 572 Module 6-1-72	Condemned material is **not suitable for animal food.**
Enteritis 530 Module 6-1-75	**Condemned material is not suitable for animal food.**
Eosinophilic Myositis 551 Module 6-1-78	**Condemned material is not suitable for animal food.**
Erosions 094 Module 6-1-79	Condemned materials are suitable for animal food.
Erythemia 523 Module 6-1-42	Condemned materials are suitable for animal food.
Erythropoietic Porphyria (Osteohemachromatosis) 130-Module 6-1-162	Condemned materials are suitable for animal food.

Exostosis 120 Module 6-1-82	Condemned materials are suitable for animal food.
Fatty Infiltration 230 Module 6-1-83	Condemned materials are suitable for animal food.
Fibrosis 968 Module 6-1-88	Condemned materials are suitable for animal food.
Fistula 002 Module 6-1-89	Condemned material is **not suitable for animal food.**
Foot Rot (Pododermatitis) 861 Module 6-1-91	Condemned materials are suitable for animal food.
Foreign Body 850 Module 6-1-92	Condemned materials are suitable for animal food.
Foot and Mouth Module 6-1-79	
Frostbite 049 Module 6-1-95	Condemned materials are suitable for animal food.
Gangrene 260 Module 6-1-97	Condemned material is **not suitable for animal food.**
Gastritis 535 Module 6-1-99	Condemned material is **not suitable for animal food.**
Goiter (Hypertrophy) 830 Module 6-1-116	Condemned materials are suitable for animal food.
Granuloma 623 Module 6-1-101	Condemned materials are suitable for animal food.
Granulomatous Lymphadenitis 495 Module 6-1-101	**Affected lymph nodes are not suitable for animal food** but other condemned materials are suitable.
Hardware Disease (Traumatic Reticulitis Complex) 855 Module 6-1-104	Condemned material is **suitable** for animal food **following removal of the lesions** unless there are signs of septicemia. **If there is evidence of septicemia condemned material is not suitable** for animal food.
Hemangioma 625 Module 6-1-230	Condemned materials are suitable for animal food.
Hematoma and Hemorrhage (Major)	

053 – Hematoma for clotted blood 576 – Hemorrhage/Major for large accumulations of unclotted blood Module 6-1-107	Condemned materials are suitable for animal food.
Hemorrhage (Petechial and Ecchymotic) 575 – Hemorrhage (Petechial) for pinpoint or petechial, hemorrhages 574 – Hemorrhage/Splash (Ecchymosis) for larger ecchymotic hemorrhages Module 6 -1 - 109	Condemned materials are suitable for animal food.
Hernias 095 Module 6 -1 -198	Condemned material is **suitable** for animal food, **following removal of any peritonitis lesions**, providing emaciation is the primary reason for condemnation.
Hydatid Cysts 089 Module 6-1-112	Condemned material is **not suitable for animal food.**
Hydronephrosis 563 Module 6 -1- 114	Condemned material is **not suitable for animal food.**
Hyperkeratosis 810 (Dermatitis) Module 6-1-57	In general **most materials**, condemned for various conditions in this section **are not suitable for animal food**.
Hypertrophy 830 Module 6-1-116	Condemned materials are suitable for animal food.
Icterus (Jaundice) 920 Module 6-1-123	**Providing there is no indication of septicemia** condemned material is suitable for animal food.
Injection Site Lesions 065 (Antibiotic Residue) 265 (Injection Site) Module 6-1-120	Condemned materials are suitable for animal food.
Intestinal Emphysema (Pigs) 082 Module 6-1-69	Condemned materials are suitable for animal food.
Jaundice (Icterus) 920 Module 6-1-123	**Providing there is no indication of septicemia** condemned material is suitable for animal food.
Joint III (Navel Infection/Omphalophlebitis) 445 Module 6-1-148	Providing there is no septicemia **condemned carcasses are suitable** for animal food **following removal of the lesions**. **Carcasses affected with septicemia are not suitable for animal food.**
Kidney Cysts 092 Module 6 -1-54	Condemned materials are suitable for animal food.

Liver Flukes 760 Module 6-1-127	Condemned **livers are not suitable for animal food**. Condemned **carcasses are suitable** for animal food **following removal of the liver**.
Lump Jaw (Actinomycosis) 403 Module 6-1-131	Condemned **livers are not suitable for animal food**. Condemned **carcasses are suitable** for animal food **following removal of the liver**.
Lymphadenitis 546 Module 6-1-134	Condemned material is **not suitable for animal food.**
Lymphosarcoma 635 Module 6-1-232	Condemned materials are suitable for animal food.
Mange (Dermatitis) 810 Module 6-1-56	In general **most materials**, condemned for various conditions in this section **are not suitable for animal food**.
Mastitis 547 Module 6-1-137	Condemned **udders are not suitable for animal food.** **Condemned carcasses are suitable** for animal food following removal of the udder and **providing there is no evidence of septicemia**.
Melanoma 645 Module 6-1-236	Condemned materials are suitable for animal food.
Melanosis 071 Module 6-1-140	Condemned materials are suitable for animal food.
Mesotheliomas 660 Module 6-1-242	Condemned materials are suitable for animal food.
Metritis 548 Module 6-1-143	Providing there is no evidence of a septicemia condemned material is **suitable for animal food following removal of the uterus.**
Myositis 550 Module 6-1-146	Condemned material is **not suitable for animal food.**
Navel Infection (Omphalophlebitis) 445 Module 6-1-148	Providing there is no septicemia **condemned carcasses are suitable** for animal food **following removal of the lesions**. **Carcasses affected with septicemia are not suitable for animal food.**
Nephritis 560 Module 6-1-151	Condemned kidneys are **not suitable for animal food.** Other condemned material is **suitable** for animal food **following removal of the kidneys**.
Neurofibroma 660-Module 6-1-241	Condemned materials are suitable for animal food.

Neurological Disorders Module 6-1-153	Condemned material is **not suitable for animal food.**
Ochranosis 071 Module 6-1-142	Condemned materials are suitable for animal food.
Orchitis 570 Module 6-1-161	Carcasses condemned for emaciation are **suitable** for animal food **following removal of the testicles.**
Osteohemachromatosis (Pink Tooth) 130 Module 6-1-162	Condemned materials are suitable for animal food.
Osteomalacia 141 Module 6-1-164	Condemned materials are suitable for animal food.
Osteomyelitis 150 Module 6-1-166	Condemned material is **suitable** for animal food **following removal of affected bones and lymph nodes.**
Pericarditis 571 Module 6-1-175	Condemned material is **not suitable for animal food.**
Peritonitis 573 Module 6-1-177	In acute peritonitis, condemned material is **suitable** for animal food **following removal of the lesions providing there is no evidence of septicemia.**
	Condemned **material from carcasses with a septicemia is not suitable for animal food.**
	Material condemned for adhesions is suitable for animal food.
Pityriasis Rosea 810 Module 6-1-58	Condemned material is **not suitable for animal food.**
Pleuritis 577 Module 6-1-180	Material from carcasses condemned for acute pleuritis is **suitable** for animal food **following removal of the lesions** providing there is no evidence of septicemia. Condemned **material from a carcass with septicemia is not suitable for animal food**. Material condemned for adhesions is suitable for animal food.
Pneumonia 579 Module 6-1-182	Providing there is no evidence of septicemia condemned material is **suitable** for animal food

	following removal of the lungs. **Carcasses with a septicemia are not suitable for animal food.**
Pork Tapeworm (Cysticercus cellulosae) 735 Module 6-1-44	Federal CFIA guidelines have a zero tolerance for C. cellulosae. **A single cyst is considered sufficient to condemn a carcass.**
Pyelonephritis 566 Module 6-1-189	Condemned material is **suitable** for animal food **following removal of the kidneys** providing there is no evidence of a septicemia. Condemned **material from animals with a septicemia is not suitable** for animal food.
Ridgeling (Retained Testicle/Cryptorchid) 060/064 Module 6-1-195	Condemned materials are suitable for animal food.
Rhinitis 455 Module 6-1-193	Condemned **heads are not suitable for animal food** primarily because of the association between cats and atrophic rhinitis.
Sarcocystosis 770 Module 6-1-201	Condemned material is **not suitable for animal food.**
Sawdust Liver 520 Module 6-1-203	Condemned materials are suitable for animal food.
Septicemia 930 Module 6-1-207	Condemned material is **not suitable for animal food.**
Serous Atrophy of Fat (Emaciation) 220 Module 6-1-64	Condemned materials are suitable for animal food.
Steatitis (Yellow Fat Disease) 102 (Not Otherwise Specified) Module 6-1-209	Condemned materials are suitable for animal food.
Stones (Calculi) 091 Module 6-1-212	Affected tissues are suitable for animal food.
Tail Biting (Cannibalism) 007 Module 6-1-215	Condemned material is **suitable** for animal food **following removal of abscesses.** Lungs with embolic abscesses are not suitable for animal food.
Telangiectasis 200 Module 6-1-217	Condemned Material is suitable for animal food.

Toxemia 960 Module 6-1-219	Condemned Material is suitable for animal food.
Trichinosis 101 Module 6-1-222	Condemned material is **not suitable for animal food.**
Tuberculosis (TB) 490 Module 6-1-226	Condemned material is **not suitable for animal food.**
Tumor-Cancer Eye (Bovine Squamous Cell Carcinoma) 620 Module 6-1-229	Condemned material, **other than heads with abscesses or necrotic lesions**, is suitable for animal food.
Tumor-Hemangioma 625 Module 6-1-231	Condemned materials are suitable for animal food.
Tumor-Lymphosarcoma 635 Module 6-1-235	Condemned materials are suitable for animal food.
Tumor-Melanoma 645 Module 6-1-238	Condemned materials are suitable for animal food.
Tumors-Miscellaneous 660 Module 6-1-243	Condemned materials are suitable for animal food.
Uremia 350 Module 6-1-245	Condemned materials are suitable for animal food.
Waterbelly (Urolithiasis) 355 Module 6-1-248	Condemned materials are suitable for animal food.
White Muscle Disease 211 Module 6-1-249	Condemned materials are suitable for animal food.
Xanthosis 079 Module 6-1-251	Condemned materials are suitable for animal food.

SUBJECT: Meat By-product Harvesting - Pork	07-B-09
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section 3.3	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2010 **Page 1 of 5**

RATIONALE

All by-products intended for human consumption must be handled in a manner that ensures they are safe.

Note: To ensure that by-products are safe the following fundamental principles must be observed as they are harvested:

a) the identity of the by-products must be maintained until the corresponding carcass is inspected and approved;

b) they will be handled in a hygienic manner and chilled promptly to prevent contamination and/or decomposition;

c) if a particular kind of by-product from several animals is collected in one container and one of the carcasses is condemned, all by-products harvested in that particular container must be condemned;

d) all by-products must be prepared, packaged and stored in an acceptable sanitary manner.

The intent of this document is to **outline** the **procedures for** the **proper harvesting** of **pork by-products**.

OBJECTIVE/OUTCOME

The facility will have appropriate facilities and equipment for the separation, chilling, packaging, labeling and storage of meat by-products.

Slaughter, dressing, trimming and washing of a carcass and its parts will be done in a manner that:

1. Reduces the risk of contamination of the carcass, all edible organs, or other meat products.
2. Ensures that a complete post-mortem inspection has been completed on the carcass and all of its parts.
3. Ensures that proper dispositions, of all edible by-products, have been made, following the post-mortem inspection.

Note: To ensure proper disposition the identity of all pork by-products must be maintained until the post-mortem inspection has been completed on the carcass from which they originated.

The abattoir operator will ensure that **all by-products** are:

1. Taken **from approved carcasses**.

2. **Free of lesions** (abnormalities).
3. **Properly prepared** to ensure freedom from contamination.

All edible by-products will be chilled to 4^0 C within 4 hours, or frozen, as soon as possible.

Note: Responsible abattoir personnel must monitor the rate of chilling of by-products.

By-products must not be permitted to remain in un-refrigerated areas for any extended periods of time.

The abattoir operator will assume responsibility for monitoring the performance of abattoir personnel to ensure they follow proper procedures.

Note: The MIB Inspector is responsible for monitoring procedures and ensuring that the plant operator takes appropriate steps to correct any deficiencies.

Individual by-products will be handled as described below.

Brains

Brains may be prepared, as an edible by-product providing **THEY ARE NOT** contaminated with bone splinters, bullet particles, hide, hair, etc

Note: Brains from animals stunned electrically, or with a penetrating percussion pistol (captive bolt), can be used for human consumption if adequately trimmed.

Brains can't be used for human, or animal, food if lead or other types of fragile bullets were used to stun the animal.

Brains that contain particles of skin, bone or blood clots can be salvaged for animal food.

Brains that are suitable for human consumption must be washed and refrigerated without delay after inspection.

Casings

The intestines, bladder and esophagus can be used for the production of casings providing they are free of any pathological lesions.

Note: Preparation of casings should be done in an area separate from the kill floor.

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

Other procedures and methods of producing casings are too numerous to get into detail in this document.

Note: Details of casing preparation including separation, cleaning, sliming, washing, testing, salting, etc. should be reviewed in appropriate textbooks on meat hygiene and documented in the facility's written salvaging procedures.

Fatty Tissues

The sanitary collection of clean fatty tissue, from approved dressed carcasses and approved detached portions, shall be carried out as quickly as possible.

Note: Fat taken from carcasses before they have been approved is not suitable for use as an edible by-product.

All fatty tissues, to be used as edible product, must be refrigerated, or rendered,

immediately after collection.

Note: Fatty tissues intended for use in the production of partially defatted tissue must not contain bone.

Feet

Feet may be harvested for human food provided they are:

1. Taken from approved carcasses.
2. Free of any visible lesions.
3. Cleaned with hot water (scalded) to ensure the complete removal of any manure, or other foreign material from the hoof and adjacent hide or they can be skinned including complete removal of the hoof wall (shell).

   Note: The proximal (upper) open end of the foot will become contaminated during the scalding process. This surface contamination must be removed by trimming following cleaning.

   The inter-digital spaces (between the toes) require special attention to completely remove any dirt, scurf and bristles.
4. Placed in a cooler as soon as processing has been completed.

   Note: If there is any concern about possible cross contamination of other edible product, in the cooler, the MIB Inspector may require that the hooves be placed in a suitable container before being placed in the cooler.

Heads

Intact heads are suitable for retail sale providing they have been skinned, or shaved, and are visibly clean.

Hearts

Hearts may be prepared, as an edible by-product providing they are properly trimmed and opened to permit the complete removal of all blood clots.

Hearts must be trimmed to remove the major blood vessels (aorta, pulmonary artery, vena cava, etc.) within 2 cm of their origin.

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

After washing, hearts must be drained and refrigerated.

Intestines, Bungs, Reproductive Organs and Bile

Intestines, bungs, reproductive organs and bile are usually harvested for ethnic trade.

Note: To be harvested these by-products must be free of pathological lesions.

Rinsed product must be examined by responsible abattoir personnel, prior to further handling, (e.g. bungs must be salted following cleaning).

Note: The MIB Inspector is responsible for monitoring the effectiveness of the procedures that are followed.

Kidneys

Hog kidneys are suitable for human consumption providing they are free of any pathological lesions.

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

Livers

Hog livers for human consumption must be prepared as follows:

1. The gall bladder has to be removed.

   Note: Care must to be taken to avoid any spillage of bile.

2. Small lesions, such as dry adhesions, parasite scars, etc. can be removed by trimming.

   Note: Livers that are more severely affected with these, or other similar conditions, may be salvaged for animal food.

Approved livers must be chilled by immersion in cold running water or by air chilling in a cooler.

Note: Livers are hung on racks, or placed in trays, when placed in a cooler for air chilling.

Livers may also be packed and frozen.

Lungs

Lungs are suitable for human consumption providing they are free of any pathological lesions or contamination.

Note: 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.

Lungs that have been approved for human consumption, or animal food, must be chilled before packaging, or alternatively they can be packed and frozen.

Spleens

Spleens are suitable for human consumption providing they are free of any pathological lesions or contamination.

Spleens that have been approved for human consumption, or animal food, must be chilled before packaging, or alternatively they can be packed and frozen.

Stomachs

Hog stomachs may be used for human consumption providing they are free of pathological lesions.

Separated hog stomachs must be opened, emptied and thoroughly washed.

To be used in prepared meat products the hog stomachs must be scalded and the mucous (inner) lining must be completely removed.

The preparation of hog stomachs should be carried out in a room separate from the slaughter floor.

Tongues

The tongue must be trimmed to remove any portions of the larynx, epiglottis, or tonsils.

Note: The severed base, of the tongue, may also have to be trimmed if there is any contamination.

Tongues must be washed prior to chilling.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Meat By-product Harvesting- Pork"** will be met when:

1. Up-to-date, facility specific, written "**Meat By-Product Harvesting Procedures**" are on file.

   Note: These procedures must:

   i. have detailed instructions relating to the all items being salvaged, including aspects of the collection, packaging, labeling and storage of meat by-products

   ii. detail the facilities, areas and equipment that will be used, and the operational controls that will be in place, including chilling and sanitary requirements.

2. Personnel responsible for harvesting the meat by-products are properly trained.
3. On site observation demonstrates that the written **"By-product Harvesting Procedures"** are being implemented and that by-products are harvested in a hygienic manner.

RELATED SECTIONS OF TIPM

03-G-01 Dressing Procedures - Red Meat

07-B-02 Dressing Procedures - Hogs

10-B-01 Salvage for Animal Food

10-B-02 Salvage for Miscellaneous Purposes

ATTACHMENT-TIPM DOCUMENT 07-B-09

APPENDIX 1 – DISPOSITION FOR ANIMAL FOOD

CONDITION	COMMENTS/UTILIZATION
Abscesses 001 Module 6-1-1	**CARCASS** Numerous abscess or systemic effect, carcass is suitable for animal food after removal of lesions or affected parts.
Actinobacillosis (Wooden Tongue) 401 Module 6-1-6	Individual **condemned heads** and heads from carcasses condemned for emaciation, or other systemic changes, **are not suitable for animal food**.
Actinomycosis (Lump Jaw) 403 Module 6-1-131	Condemned **livers are not suitable for animal food**. Condemned **carcasses are suitable** for animal food **following removal of the liver**.
Adhesions - 511 Peritonitis 571 Module 6-1-177	In acute peritonitis, condemned material is **suitable** for animal food **following removal of the lesions providing there is no evidence of septicemia.** Condemned **material from carcasses with a septicemia is not suitable for animal food.** Material condemned for adhesions is suitable for animal food.
Adhesions - 511 Pleuritis 577 Module 6-1-180	Material from carcasses condemned for acute pleuritis is **suitable** for animal food **following removal of the lesions** providing there is no evidence of septicemia. Condemned **material from a carcass with septicemia is not suitable for animal food**. Material condemned for adhesions is suitable for animal food.
Anemia 910 Module 6-1-10	Condemned materials are suitable for animal food provided the anemia is not accompanied by septicemia.
Arthritis 512 Module 6-1-12	Condemned materials are **suitable for animal food following removal of affected joints** providing there are no indications of a concurrent septicemia.
Ascaris suum (Milk Spots - Pig Round Worm) 790 Module 6-1-167	Condemned livers are suitable for animal food because the lesions are only scars.
Ascities 320 Module 6-1-16	Condemned materials are suitable for animal food.
Atrophic Rhinitis 455	Condemned **heads are not suitable for animal food** primarily because of the association between

Module 6-1-192	cats and atrophic rhinitis.
Atrophy 210 Module 6-1-20	Condemned material is suitable for animal food.
Black Leg 410 Module 6-1-22	Condemned **material is not suitable for animal food**.
Bone Infection (Osteomyelitis) 150 Module 6-1-166	Condemned material is **suitable** for animal food **following removal of affected bones and lymph nodes.**
Bovine Squamous Cell Carcinoma (Cancer Eye) 620 Module 6-1-227	Condemned material, other than heads with abscessed or necrotic lesions, is suitable for animal food.
Bovine Virus Disease (BVD)/ Erosions 094 Module 6-1-79	Condemned material is suitable for animal food.
Bruising 051 Module 6-1-24	Condemned material is suitable for animal food.
Bursitis (Hygroma) 080/081 Module 6-1-26	Condemned material is suitable for animal food.
Calcification 710 Module 6-1-29	Condemned material is suitable for animal food.
Calculi (stones) 355 Module 6-1-210	Affected tissues are suitable for animal food.
Cannibalism 007 Module 6-1-212	Condemned material is **suitable** for animal food **following removal of abscesses**.
Caseous Lymphadenitis (CLA) 420 Module 6-1-31	Condemned material is **suitable** for animal food **following the removal of the abscessed lymph nodes.**
Cellulitis 800 Module 6-1-35	Condemned material is **not suitable for animal food**.
Cirrhosis 521 Module 6-1-37	Condemned livers are suitable for animal food.
Coccidiosis 720 Module 6-1-39	Condemned material is suitable for animal food.
Congestion 523 Module 6-1-42	Condemned material is suitable for animal food.
Congestive Heart Failure (Ascities - 320 & Edema - 340) Module 6-1-16	Condemned materials are suitable for animal food.

Cryptorchid (Ridgeling) 060 Module 6 – 1 - 195	Condemned material is suitable for animal food.
Cysticercosis 735 Module 6-1-44	**Materials condemned for C. ovis, pisiformis, or tenuicollis are not suitable for animal food.**
Cysts 092 Module 6 -1-54	Condemned materials are suitable for animal food.
Dermatitis 810 Module 6-1-56	In general **most materials**, condemned for various conditions in this section **are not suitable for animal food**.
Diamond Skin Disease (Erysipelas) 435 Module 6-1-61	Condemned material is **not suitable for animal food**.
Edema 340 Module 6-1-16	Condemned materials are suitable for animal food.
Emaciation (Serous Atrophy of Fat) 220 Module 6-1-64	Condemned materials are suitable for animal food.
Emphysema 082 Module 6-1-69	Condemned materials are suitable for animal food.
Endocarditis 572 Module 6-1-72	Condemned material is **not suitable for animal food.**
Enteritis 530 Module 6-1-75	**Condemned material is not suitable for animal food.**
Eosinophilic Myositis 551 Module 6-1-78	**Condemned material is not suitable for animal food.**
Erosions 094 Module 6-1-79	Condemned materials are suitable for animal food.
Erythemia 523 Module 6-1-42	Condemned materials are suitable for animal food.
Erythropoietic Porphyria (Osteohemachromatosis) 130 Module 6-1-162	Condemned materials are suitable for animal food.
Exostosis 120 Module 6-1-82	Condemned materials are suitable for animal food.
Fatty Infiltration 230 Module 6-1-83	Condemned materials are suitable for animal food.

Fibrosis 968 Module 6-1-88	Condemned materials are suitable for animal food.
Fistula 002 Module 6-1-89	Condemned material is **not suitable for animal food.**
Foot Rot (Pododermatitis) 861 Module 6-1-91	Condemned materials are suitable for animal food.
Foreign Body 850 Module 6-1-92	Condemned materials are suitable for animal food.
Frostbite 049 Module 6-1-95	Condemned materials are suitable for animal food.
Gangrene 260 Module 6-1-97	Condemned material is **not suitable for animal food.**
Gastritis 535 Module 6-1-99	Condemned material is **not suitable for animal food.**
Goiter (Hypertrophy) 830 Module 6-1-116	Condemned materials are suitable for animal food.
Granuloma 623 Module 6-1-101	Condemned materials are suitable for animal food.
Granulomatous Lymphadenitis 495 Module 6-1-101	**Affected lymph nodes are not suitable for animal food** but other condemned materials are suitable.
Hardware Disease (Traumatic Reticulitis Complex) 855 Module 6-1-104	Condemned material is **suitable** for animal food **following removal of the lesions** unless there are signs of septicemia. **If there is evidence of septicemia condemned material is not suitable** for animal food.
Hemangioma 625 Module 6-1-230	Condemned materials are suitable for animal food.
Hematoma and Hemorrhage (Major) 053 – Hematoma for clotted blood 576 – Hemorrhage/Major for large accumulations of unclotted blood Module 6-1-107	Condemned materials are suitable for animal food.
Hemorrhage (Petechial and Ecchymotic) 575 – Hemorrhage (Petechial) for pinpoint or petechial, hemorrhages	Condemned materials are suitable for animal food.

574 – Hemorrhage/Splash (Ecchymosis) for larger ecchymotic hemorrhages Module 6 -1 - 109	
Hernias 095 Module 6 -1 -198	Condemned material is **suitable** for animal food, **following removal of any peritonitis lesions**, providing emaciation is the primary reason for condemnation.
Hydatid Cysts 089 Module 6-1-112	Condemned material is **not suitable for animal food.**
Hydronephrosis 563 Module 6 -1- 114	Condemned material is **not suitable for animal food.**
Hyperkeratosis 810 (Dermatitis) Module 6-1-57	In general **most materials**, condemned for various conditions in this section **are not suitable for animal food**.
Hypertrophy 830 Module 6-1-116	Condemned materials are suitable for animal food.
Icterus (Jaundice) 920 Module 6-1-123	**Providing there is no indication of septicemia** condemned material is suitable for animal food.
Injection Site Lesions 065 (Antibiotic Residue) 265 (Injection Site) Module 6-1-120	Condemned materials are suitable for animal food.
Intestinal Emphysema (Pigs) 082 Module 6-1-69	Condemned materials are suitable for animal food.
Jaundice (Icterus) 920 Module 6-1-123	**Providing there is no indication of septicemia** condemned material is suitable for animal food.
Joint III (Navel Infection/Omphalophlebitis) 445 Module 6-1-148	Providing there is no septicemia **condemned carcasses are suitable** for animal food **following removal of the lesions**. **Carcasses affected with septicemia are not suitable for animal food.**
Kidney Cysts 092 Module 6 -1-54	Condemned materials are suitable for animal food.
Liver Flukes 760 Module 6-1-127	Condemned **livers are not suitable for animal food**. Condemned **carcasses are suitable** for animal food **following removal of the liver**.
Lump Jaw (Actinomycosis) 403 Module 6-1-131	Condemned **livers are not suitable for animal food**.

	Condemned **carcasses are suitable** for animal food **following removal of the liver**.
Lymphadenitis 546 Module 6-1-134	Condemned material is **not suitable for animal food.**
Lymphosarcoma 635 Module 6-1-232	Condemned materials are suitable for animal food.
Mange (Dermatitis) 810 Module 6-1-56	In general **most materials**, condemned for various conditions in this section **are not suitable for animal food**.
Mastitis 547 Module 6-1-137	Condemned **udders are not suitable for animal food.** **Condemned carcasses are suitable** for animal food following removal of the udder and **providing there is no evidence of septicemia**.
Melanoma 645 Module 6-1-236	Condemned materials are suitable for animal food.
Melanosis 071 Module 6-1-140	Condemned materials are suitable for animal food.
Mesotheliomas 660 Module 6-1-242	Condemned materials are suitable for animal food.
Metritis 548 Module 6-1-143	Providing there is no evidence of a septicemia condemned material is **suitable for animal food following removal of the uterus.**
Myositis 550 Module 6-1-146	Condemned material is **not suitable for animal food.**
Navel Infection (Omphalophlebitis) 445 Module 6-1-148	Providing there is no septicemia **condemned carcasses are suitable** for animal food **following removal of the lesions**. **Carcasses affected with septicemia are not suitable for animal food.**
Nephritis 560 Module 6-1-151	Condemned kidneys are **not suitable for animal food.** Other condemned material is **suitable** for animal food **following removal of the kidneys**.
Neurofibroma 660 Module 6-1-241	Condemned materials are suitable for animal food.
Neurological Disorders Module 6-1-153	Condemned material is **not suitable for animal food.**
Ochranosis 071	Condemned materials are suitable for animal food.

Module 6-1-142	
Orchitis 570 Module 6-1-161	Carcasses condemned for emaciation are **suitable** for animal food **following removal of the testicles.**
Osteohemachromatosis (Pink Tooth) 130 Module 6-1-162	Condemned materials are suitable for animal food.
Osteomalacia 141 Module 6-1-164	Condemned materials are suitable for animal food.
Osteomyelitis 150 Module 6-1-166	Condemned material is **suitable** for animal food **following removal of affected bones and lymph nodes.**
Parasitic Conditions (Miscellaneous) 790 Module 6-1-167	<u>Livers</u> 3+ lesions (scars from Ascarid migration)-condemned material is suitable for animal food.
Pericarditis 571 Module 6-1-175	Condemned material is **not suitable for animal food.**
Peritonitis 573 Module 6-1-177	In acute peritonitis, condemned material is **suitable** for animal food **following removal of the lesions providing there is no evidence of septicemia.**
	Condemned **material from carcasses with a septicemia is not suitable for animal food.**
	Material condemned for adhesions is suitable for animal food.
Pityriasis Rosea 810 Module 6-1-58	Condemned material is **not suitable for animal food.**
Pleuritis 577 Module 6-1-180	Material from carcasses condemned for acute pleuritis is **suitable** for animal food **following removal of the lesions** providing there is no evidence of septicemia. Condemned **material from a carcass with septicemia is not suitable for animal food**. Material condemned for adhesions is suitable for animal food.
Pneumonia 579 Module 6-1-182	Providing there is no evidence of septicemia condemned material is **suitable** for animal food **following removal of the lungs**.

	Carcasses with a septicemia are not suitable for animal food.
Pork Tapeworm (Cysticercus cellulosae) 735 Module 6-1-44	Federal CFIA guidelines have a zero tolerance for C. cellulosae. **A single cyst is considered sufficient to condemn a carcass.**
Pyelonephritis 566 Module 6-1-189	Condemned material is **suitable** for animal food **following removal of the kidneys** providing there is no evidence of a septicemia. Condemned **material from animals with a septicemia is not suitable** for animal food.
Ridgeling (Retained Testicle/Cryptorchid) 060/064 Module 6-1-195	Condemned materials are suitable for animal food.
Rhinitis 455 Module 6-1-193	Condemned **heads are not suitable for animal food** primarily because of the association between cats and atrophic rhinitis.
Sarcocystosis 770 Module 6-1-201	Condemned material is **not suitable for animal food.**
Sawdust Liver 520 Module 6-1-203	Condemned materials are suitable for animal food.
Septicemia 930 Module 6-1-207	Condemned material is **not suitable for animal food.**
Serous Atrophy of Fat (Emaciation) 220 Module 6-1-64	Condemned materials are suitable for animal food.
Steatitis (Yellow Fat Disease) 102 (Not Otherwise Specified) Module 6-1-209	Condemned materials are suitable for animal food.
Stones (Calculi) 091 Module 6-1-212	Affected tissues are suitable for animal food.
Tail Biting (Cannibalism) 007 Module 6-1-215	Condemned material is **suitable** for animal food **following removal of abscesses.** **Lungs with embolic abscesses are not suitable for animal food.**
Telangiectasis 200	Condemned Material is suitable for animal food.

Module 6-1-217	
Toxemia 960 Module 6-1-219	Condemned Material is suitable for animal food.
Trichinosis 101 Module 6-1-222	Condemned material is **not suitable for animal food.**
Tuberculosis (TB) 490 Module 6-1-226	Condemned material is **not suitable for animal food.**
Tumor-Cancer Eye (Bovine Squamous Cell Carcinoma) 620 Module 6-1-229	Condemned material, **other than heads with abscesses or necrotic lesions**, is suitable for animal food.
Tumor-Hemangioma 625 Module 6-1-231	Condemned materials are suitable for animal food.
Tumor-Lymphosarcoma 635 Module 6-1-235	Condemned materials are suitable for animal food.
Tumor-Melanoma 645 Module 6-1-238	Condemned materials are suitable for animal food.
Tumors-Miscellaneous 660 Module 6-1-243	Condemned materials are suitable for animal food.
Uremia 350 Module 6-1-245	Condemned materials are suitable for animal food.
Waterbelly (Urolithiasis) 355 Module 6-1-248	Condemned materials are suitable for animal food.
White Muscle Disease 211 Module 6-1-249	Condemned materials are suitable for animal food.
Xanthosis 079 Module 6-1-251	Condemned materials are suitable for animal food.

SUBJECT: Meat By-product Harvesting - Poultry	07-B-10
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 66(1)(a) Meat Facility Standards (MFS) Section 3.3	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2010 **Page 1 of 4**

RATIONALE

All by-products intended for human consumption must be handled in a manner that ensures they are safe.

Note: To ensure that by-products are safe the following fundamental principles must be observed as they are harvested:

a) the identity of the by-products must be maintained until the corresponding carcass is inspected and approved;

b) they will be handled in a hygienic manner and chilled promptly to prevent contamination and/or decomposition;

c) if a particular kind of by-product from several animals is collected in one container and one of the carcasses is condemned, all by-products harvested in that particular container must be condemned;

d) all by-products must be prepared, packaged and stored in an acceptable sanitary manner.

The intent of this document is to **outline** the **procedures for** the **proper harvesting** of **poultry by-products**.

OBJECTIVE/OUTCOME

The facility will have appropriate facilities and equipment for the separation, chilling, packaging, labeling and storage of meat by-products.

Slaughter, dressing, trimming and washing of poultry carcasses and their parts must be done in a manner that:

1. Reduces the risk of contamination of the carcass, all edible organs, or other meat products; and
2. Ensures that a complete post-mortem inspection has been completed on the carcass and all of its parts; and
3. Ensures that proper dispositions, of all edible by-products, have been made, following the post-mortem inspection.

Note: To ensure proper disposition the identity of all poultry by-products must be maintained until the post-mortem inspection has been completed on the carcass from which they originated.

The abattoir operator will ensure that **all by-products** are:

1. Taken **from approved carcasses**.

2. **Free of lesions** (abnormalities).
3. **Properly prepared** to ensure freedom from contamination.

Giblets, parts of dressed carcasses harvested during the dressing procedures including detached necks and salvaged portions must be chilled to 4^0 C or lower within two hours after evisceration.

Turkey breasts, breast fillets, legs, drumsticks and thighs must be chilled to 4^0 C or lower within four hours after evisceration.

Note: Responsible abattoir personnel must monitor the rate of chilling of by-products.

By-products must not be permitted to remain in un-refrigerated areas for any extended periods of time.

The abattoir operator will assume responsibility for monitoring the performance of abattoir personnel to ensure they follow proper procedures.

Note: The MIB Inspector is responsible for monitoring procedures and ensuring that the plant operator takes appropriate steps to correct any deficiencies.

Individual by-products will be handled as described below.

Feathers

Feathers may be harvested for the preparation of feather meal for feeding to ruminants (cattle, sheep, etc.) or for making pillows.

Feather collection must be done in the scalding/plucking area and must be conducted in a hygienic manner.

Note: Feathers must be collected in a timely manner. **Accumulation** in the de-feathering area **is not allowed** because this would lead to potential contamination due to air airborne contaminants.

Feathers must not be stored near edible product or materials.

Feet

Poultry feet (also referred to as paws) are suitable for human consumption providing:

1. They are not removed from the carcass until the post-mortem inspection is completed.

   Note: Feet can only be left on the carcass providing they don't cause a contamination hazard. All feet, carcasses and equipment surfaces must remain visibly clean during operations.

2. They are only harvested from approved carcasses.
3. The epidermis (outer layer of skin) and toenails are removed.
4. Only feet that are free of manure, or other foreign material are allowed to be transferred to an edible product processing area.
5. Sorting, trimming and packaging are performed in a manner that ensures feet ready for packaging are not contaminated by defective feet.

   Note: When operations have been completed all surfaces, on equipment in unrefrigerated rooms, that came into contact with feet must be cleaned

and sanitized before these facilities can be used for the processing of any other product.

6. They are chilled to 4^0 C or less within 4 hours of scalding.

Depending on the facility situation, the MIB Inspector may:

1. Require feet deemed to be unsuitable for human consumption to be removed from the carcass and discarded before the carcass reaches the location where edible feet are being removed.

   Note: "Bad feet" tend to come from individual flock problems, thus the MIB Inspector has the authority to prohibit the salvage of feet from a particular flock.

2. Advise the abattoir operator that salvaged feet may be re-inspected at anytime, and if unsuitable feet are found, all feet in the container will be condemned.

   Note: This option places the onus on the abattoir, rather than on the MIB Inspector, to ensure that only wholesome feet are collected.

Giblets

Note: The term giblet refers to the heart, liver and gizzard as a single item.

Poultry giblets are suitable for human consumption providing they are free of pathological lesions (disease conditions).

It is essential that contamination of the giblets be avoided during preparation and inspection.

Note: The viscera pack must be removed as a single unit and brought to the giblet harvesting station for preparation.

Accumulation of giblets, for later preparation, is **not permitted**.

The pericardium (sac around the heart) must be removed.

The liver needs to be separated from the rest of the viscera and the gall bladder is removed.

Note: Care must be taken to avoid the release of bile onto edible product.

Gizzards must be separated from the viscera then the contents and the lining is removed.

Following preparation giblets must be washed and drained.

Giblets must be chilled to 4 °C or less within 2 hours of harvesting.

Note: The components of the giblet group can be harvested and packaged individually if desired.

Kidneys

Poultry **kidneys cannot be used for human consumption**.

They can be salvaged for pet food.

Necks

Necks can be removed from the carcass and used for human consumption providing they are free of contamination.

They must be chilled to 4 °C or less within 2 hours following their removal from the carcass.

Ova

Note: Ova are partially developed eggs on the ovary of laying hens.

Ova are suitable for human consumption.

To ensure that they only come from approved carcasses ova cannot be salvaged until the post-mortem inspection has been completed.

Collection must be done under sanitary conditions.

All ova must be refrigerated to 4^0 C or less within 2 hours following harvesting.

Note: All ova not intended for the facility's own use must be sent to a registered egg processing station, for pasteurization, before they can be sold.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Meat By-product Harvesting- Poultry"** will be met when:

1. Up-to-date, facility specific, written "**Meat By-Product Harvesting Procedures**" are on file.

   Note: These procedures must:

   a) have detailed instructions relating to the all items being salvaged, including aspects of the collection, packaging, labeling and storage of meat by-products

   b) detail the facilities, areas and equipment that will be used, and the operational controls that will be in place, including chilling and sanitary requirements.

2. Personnel responsible for harvesting the meat by-products are properly trained.
3. On site observation demonstrates that the written **"By-product Harvesting Procedures"** are being implemented and that by-products are harvested in a hygienic manner.

RELATED SECTIONS OF TIPM

02-O-03 Giblet Salvaging Station(s)

03-G-02 Dressing Procedures - Poultry

07-B-06 Dressing Procedures - Poultry

10-B-01 Salvage for Animal Food

10-B-02 Salvage for Miscellaneous Purposes

SUBJECT: Meat By-product Harvesting - Miscellaneous Species	07-B-11
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section 3.3	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2010 **Page 1 of 5**

RATIONALE

All by-products intended for human consumption must be handled in a manner that ensures they are safe.

Note: To ensure that by-products are safe the following fundamental principles must be observed as they are harvested:

a) the identity of the by-products must be maintained until the corresponding carcass is inspected, approved, and released (e.g. CWD results for Elk and Deer);

b) they will be handled in a hygienic manner and chilled promptly to prevent contamination and/or decomposition;

c) if a particular kind of by-product from several animals is collected in one container and one of the carcasses is condemned, all by-products harvested in that particular container must be condemned;

d) all by-products must be prepared, packaged and stored in an acceptable sanitary manner.

The intent of this document is to **outline** the **procedures for** the **proper harvesting** of **by-products** from **animals typically done in low numbers**, including, but not restricted to: Emu, Ostrich, Rhea, Buffalo, Deer, Elk, Sheep & Goats etc.

OBJECTIVE/OUTCOME

The facility will have appropriate facilities and equipment for the separation, chilling, packaging, labeling and storage of meat by-products.

Slaughter, dressing, trimming and washing of a carcass and its parts is done in a manner that:

1. Reduces the risk of contamination of the carcass, all edible organs, or other meat products.
2. Ensures that a complete post-mortem inspection has been completed on the carcass and all of its parts
3. Ensures that proper dispositions, of all edible by-products, have been made, following the post-mortem inspection.

Note: To ensure proper disposition the identity of all by-products must be maintained until the post-mortem inspection has been completed on the

carcass from which they originated.

The abattoir operator will ensure that **all by-products** are:

1. Taken **from approved carcasses**.
2. **Free of lesions** (abnormalities).
3. **Properly prepared** to ensure freedom from contamination.

All edible by-products must be chilled to 4^0 C within 4 hours, or frozen, as soon as possible.

Note: Responsible abattoir personnel must monitor the rate of chilling of by-products.

By-products must not be permitted to remain in un-refrigerated areas for any extended periods of time.

The abattoir operator will assume responsibility for monitoring the performance of abattoir personnel to ensure they follow proper procedures.

Note: The MIB Inspector is responsible for monitoring procedures and ensuring that the plant operator takes appropriate steps to correct any deficiencies.

Individual by-products will be handled as described below.

Note: The following list is abbreviated to include only those by-products that are currently being harvested. If there is a desire to salvage any other by-products from miscellaneous species these items should be handled in the same manner as described in TIPM Documents 07-B-08, 07-B-09 and 07-B-10 for beef, pork and poultry respectively.

Feet/Hooves

Feet /hooves may be harvested for human food provided they are:

1. Taken from approved carcasses
2. Free of any visible lesions
3. Cleaned with hot water (scalded) to ensure the complete removal of any manure, hair, or other foreign material from the hoof and adjacent hide.

Note: The proximal (upper) open end of the foot will become contaminated during the scalding process. This surface contamination must be removed by trimming following cleaning.

Ethnic groups that use beef feet, as edible material, are only interested in the tissues located within the hoof; therefore the complete removal of the hoof sole, wall, and adjacent skin is an alternative method of processing.

4. Placed in a cooler as soon as processing has been completed.

Note: If there is any concern about possible cross contamination of other edible product, in the cooler, the MIB Inspector may require that the hooves be placed in a suitable container before being placed in the cooler.

Heads

Lamb and kid heads are suitable for human consumption providing they are free of any pathological lesions, hair, or foreign matter. Age verification by denition is required to

ensure animals are less than one (1) year old to allow for salvage for human consumption.

Note: Sheep and goat heads of animals over one (1) year of age are **not** suitable for human consumption and must be disposed of as SRM.

Head Meat

The hair, hide and horns on buffalo, elk or deer heads are potential sources of serious contamination from micro-organisms (bacteria, molds, fungi, etc.) thus these structures must be removed if any head meat is going to be salvaged.

Hearts

Hearts may be prepared, as an edible by-product, providing they are properly trimmed and opened to permit the complete removal of all blood clots.

Hearts must be trimmed to remove the major blood vessels (aorta, pulmonary artery, vena cava, etc.) within 2 cm of their origin.

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

After washing, hearts must be drained and refrigerated.

Intestines

Intestines are usually harvested for ethnic trade.

Note: To be harvested, these by-products must be free of pathological lesions.

Rinsed product must be examined by responsible abattoir personnel, prior to further handling.

Note: The MIB Inspector is responsible for monitoring the effectiveness of the procedures that are conducted.

Kidneys

Kidneys from any red meat animal are suitable for human consumption providing they are free of any pathological lesions.

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

Note: Like poultry, the kidneys of ratites are not considered to be suitable for human consumption.

Livers

The liver of any species is suitable for human consumption providing it is prepared in the following manner:

1. The gall bladder has to be removed.

   Note: Care must to be taken to avoid any spillage of bile.

2. Small lesions, such as dry adhesions, parasite scars, etc. can be removed by trimming.

   Note: Livers that are more severely affected with these, or other similar conditions, may be salvaged for animal food.

Approved livers must be chilled by immersion in cold running water or by air chilling in a cooler.

Note: Livers are hung on racks, or placed in trays, when placed in a cooler for air chilling.

Livers may also be packed and frozen.

Stomach

Stomachs are usually harvested for ethnic trade.

Stomachs must be handled in the following manner:

1. The stomach contents are removed
2. The raw product is washed, inside and out

   Note: Any contamination of the attached fat, that is not removed by washing, must be trimmed.

3. The rinsed product must be examined by responsible abattoir personnel, prior to further handling (e.g. chilling and packing in the case of raw products)

   Note: The MIB Inspector is responsible for monitoring the effectiveness of the procedures being followed.

The preparation of this material should, as far as abattoir facilities permit, be carried out in a location separate from the slaughter floor.

The use of automated equipment requires prior approval of the MIB Area Manager (AM)

Note: This approval is required to ensure that approved materials and procedures are used.

Tongues

The tongue must be trimmed to remove any portions of the larynx, epiglottis, or tonsils.

Note: The severed base of the tongue may also have to be trimmed if there is any contamination.

Tongues must be washed prior to chilling.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Meat By-product Harvesting- Miscellaneous Species"** will be met when:

1. Up-to-date, facility specific, written "**Meat By-Product Harvesting Procedures**" are on file.

   Note: These procedures must:

   a) have detailed instructions relating to the all items being salvaged, including aspects of the collection, packaging, labeling and storage of meat by-products

   b) detail the facilities, areas and equipment that will be used, and the operational controls that will be in place, including chilling and sanitary requirements.

2. Personnel responsible for harvesting the meat by-products are properly trained.
3. On site observation demonstrates that the written "**By-product Harvesting Procedures"** are being implemented and that by-products are harvested in a hygienic manner.

RELATED SECTIONS OF TIPM

03-G-01 Dressing Procedures - Red Meat

10-B-01 Salvage for Animal Food

10-B-02 Salvage for Miscellaneous Purposes

ATTACHMENT-TIPM DOCUMENT 07-B-11

APPENDIX 1 – DISPOSITION FOR ANIMAL FOOD

CONDITION & MODULE OF MIB TRAINING MANUAL	COMMENTS/UTILIZATION
Abscesses-001 Module 6-1-1	**CARCASS** Numerous abscess or systemic effect, carcass is suitable for animal food after removal of lesions or affected parts.
Actinobacillosis (Wooden Tongue)-401 Module 6-1-6	Individual **condemned heads** and heads from carcasses condemned for emaciation, or other systemic changes, **are not suitable for animal food**.
Actinomycosis (Lump Jaw)-403 Module 6-1-131	Condemned **livers are not suitable for animal food**. Condemned **carcasses are suitable** for animal food **following removal of the liver**.
Adhesions – 511 Peritonitis-571 Module 6-1-177	In acute peritonitis, condemned material is **suitable** for animal food **following removal of the lesions providing there is no evidence of septicemia.** Condemned **material from carcasses with a septicemia is not suitable for animal food.** Material condemned for adhesions is suitable for animal food.
Adhesions – 511 Pleuritis-577 Module 6-1-180	Material from carcasses condemned for acute pleuritis is **suitable** for animal food **following removal of the lesions** providing there is no evidence of septicemia. Condemned **material from a carcass with septicemia is not suitable for animal food**. Material condemned for adhesions is suitable for animal food.
Anemia-910 Module 6-1-10	Condemned materials are suitable for animal food provided the anemia is not accompanied by septicemia.
Arthritis-512 Module 6-1-12	Condemned materials are **suitable for animal food following removal of affected joints** providing there are no indications of a concurrent septicemia.
Ascaris suum (Milk Spots - Pig Round Worm)-790 Module 6-1-167	Condemned livers are suitable for animal food because the lesions are only scars.
Ascities- 320 Module 6-1-16	Condemned materials are suitable for animal food.
Atrophic Rhinitis- 455 Module 6-1-192	Condemned **heads are not suitable for animal food** primarily because of the association between cats and atrophic rhinitis.

Atrophy- 210 Module 6-1-20	Condemned material is suitable for animal food.
Black Leg- 410 Module 6-1-22	Condemned **material is not suitable for animal food**.
Bone Infection (Osteomyelitis)- 150 Module 6-1-166	Condemned material is **suitable** for animal food **following removal of affected bones and lymph nodes.**
Bovine Squamous Cell Carcinoma (Cancer Eye) 620 Module 6-1-227	Condemned material, other than heads with abscessed or necrotic lesions, is suitable for animal food.
Bovine Virus Disease (BVD)/ Erosions-094 Module 6-1-79	Condemned material is suitable for animal food.
Bruising-051 Module 6-1-24	Condemned material is suitable for animal food.
Bursitis (Hygroma)-080/081 Module 6-1-26	Condemned material is suitable for animal food.
Calcification-710 Module 6-1-29	Condemned material is suitable for animal food.
Calculi (stones)-355 Module 6-1-210	Affected tissues are suitable for animal food.
Cannibalism-007 Module 6-1-212	Condemned material is **suitable** for animal food **following removal of abscesses**.
Caseous Lymphadenitis (CLA)-420 Module 6-1-31	Condemned material is **suitable** for animal food **following the removal of the abscessed lymph nodes.**
Cellulitis-800 Module 6-1-35	Condemned material is **not suitable for animal food**.
Cirrhosis-521 Module 6-1-37	Condemned livers are suitable for animal food.
Coccidiosis-720 Module 6-1-39	Condemned material is suitable for animal food.
Congestion-523 Module 6-1-42	Condemned material is suitable for animal food.
Congestive Heart Failure (Ascities - 320 & Edema - 340) Module 6-1-16	Condemned materials are suitable for animal food.
Cryptorchid (Ridgeling)-060 Module 6 – 1 - 195	Condemned material is suitable for animal food.
Cysticercosis-735 Module 6-1-44	**Materials condemned for C. ovis, pisiformis, or tenuicollis are not suitable for animal food.**
Cysts-092 Module 6 -1-54	Condemned materials are suitable for animal food.
Dermatitis-810 Module 6-1-56	In general **most materials**, condemned for various conditions in this section **are not suitable for animal food**.
Diamond Skin Disease (Erysipelas)-435 Module 6-1-61	Condemned material is **not suitable for animal food**.

Edema-340 Module 6-1-16	Condemned materials are suitable for animal food.
Emaciation (Serous Atrophy of Fat)-220 Module 6-1-64	Condemned materials are suitable for animal food.
Emphysema-082 Module 6-1-69	Condemned materials are suitable for animal food.
Endocarditis-572 Module 6-1-72	Condemned material is **not suitable for animal food.**
Enteritis-530 Module 6-1-75	**Condemned material is not suitable for animal food.**
Eosinophilic Myositis-551 Module 6-1-78	**Condemned material is not suitable for animal food.**
Erosions-094 Module 6-1-79	Condemned materials are suitable for animal food.
Erythemia-523 Module 6-1-42	Condemned materials are suitable for animal food.
Erythropoietic Porphyria (Osteohemachromatosis) 130 Module 6-1-162	Condemned materials are suitable for animal food.
Exostosis-120 Module 6-1-82	Condemned materials are suitable for animal food.
Fatty Infiltration-230 Module 6-1-83	Condemned materials are suitable for animal food.
Fibrosis-968 Module 6-1-88	Condemned materials are suitable for animal food.
Fistula-002 Module 6-1-89	Condemned material is **not suitable for animal food.**
Foot Rot (Pododermatitis)-861 Module 6-1-91	Condemned materials are suitable for animal food.
Foreign Body-850 Module 6-1-92	Condemned materials are suitable for animal food.
Frostbite-049 Module 6-1-95	Condemned materials are suitable for animal food.
Gangrene-260 Module 6-1-97	Condemned material is **not suitable for animal food.**
Gastritis-535 Module 6-1-99	Condemned material is **not suitable for animal food.**
Goiter (Hypertrophy)-830 Module 6-1-116	Condemned materials are suitable for animal food.
Granuloma-623 Module 6-1-101	Condemned materials are suitable for animal food.
Granulomatous Lymphadenitis-495 Module 6-1-101	**Affected lymph nodes are not suitable for animal food** but other condemned materials are suitable.
Hardware Disease (Traumatic Reticulitis Complex)-855	Condemned material is **suitable** for animal food **following removal of the lesions** unless there are

Module 6-1-104	signs of septicemia. **If there is evidence of septicemia condemned material is not suitable** for animal food.
Hemangioma-625 Module 6-1-230	Condemned materials are suitable for animal food.
Hematoma and Hemorrhage (Major) 053 – Hematoma for clotted blood 576 – Hemorrhage/Major for large accumulations of unclotted blood Module 6-1-107	Condemned materials are suitable for animal food.
Hemorrhage (Petechial and Ecchymotic) 575 – Hemorrhage (Petechial) for pinpoint or petechial, hemorrhages 574 – Hemorrhage/Splash (Ecchymosis) for larger ecchymotic hemorrhages Module 6 -1 - 109	Condemned materials are suitable for animal food.
Hernias-095 Module 6 -1 -198	Condemned material is **suitable** for animal food, **following removal of any peritonitis lesions**, providing emaciation is the primary reason for condemnation.
Hydatid Cysts-089 Module 6-1-112	Condemned material is **not suitable for animal food.**
Hydronephrosis- 563 Module 6 -1- 114	Condemned material is **not suitable for animal food.**
Hyperkeratosis- 810 (Dermatitis) Module 6-1-57	In general **most materials**, condemned for various conditions in this section **are not suitable for animal food**.
Hypertrophy- 830 Module 6-1-116	Condemned materials are suitable for animal food.
Icterus (Jaundice)-920 Module 6-1-123	**Providing there is no indication of septicemia** condemned material is suitable for animal food.
Injection Site Lesions 065 (Antibiotic Residue) 265 (Injection Site) Module 6-1-120	Condemned materials are suitable for animal food.
Intestinal Emphysema (Pigs)-082 Module 6-1-69	Condemned materials are suitable for animal food.
Jaundice (Icterus)-920 Module 6-1-123	**Providing there is no indication of septicemia** condemned material is suitable for animal food.
Joint III (Navel Infection/Omphalophlebitis) 445 Module 6-1-148	Providing there is no septicemia **condemned carcasses are suitable** for animal food **following removal of the lesions**. **Carcasses affected with septicemia are not suitable for animal food.**
Kidney Cysts-092 Module 6 -1-54	Condemned materials are suitable for animal food.
Liver Flukes-760 Module 6-1-127	Condemned **livers are not suitable for animal food**.

	Condemned **carcasses are suitable** for animal food **following removal of the liver**.
Lump Jaw (Actinomycosis)-403 Module 6-1-131	Condemned **livers are not suitable for animal food**. Condemned **carcasses are suitable** for animal food **following removal of the liver**.
Lymphadenitis-546 Module 6-1-134	Condemned material is **not suitable for animal food.**
Lymphosarcoma-635 Module 6-1-232	Condemned materials are suitable for animal food.
Mange (Dermatitis)-810 Module 6-1-56	In general **most materials**, condemned for various conditions in this section **are not suitable for animal food**.
Mastitis-547 Module 6-1-137	Condemned **udders are not suitable for animal food.** **Condemned carcasses are suitable** for animal food following removal of the udder and **providing there is no evidence of septicemia**.
Melanoma-645 Module 6-1-236	Condemned materials are suitable for animal food.
Melanosis-071 Module 6-1-140	Condemned materials are suitable for animal food.
Mesotheliomas-660 Module 6-1-242	Condemned materials are suitable for animal food.
Metritis-548 Module 6-1-143	Providing there is no evidence of a septicemia condemned material is **suitable for animal food following removal of the uterus.**
Myositis-550 Module 6-1-146	Condemned material is **not suitable for animal food.**
Navel Infection (Omphalophlebitis)-445 Module 6-1-148	Providing there is no septicemia **condemned carcasses are suitable** for animal food **following removal of the lesions**. **Carcasses affected with septicemia are not suitable for animal food.**
Nephritis-560 Module 6-1-151	Condemned kidneys are **not suitable for animal food.** Other condemned material is **suitable** for animal food **following removal of the kidneys**.
Neurofibroma-660 Module 6-1-241	Condemned materials are suitable for animal food.
Neurological Disorders Module 6-1-153	Condemned material is **not suitable for animal food.**
Ochranosis- 071 Module 6-1-142	Condemned materials are suitable for animal food.
Orchitis-570 Module 6-1-161	Carcasses condemned for emaciation are **suitable** for animal food **following removal of the testicles.**
Osteohemachromatosis (Pink Tooth)-130 Module 6-1-162	Condemned materials are suitable for animal food.
Osteomalacia-141	Condemned materials are suitable for animal food.

Module 6-1-164	
Osteomyelitis-150 Module 6-1-166	Condemned material is **suitable** for animal food **following removal of affected bones and lymph nodes.**
Pericarditis-571 Module 6-1-175	Condemned material is **not suitable for animal food.**
Peritonitis-573 Module 6-1-177	In acute peritonitis, condemned material is **suitable** for animal food **following removal of the lesions providing there is no evidence of septicemia.** Condemned **material from carcasses with a septicemia is not suitable for animal food.** Material condemned for adhesions is suitable for animal food.
Pityriasis Rosea-810 Module 6-1-58	Condemned material is **not suitable for animal food.**
Pleuritis-577 Module 6-1-180	Material from carcasses condemned for acute pleuritis is **suitable** for animal food **following removal of the lesions** providing there is no evidence of septicemia. Condemned **material from a carcass with septicemia is not suitable for animal food**. Material condemned for adhesions is suitable for animal food.
Pneumonia-579 Module 6-1-182	Providing there is no evidence of septicemia condemned material is **suitable** for animal food **following removal of the lungs**. **Carcasses with a septicemia are not suitable for animal food.**
Pork Tapeworm (Cysticercus cellulosae)-735 Module 6-1-44	Federal CFIA guidelines have a zero tolerance for C. cellulosae. **A single cyst is considered sufficient to condemn a carcass.**
Pyelonephritis-566 Module 6-1-189	Condemned material is **suitable** for animal food **following removal of the kidneys** providing there is no evidence of a septicemia. Condemned **material from animals with a septicemia is not suitable** for animal food.
Ridgeling (Retained Testicle/Cryptorchid) 060/064 Module 6-1-195	Condemned materials are suitable for animal food.
Rhinitis-455 Module 6-1-193	Condemned **heads are not suitable for animal food** primarily because of the association between cats and atrophic rhinitis.

Sarcocystosis-770 Module 6-1-201	Condemned material is **not suitable for animal food.**
Sawdust Liver-520 Module 6-1-203	Condemned materials are suitable for animal food.
Septicemia-930 Module 6-1-207	Condemned material is **not suitable for animal food.**
Serous Atrophy of Fat (Emaciation)-220 Module 6-1-64	Condemned materials are suitable for animal food.
Steatitis (Yellow Fat Disease) 102 (Not Otherwise Specified) Module 6-1-209	Condemned materials are suitable for animal food.
Stones (Calculi)-091 Module 6-1-212	Affected tissues are suitable for animal food.
Tail Biting (Cannibalism)-007 Module 6-1-215	Condemned material is **suitable** for animal food **following removal of abscesses.** Lungs with embolic abscesses are **not suitable** for animal food.
Telangiectasis-200 Module 6-1-217	Condemned Material is suitable for animal food.
Toxemia-960 Module 6-1-219	Condemned Material is suitable for animal food.
Trichinosis-101 Module 6-1-222	Condemned material is **not suitable for animal food.**
Tuberculosis (TB)-490 Module 6-1-226	Condemned material is **not suitable for animal food.**
Tumor-Cancer Eye (Bovine Squamous Cell Carcinoma) 620 Module 6-1-229	Condemned material, **other than heads with abscesses or necrotic lesions**, is suitable for animal food.
Tumor-Hemangioma-625 Module 6-1-231	Condemned materials are suitable for animal food.
Tumor-Lymphosarcoma-635 Module 6-1-235	Condemned materials are suitable for animal food.
Tumor-Melanoma-645 Module 6-1-238	Condemned materials are suitable for animal food.
Tumors-Miscellaneous-660 Module 6-1-243	Condemned materials are suitable for animal food.
Uremia-350 Module 6-1-245	Condemned materials are suitable for animal food.
Waterbelly (Urolithiasis)-355 Module 6-1-248	Condemned materials are suitable for animal food.
White Muscle Disease-211 Module 6-1-249	Condemned materials are suitable for animal food.
Xanthosis-079 Module 6-1-251	Condemned materials are suitable for animal food.

SUBJECT: Intervention Strategies - Red Meat Animals	07-B-12
REGULATORY REFERENCES: AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section 3.3	**Initial Release** Sept 1, 2009 **Revision Date** Sept 1, 2010 **Page 1 of 5**

RATIONALE

A primary goal of the slaughter process is to minimize contamination of the carcass with micro-organisms (bacteria, molds, fungi, etc.) and to effectively remove contamination that may have occurred.

Note: Most contaminants, micro-organisms, chemical, or physical, have the potential to cause harm to consumers of meat, or meat products.

Sanitary dressing procedures are the primary means of reducing contamination of poultry carcasses, by micro-organisms, but in reality, no matter how careful the dressing procedure is conducted, it is almost impossible to dress a red meat carcass without some bacterial contamination.

Note: Many bacteria found in the manure (e.g. Salmonella, Campylobacter, etc.) and on the skin of red meat animals are capable of causing serious disease in humans.

The unavoidability of bacterial contamination is the reason that “Intervention Protocols” are necessary.

As a means of improving meat safety the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD) strongly recommends the routine use of “Intervention Protocols” to effectively remove, or inactivate, bacterial contamination of the carcass.

This document outlines the types of **“Intervention Strategies**” that are currently approved for use on red meat carcasses.

OBJECTIVE/OUTCOME

To minimize bacterial and/or chemical contamination, **it is strongly recommended** that “Licensed Meat Facilities” (abattoirs) adopt **“Intervention Strategies”** that go beyond the routine, traditional practice of only trimming and washing carcasses in the final steps of dressing.

“Approved Intervention Strategies” include those identified in this document along with others that may be approved, in the future, by the Head of the MIB.

The MIB recommends that abattoirs test some of their red meat carcasses to verify that *E. coli* 0157:H7 has been eliminated.

Note: This is only a **recommendation**. It is **not a** legislated **requirement**.

Verification of the elimination of E. coli O157:H7 requires bi-monthly, or quarterly, testing of at least one carcass for E. coli O157:H7.

A standard 3 site carcass swabbing technique is used. The carcass must be

held until test results are known.

If verification tests are positive, for *E. coli* 0157:H7, the operator must re-apply the intervention to the positive carcass(es), retest and then evaluate the slaughter process for potential problem areas, and consider increasing the frequency of carcass testing.

The following "Intervention Strategies" are approved for use by the MIB.

Lactic Acid Wash

Note: Lactic acid is the most commonly used antibacterial chemical for acid washing of carcasses.

The wash is applied following trimming of any visible contaminants.

Note: Normally acid washes are applied following the final wash with water but they can be applied before.

"Common Industry Practice" calls for the use of a 2.0 – 4.0% solution.

Note: As long as the operator does not exceed a concentration of 5% the carcass does not have to be rinsed with water after application of the lactic acid.

It is recommended that carcasses be sprayed, in a gentle sweeping motion, from top to bottom, with the nozzle no more than 12 inches from the carcass. Lactic acid may also be applied to beef subprimals, trimmings, and offals.

A side of beef should be sprayed for at least one minute, smaller carcasses (e.g. pork, lamb, etc) for 30 seconds.

The rinse should be applied with a moderately broad nozzle setting and a high level of pump pressure (between 30-40 psi).

Note: It is acceptable to use a garden type sprayer but it is recommended that one of higher quality be used.

The concentration and temperature, of the solution, must be checked and recorded at least once on each shift.

Note: The efficiency of the lactic acid depends on the temperature it is used at. It works best at temperatures between 50 and 55^0 C.

Mixing instructions, for lactic acid, are included as an attachment to this document.

In keeping with Health Canada's requirement, a 72 hours minimal interval is required between application of lactic acid to beef and pork carcasses and consumption of the product.

Acetic Acid Wash

Acetic acid washes are applied following trimming of any visible contaminants.

"Common Industry Practice" calls for the use of a 2.0% solution.

Note: Concentrations of 5% or less do not require rinsing of the carcasses following application.

The carcass should be sprayed twice to create a drip.

The concentration of the solution must be checked at least once each shift.

Peroxyacetic Acid and Hydrogen Peroxide Washes

These chemical washes are applied following trimming of any visible contaminants, and may be applied to carcasses, parts, trim and organs.

Note: Concentrations of 220 ppm or less of peroxyacetic acid, or 110 ppm or less of hydrogen peroxide do not require rinsing of the carcasses following application.

Chlorine or Chlorine Dioxide Washes (including Sodium/Calcium Hypochlorite)

Chorine solutions can be used instead of an organic acid. Approved chlorine compounds include sodium/calcium hypochlorite and electrolytically generated hypochlorous acid.

Application of chlorine is done using the same method as for acid washes.

The **MAXIMUM** allowable concentration of **TOTAL AVAILABLE** chlorine, for a red meat carcass, is **20 parts per million** (ppm), followed by a rinse with potable water.

Acidified chlorine

Acidified chlorine is applied the same as other washes but in this case the maximum allowable limit of total available chlorine is 10 ppm, followed by a rinse with potable water.

Dry Chilling and Ageing

Note: Generally dry chilling and ageing, which is routinely used to tenderize beef carcasses, also has the desirable effect of reducing the number of bacteria on the surface of the carcass. Generally this process is only applicable to beef carcasses.

The following conditions are required to ensure that dry chilling and ageing have the desired effect of reducing bacterial contamination:

1. A cooler temperature of less than 4^0 C (39.2^0 F).

   Note: It is “Common Industry Practice” to set the coolers at temperatures between 1^0 C (34^0 F) to 3.3^0 C (38^0 F) with a humidity below 90%.

2. Monitoring is conducted, to ensure that the temperature has remained below 4^0 C.
3. Documentation to show that carcasses have been dry chilled for at least 6 days.

   Note: Laboratory tests have confirmed that generic *E. coli* and *E. coli* 0157:H7 are more susceptible to these conditions than most other contaminating bacteria.

MISCELLANEOUS CONSIDERATIONS ON THE USE OF ACID WASHES

General Comments on Acid Washes

It has been reported that acetic acid solutions may be hard on floor surfaces.

Acetic acid also tends to be more irritating for workers than lactic acid.

It has been observed that carcasses sprayed with organic acids develop changes in the appearance of the surface fat after ageing.

Note: These changes include a yellowish tinge to carcass fat and a brownish tinge to blood. These color changes may be lessened following the chilling process.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for "**Intervention Strategies- Red Meat Animals**" will be met when**:**

1. **Written**, abattoir specific, **"Intervention Procedures"** are on file.

   Note: Written protocols must include monitoring procedures and records, including tests of the concentrations (and temperature, if applicable) of any solutions used in the protocol at least once every shift.

   These procedures must include:

   a) the method of intervention;
   b) the person responsible;
   c) cleanliness requirements for the equipment;
   d) descriptions for the proper utilization of the equipment;
   e) the site and rate of application including solution flow rate and pressure;
   f) safe and sanitary storage requirements for chemical agents;
   g) chemical concentrations, temperatures and other specifications;
   h) a description of actions taken if the method of intervention does not follow the written program

2. An up-to-date **list of all non-food chemicals** in use, or stored, on the premises.

   Note: There should also be documentation indicating that these chemicals have been approved for use in abattoirs.

3. All microbial control treatment solutions and/or treated water are tested and the test results are captured by a continuous recorder, or if recorded manually, a minimum of once every 4 hours.

   Note: Records must show ongoing compliance with:

   a) Maximum allowable concentrations (and if applicable, temperature and/or time) as indicated by Health Canada for use on raw poultry; and
   b) minimum concentration (and if applicable, temperature and/or time) needed to ensure effective control of microbial organisms.

4. **"Intervention Strategies"** do not result in the contamination of any non-compatible products, ingredients or packaging material.

5. All facility personnel involved in the performance of **"Intervention Strategies"** are in compliance with Occupational Health and Safety Requirements.

   Note: A current "Material Safety Data Sheet" (MSDS) must be on file, at the facility, for each microbial control agent in use.

6. "**Intervention Training Records"** are on file at the premises**,** for personnel responsible for conducting the intervention.

   Note: Training must include MSDS training for chemicals being used.

7. On site observations by MIB Inspectors demonstrate that the abattoir is performing

the **"Intervention Strategies"** in accordance with the written protocol.

RELATED SECTIONS OF TIPM

03-C-02 Approved Chemicals & Chemical Listing
03-G-01 Dressing Procedures - Red Meat
07-B-01 Dressing Procedures - Cattle & Calves
07-B-02 Dressing Procedures - Hogs
07-B-03 Dressing Procedures - Sheep, Goats & Deer
07-B-04 Dressing Procedures - Elk & Bison
07-B-05 Dressing Procedures - Rabbits (Domestic)

Attachment - TIPM Document 07-B-12

Lactic Acid Instructions

Materials Required:

Lactic Acid 88% (20L Pail)

Graduated Cylinder or another measuring device

Pail Pump

Sprayer

MSDS sheets, Acid Usage Sheets

Lactic Acid Test Kit

Mixing and Storage Instructions:

1. Acid should be diluted to approximately 2%-2.5%. If kept at 5% or below, the carcasses do not have to be rinsed following treatment.

   To get this percentage range:

   Fill the sprayer to the 8 litre mark on the outside. (You can weigh this- it will weigh 8 kg + weight of container or you can use a dipstick to measure level.

   Measure 190 ml of lactic acid

   This should give approximately 2% strength. Use the test kit to verify concentration and adjust as necessary.

2. Research studies have shown that the temperature range of the water affects the efficacy of the acid. Water temperature should be between 50-65 °C. Keep the sprayer submersed in a pail of hot water to keep the water warm throughout the slaughter. Refresh the hot water surrounding the sprayer as it starts to cool off (especially if you are keeping the pail in the cooler in between animals)

3. A treatment record is required. This record must contain the date, the water temperature, and the tested concentration of the acid (using the test kit) for each batch of lactic acid used.

Lactic Acid Instructions (cont.)

Method of Application

1. Rinse each carcass side with warm potable water prior to acid treatments. Each side of beef should be washed for at least 2 minutes. Pork should be washed for 1 minute. Wash the carcass from top to bottom. Spray only 1 carcass at a time, and hold nozzle no more than one foot from the carcass surface.

2. Allow carcass halves to drip for 5 minutes.

   Note: Allowing the carcass to drip is important, because if there is not enough drip time there will be too much water film and the acid cannot get through into the carcass

3. Apply acid treatment to carcass halves.

4. A side of beef must be rinsed for at least 1 minute, pork for 30 seconds. Spray both the inside and outside, moving from top to bottom in a sweeping motion.

5. Transfer all carcass halves to drip cooler. There is no need to rinse again.

   Note: Pails of intervention acids must be stored in a secure location, along with all other chemicals. Amounts required can be transferred to the sprayer from this location.

6. There must be a 72 hour interval between spraying the carcasses and consumption of product.

SUBJECT: Intervention Strategies - Poultry	07-B-13
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section 3.3	**Initial Release** Sept 1, 2009 **Revision Date** Sept 1, 2010 **Page 1 of 4**

RATIONALE

A primary goal of the slaughter process is to minimize contamination of the carcass with micro-organisms (bacteria, molds, fungi, etc.) and to effectively remove contamination that may have occurred.

Note: Most contaminants, micro-organisms (bacteria, fungi, molds, etc.), chemical, or physical, have the potential to cause harm to consumers of meat, or meat products.

Sanitary dressing procedures are the primary means of reducing contamination of poultry carcasses, by micro-organisms, but in reality, no matter how careful the dressing procedure is conducted, it is almost impossible to dress a poultry carcass without some bacterial contamination.

Note: Many bacteria found in the manure (e.g. Salmonella, Campylobacter, etc.) and on the skin of poultry are capable of causing serious disease in humans.

The unavoidability of bacterial contamination is the reason that “Intervention Protocols” are necessary.

As a means of improving meat safety the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD) strongly recommends the routine use of “Intervention Protocols” to effectively remove, or inactivate, bacterial contamination of the carcass.

This document **outlines** the types of **“Intervention Strategies”** that are currently approved for use **in poultry**.

OBJECTIVE/OUTCOME

To minimize bacterial and/or chemical contamination, **it is strongly recommended** that “Licensed Meat Facilities” (abattoirs) adopt **“Intervention Strategies”** that go beyond the routine, traditional practice of only washing poultry carcasses in the final steps of dressing.

“Approved Intervention Strategies” include those identified in this document along with others that may be approved, in the future, by the Head of the MIB.

The following “Intervention Strategies” are approved for use by the MIB on poultry:

Acidified Chlorine

Poultry carcasses may be sprayed with, or dipped into, solutions of acidified chlorine (HOCL).

Note: Acidified chlorine is a mixture of sodium hypochlorite and phosphoric acid.

A maximum of 10 parts per million (ppm) of total available (acidified) chlorine can be put in dips, or sprays, for poultry carcasses, or parts of carcasses, providing treatment is followed by a rinse with potable water.

Acidified Sodium Chlorite Solutions

Poultry carcasses may be sprayed with, or dipped into, acidified solutions of sodium chlorite.

It is "Common Industry Practice" to use a solution that contains between 500 and 1,200 ppm of sodium chlorite in combination with a food grade acid at levels sufficient to achieve a solution pH of 2.5 to 2.9.

Note: 500 to 1,200 ppm of sodium chlorite is equivalent to a concentration of 20 to 226 ppm of hydrochlorous acid.

Chlorine Dioxide

Chlorine Dioxide (ClO_2) can be used providing:

1. The air surrounding and/or within the treatment equipment is exhausted to comply with occupational health and safety requirements.
2. An initial validation test of the ClO_2 generation system verifies that the generator effluent contains at least 90% (by weight) of ClO_2 with respect to all chlorine containing compounds, as determined by an internationally accepted method e.g. as published in "Standard Methods for the Examination of Water and Wastewater".
3. Water in immersion chillers doesn't exceed 50 ppm of total available chlorine dioxide such that a maximum of 3 ppm (mg/l) of residual chlorine dioxide is detected in the chiller overflow water.

Chlorine Washes

Chlorine can be applied to poultry carcasses, or to portions of carcasses and equipment, in the chill tank, by sprays on the salvage line and through the use of venting and cropping sprays.

Chlorine can be applied in the form of sodium or calcium hypochlorite, or electrolytically generated hydrochlorous acid.

Note: For the chill tank the concentration of **total available chlorine** must be equal to, or greater than, 20 ppm but must not exceed 50 ppm. There must always be a trace of residual chorine.

A maximum of 5 ppm total available residual chlorine is allowed in the chiller overflow water.

Similarly, in salvage lines, venting equipment and cropper sprays the concentration of total available chlorine must be equal to, or greater than, 20 ppm but must not exceed 50 ppm.

Carcass contact surfaces of automatic poultry evisceration equipment may be sprayed with water containing 20-200 ppm of total available chlorine provided the surfaces are well drained prior to contact with poultry carcasses or parts.

Lactic Acid Wash

Lactic acid washes are applied following trimming of any visible contaminants.

Note: Normally acid washes are applied following the final wash with water but they can be applied before.

A 4.5% solution may be used, with or without buffered sodium lactate, providing the acid treatment is followed immediately by rinsing with potable water.

The concentration and temperature, of the solution, and temperature must be checked and recorded at least once on each shift.

Peroxyacetic Acid and Hydrogen Peroxide

These chemicals may be added to water or ice used for washing, rinsing, cooling, or processing whole poultry, poultry parts, or organs, or in chill tanks.

Washes and sprays must be applied at a maximum concentration of 220 ppm peroxyacetic acid or 85 ppm hydrogen peroxide, while chillers must not exceed 2000 ppm peroxyacetic acid or 165 ppm hydrogen peroxide.

Ozone

Ozone may be used for treating re-circulated poultry chiller water but must not be allowed to contact poultry carcasses, or parts thereof.

Note: Residual ozone must be removed from the treated chiller water by filtration.

Ozone generators can be used, but they must not generate ozone into the air, incidental to their normal operation, at a level in excess of 0.05 ppm.

Tri-sodium Phosphate

Tri-sodium phosphate (TSP) may be used for pre, or post, chill application on raw poultry carcasses based on the following general conditions of use:

1. TSP must be dissolved in water at a concentration between 8% and 12%.
2. TSP can be applied by means of an on-line spray system for the pre-chill drench application, or as a post chill immersion/drench application;

   Note: TSP must not be applied directly into water immersion chill tanks.
3. The TSP solution must be maintained at a temperature between a minimum of 7.2^0 C (45^0 F) and the temperature of a freshly eviscerated carcass.
4. Re-circulated TSP treatment solution must be put through a filtration system; and carcasses must not be exposed to the TSP solution for more than fifteen (15) seconds in either the pre chill or the post chill treatment methods.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for "**Intervention Strategies- Poultry**" will be met when**:**

1. **Written**, abattoir specific, **"Intervention Procedures"** are on file.

   Note: Written protocols must include monitoring procedures and records, including tests of the concentrations (and temperature, if applicable) of any solutions used in the protocol at least once every shift.

   These procedures must include:

   a) the method of intervention;

b) the person responsible;

c) cleanliness requirements for the equipment;

d) descriptions for the proper utilization of the equipment;

e) the site and rate of application including solution flow rate and pressure;

f) safe and sanitary storage requirements for chemical agents;

g) chemical concentrations, temperatures and other specifications;

h) a description of actions taken if the method of intervention does not follow the written program

2. An up-to-date **list of all non-food chemicals** in use, or stored, on the premises.

   Note: There should also be documentation indicating that these chemicals have been approved for use in abattoirs.

3. All microbial control treatment solutions and/or treated water are tested and the test results are captured by a continuous recorder, or if recorded manually, a minimum of once every 4 hours.

   Note: Records must show ongoing compliance with:

   a) maximum allowable concentrations (and if applicable, temperature and/or time) as indicated by Health Canada for use on raw poultry; and

   b) minimum concentration (and if applicable, temperature and/or time) needed to ensure effective control of microbial organisms

4. **"Intervention Strategies"** do not result in the contamination of any non-compatible products, ingredients or packaging material.

5. All facility personnel involved in the performance of **"Intervention Strategies"** are in compliance with Occupational Health and Safety Requirements.

   Note: A current "Material Safety Data Sheet" (MSDS) must be on file, at the facility, for each microbial control agent in use.

6. Intervention Strategy **"Training Records"** are on file at the premises**,** for personnel responsible for conducting the intervention.

   Note: Training must include MSDS training for chemicals being used.

7. On site observations, by MIB Inspectors, demonstrate that the abattoir is performing the **"Intervention Strategies"** in accordance with the written protocol.

RELATED SECTIONS OF TIPM

03-C-02 Approved Chemicals & Chemical Listing

03-G-02 Dressing Procedures - Poultry

07-B-06 Dressing Procedures - Poultry

SUBJECT: PM Inspection - Red Meat Animals - General	08-A-01
REGULATORY REFERENCES M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Section 5(c) AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 47	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Most disease conditions cause visible changes (lesions) in the carcass of the affected animal therefore, the post-mortem (PM) examination is considered to be the focal point of meat inspection.

Note: Lesions are defined as any visible abnormality in a carcass or any of its parts regardless of cause. They may be caused by disease, or other factors such as physical injury.

The **PM examination** is **intended to detect** any **lesions**, **in the carcass**, or any of its parts.

Examination to determine the presence or absence of disease is critical in ensuring that all parts of the animal are wholesome and fit for human consumption.

Note: A proper ante-mortem (before death) inspection is critical in detecting animals affected with disease conditions that may not result in visible changes in the carcass or internal organs.

The need for a PM inspection is mandated in both the Alberta *Meat Inspection Act* (MIA) and in the Alberta *Meat Inspection Regulation* (AR 42/2003).

Note: Section 5(c), of the MIA states that PM inspection must be performed before a carcass, or any of its parts, can be sold, or offered for sale.

Section 47 of AR 42/2003 requires a complete PM inspection following slaughter.

The **purpose** of this document is to **outline**, in general terms, **responsibilities** of Meat Inspection Branch (MIB) **Inspectors** and abattoir **personnel** in relation to PM inspections.

OBJECTIVE/OUTCOME

PM inspections will be conducted, by “duly appointed” inspectors, on all animals, immediately following their slaughter.

Note: “Duly appointed” inspectors are defined as individuals appointed under section 2(1) of the MIA.

All PM inspections will be done in accordance with the methods prescribed by the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

Note: The MIB is responsible for ensuring that all MIB Inspectors have the necessary training, knowledge, skills and ability to conduct a proper PM inspection.

The PM inspection will include all parts of the animal.

Abattoir personnel will assist the MIB Inspector in the conduct of the PM inspection by:

1. Presenting the carcass and its parts in a manner that allows effective and efficient post-mortem inspection.
2. Cleaning, preparing and presenting the carcass and it's parts for inspection in a hygienic manner.
3. Assisting with the physical separation and detention of any carcasses and their parts, as required, when lesions are detected during the PM inspection.

    Note: MIB Inspectors have the authority and responsibility to take immediate action if abattoir personnel don't provide appropriate assistance during PM inspection procedures.

    Actions that may be taken include:

    a) slowing down the rate of slaughter;

    b) temporary suspension of inspection services until the situation has been corrected

MIB Inspectors will provide the abattoir operator with a **MIF - 4 (Certificate of Condemnations)** for all condemnations

Note: The MIF - 4 is an official document that has been approved by the MIB. This document should:

a) be filled out in its entirety;

b) be legible;

c) fully describe the reasons for the condemnation

The abattoir operator will sign and receive a copy of the **MIF - 5 (Inspector's Daily Report)**

Note: The MIF - 5 provides a summary of all condemnations and the code (reason) for the condemnation.

RELATED SECTIONS OF TIPM

08-A-02 PM Inspection - Red Meat Animals - Methods
08-A-03 PM Inspection - Red Meat Animals - Findings - General
08-A-04 PM Disposition After PM Inspection - All Species
08-B-01 to 08-B-04 PM Procedures in Cattle
08-C-01 to 08-C-04 PM Procedures in Hogs
08-D-01 to 08-D-04 PM Procedures in Sheep, Goats & Deer
08-E-01 to 08-E-04 PM Procedures in Elk & Bison
08-F-01 PM Inspection - Rabbits

SUBJECT: PM Inspection - Red Meat Animals - Methods	08-A-02
REGULATORY REFERENCES M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Section 5(c) AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 47	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Most disease conditions cause visible changes (lesions) in the carcass of the affected animal therefore, the post-mortem (PM) examination is considered to be the focal point of meat inspection.

Note: Lesions are defined as any visible abnormality in a carcass or any of its parts regardless of cause. They may be caused by disease, or other factors such as physical injury.

PM examinations are **intended to detect lesions**, **in the carcass**, or any of its parts.

Note: Ensuring that a proper PM examination is conducted requires attention to detail including the use of recognized examination techniques.

The need for a PM inspection is mandated in both the Alberta *Meat Inspection Act* (MIA) and in the Alberta *Meat Inspection Regulation* (AR 42/2003).

Note: Section 5(c), of the MIA states that PM inspection must be performed before a carcass, or any of its parts, can be sold, or offered for sale.

Section 47 of AR 42/2003 requires a complete PM inspection following slaughter.

The **purpose** of this document is to **outline PM examination techniques** that apply, in principle to all animals including birds.

OBJECTIVE/OUTCOME

Meat Inspection Branch (MIB) Inspectors will follow a routine that ensures that a thorough PM examination is conducted.

Note: A systematic approach should be used to ensure that nothing is missed. In general for red meat animals the systematic approach includes examination of the:

a) structures of the head;

b) organs (viscera) in the thoracic (chest) cavity;

c) viscera in the abdomen;

d) carcass

Special attention will be paid to examining the lymph nodes in all parts of the body.

Note: The lymphatic system is a one way closed circulatory system that allows tissue fluids to be returned to the blood stream. Tissue fluids passing through the lymphatic system have to go through various lymph nodes that act as filters. Any time there is an infection in an area, or region, of the body, the lymph nodes of that area, or region, will show evidence of the infection. The degree of spread of an infection through the lymphatic system is a major factor in determining what should, or shouldn't be condemned.

MIB Inspectors will use the following techniques while conducting a post-mortem examination:

1. Visual examination
2. Palpation
3. Incision
4. Laboratory testing

Visual Examination

All parts of the carcass and internal organs will be observed visually. This simply means that the MIB Inspector looks at everything.

Note: The MIB Inspector needs to follow a set pattern, or sequence, to ensure that everything is looked at. Proper positioning of the internal organs, by abattoir personnel, is very important in ensuring that nothing is missed.

Palpation

Internal organs intended for human consumption will be palpated.

Note: Palpation is defined as physically feeling, or touching, an object.

Palpation will be sufficiently firm to detect deep-seated lesions.

Note: Deep palpation often precludes the need to incise an organ which may affect its sale value

Incision

Certain organs will be incised (cut into) routinely and others will be incised at the discretion of the MIB Inspector.

Note: Incision of the heart is a routine practice during the PM examination of beef cattle. It is done to detect tapeworm cysts that are not always visible on the surface and that are too small to palpate.

Incision is often the only way to determine the cause of a swelling. MIB Inspectors must exercise caution to ensure that incision doesn't cause contamination of the carcass, or other edible organs. A good example of possible contamination would be the opening of an abscess.

Laboratory Examination

It is not always possible to determine the cause of a lesion. Laboratory examination can help with this determination. For example tissue samples could be submitted for microscopic examination. Another example would be the submission of an injection site lesion to determine whether antibiotics are present.

Note: Determination of the cause is important in determining whether the condition requires condemnation or not.

When further testing is required the carcass and its portions will be detained, under a held tag, until test results come back.

While not listed as specific PM inspection techniques, MIB Inspectors have two other tools at their disposal:

1. Sense of smell
2. Digital cameras for consultation purposes

The first indication of an abnormality may be an abnormal smell (e.g. an abscess).

Regardless of how much experience the MIB Inspector has, things will come up that are unclear. In these instances it is highly recommended that the inspector consult with their Regional Supervisor, Area Manager and/or the Division Veterinarian. Pictures taken with a digital camera are valuable tools for consultation purposes.

RELATED SECTIONS OF TIPM

08-A-01 PM Inspection - Red Meat Animals - General
08-A-03 PM Inspection - Red Meat Animals - Findings - General
08-A-04 PM Disposition After PM Inspection - All Species
08-B-01 PM Inspection - Cattle - Head
08-B-02 PM Inspection - Cattle - Thoracic Viscera
08-B-03 PM Inspection - Cattle - Abdominal Viscera
08-B-04 PM Inspection - Cattle - Carcass
08-C-01 PM Inspection - Hogs - Head
08-C-02 PM Inspection - Hogs - Thoracic Viscera
08-C-03 PM Inspection - Hogs - Abdominal Viscera
08-C-04 PM Inspection - Hogs - Carcass
08-D-01 PM Inspection - Sheep, Goats & Deer - Head
08-D-02 PM Inspection - Sheep, Goats & Deer - Thoracic Viscera
08-D-03 PM Inspection - Sheep, Goats & Deer - Abdominal Viscera
08-D-04 PM Inspection - Sheep, Goats & Deer - Carcass
08-E-01 PM Inspection - Elk & Bison - Head
08-E-02 PM Inspection - Elk & Bison - Thoracic Viscera
08-E-03 PM Inspection - Elk & Bison - Abdominal Viscera
08-E-04 PM Inspection - Elk & Bison - Carcass
08-F-01 PM Inspection - Rabbits

SUBJECT: PM Inspection - Red Meat Animals - Findings - General	08-A-03
REGULATORY REFERENCES M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Section 5(c) AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 47	**Initial Release** Sept 1, 2009 **Page 1 of 9**

RATIONALE

Most disease conditions cause visible changes (lesions) in the carcass of the affected animal therefore, the post-mortem (PM) examination is considered to be the focal point of meat inspection.

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The **PM examination** is **intended to detect** any **lesions**, **in the carcass**, or any of its parts.

Examination to determine the presence or absence of disease is critical in ensuring that all parts of the animal are wholesome and fit for human consumption.

Note: A proper ante-mortem (before death) inspection is critical in detecting animals affected with disease conditions that may not result in visible changes in the carcass or internal organs.

The need for a PM inspection is mandated in both the Alberta *Meat Inspection Act* (MIA) and in the Alberta *Meat Inspection Regulation* (AR 42/2003).

Note: Section 5(c), of the MIA states that PM inspection must be performed before a carcass, or any of its parts, can be sold, or offered for sale.

Section 47 of AR 42/2003 requires a complete PM inspection following slaughter.

The **purpose** of this document is to **outline**, in general terms, **common abnormalities** encountered by Meat Inspection Branch (MIB) Inspectors.

OBJECTIVE/OUTCOME

All carcasses and viscera, of red meat animals will be closely examined for lesions (abnormalities).

Following is a list of abnormalities commonly seen by MIB Inspectors:

Note: **This listing is not intended to be comprehensive** nor is it intended to provide sufficient information for the reader to perform a PM examination. It is simply intended to provide the reader with some basic understanding about what inspectors are looking for.

For more information the reader is referred to module 6 of the Regulatory Services Division Meat Inspection Manual (MIM)**.** All MIB Inspectors have a complete copy of the MIM and there should be copies of module 6, in the meat inspector's office, at every abattoir.

1. **Abscesses**

Abscesses are accumulations of debris (commonly referred to as pus). They indicate that the animal is, or was, affected with an infectious agent generally a bacterium.

Note: The type of pus, in an abscess, will vary greatly in color, odor and consistency. This variation is due to differences in the type of infectious bacteria and the length of time the abscess has been present.

The pus, in an abscess, is encapsulated (separated from surrounding tissues) by a layer of fibrous connective tissue. This purpose of the capsule is to prevent further spread of the infection.

Abscesses may be single, or small in number, and confined to one location, or they may be multiple and spread throughout the body.

Note: Abscesses and the surrounding tissues and/or area are not suitable for human consumption. At the very least the abscess itself will be trimmed or the affected area (organ or quarter) will be condemned. If there is evidence of spread throughout the body the carcass and all organs will be condemned.

2. **Adhesions**

Adhesions are accumulations of fibrous (scar) tissue that have entrapped various internal organs. The intestines are commonly affected with adhesions in animals that have recovered from peritonitis. Lungs may be tied up with adhesions following pleuritis.

Note: Birds have a limited ability to produce fibrous tissue therefore, adhesions are rare in birds.

Fibrous tissue, in well developed adhesions, tends to be white, dry and very tough. In the early stages, when the infection is still active, adhesions are easier to tear apart. At this stage they are wet and usually have a yellow color.

Note: It is important for MIB Inspectors to differentiate mature adhesions from those that still have an active infectious component.

Well developed adhesions indicate that the animal has recovered from the infection thus the carcass is likely suitable.

As a general principle, organs affected with adhesions are condemned.

3. **Arthritis**

Arthritis is defined as inflammation in the joint. One or more joints, in one or more limbs, may be affected.

Note: It is possible to have inflammation without infection. Physical injury is the cause of non-infectious arthritis.

The decision of whether to condemn, or not, depends on the ability of the MIB Inspector to determination whether infection is present or not.

Note: It is important to make a distinction between infectious and non-infectious inflammation. When infection is present the joint fluid is usually cloudy due to the presence of pus. In non infectious arthritis (caused by injury or degenerative joint disease) there may be an increased amount of joint fluid but it will have a normal clear appearance or at worst it will only contain some blood.

Partial condemnations are common when it is determined that infectious arthritis is confined to one limb regardless of the number of joints affected.

Note: Animals with more than one leg affected are often thin and may be condemned for other reasons such as emaciation.

4. Ascites and Edema

Ascites and edema both refer to accumulations of clear watery fluid. In ascites the fluid is in the abdominal cavity. In the case of edema the fluid is in the muscles, or other affected organs.

Note: Ascites is very common in broiler chickens that have been grown too quickly. It is an indication of right sided heart failure. Ascites can also occur in red meat animals.

Edema can be localized, or generalized. The most common cause of generalized edema is heart failure. Localized edema is usually due to local circulation problems (in the blood, or lymph) or secondary to an inflammatory reaction.

Note: Portions of the carcass affected with edema are condemned. Broilers with ascites can be approved for human consumption providing there are no systemic effects including emaciation, cyanosis (bluish discoloration of the carcass) or generalized edema in other tissues.

5. Atrophy

Atrophy is defined as a wasted, or shrunken, condition. Nerve paralysis leading to the inability of the animal to use a leg is the most usual cause of muscular atrophy.

Note: Atrophy is not considered to be a food safety issue.

6. Bruising

Bruises are caused by injuries that cause bleeding into the tissues. As the blood pigment (hemoglobin) breaks down, over time, the color of the bruise will change from dark red, to green, to yellow.

Note: Bruising is not hazardous to human health but affected tissues don't have a good appearance so they are trimmed out. MIB Inspectors have the authority to condemn the entire carcass when bruising is severe and widespread.

7. Cellulitis

Cellulitis is defined as the spreading of inflammatory material into the tissues through the spaces between the cells. Basically cellulitis occurs when the animal is unable to form the fibrous tissue wall of an abscess.

Note: There are certain bacteria (e.g. “Group A” Streptococci and some strains of Staphylococci) that can block the formation of fibrous tissue thus allowing the infection to spread unchecked.

In red meat animals cellulitis develops very quickly and is life threatening. For this reason this condition is not seen very often at an abattoir.

Note: “Flesh Eating Disease”, in humans, is an example of a severe form of cellulitis.

8. Cirrhosis

Technically cirrhosis is hardening of a soft tissue organ due to a generalized accumulation of scar (fibrous) tissue.

Note: Cirrhosis is most commonly seen in the liver but a disease condition, in cattle, called wooden tongue is a form of cirrhosis. The affected organ or tissue is condemned. In the case of cirrhosis of the liver the carcass could be condemned if there is evidence of liver failure (jaundice).

9. Contamination

Contamination simply refers to contact between edible portions of the carcass and something that is inherently dirty.

Note: The implementation of sound dressing procedures is very important in reducing the chance of contamination.

Common potential sources of contamination include:

a) the animal (particularly the hide and intestinal tract);

b) unsanitary surfaces such as walls, floors, etc;

c) unsanitary personnel;

d) unsanitary equipment;

e) the presence of rodents and other animals;

f) contact with non-potable water.

Note: All contaminated portions must be removed and the remaining portions must be thoroughly washed. The carcass may be condemned if, in the opinion of a MIB Inspector, the contamination is so severe that it cannot be completely removed by trimming. Contamination due to exposure to non-potable water is handled on a case by case basis and will involve the Area Manager and possibly a Food Safety Specialist.

10. Cysts

Cysts are defined as any closed cavity, or sac, that contains fluid.

Note: Cysts can occur in any part of the body.

The most common cysts seen by MIB Inspectors are tapeworm cysts (cysticerci) and renal (kidney) cysts.

Note: Other than for tapeworm cysts, cysts tend to be localized. Most are non-infectious thus only the organ, or affected portion, is removed and condemned.

11. Emaciation

Emaciation is the technical term for an extremely wasted body condition.

Note: **Animals can be thin without being emaciated**. To diagnose emaciation the inspector needs to see "Serous Atrophy" (fat with a watery appearance). This is usually seen in the fat on the surface of the heart and around the kidneys because these are the last places that fat will disappear from as emaciation progresses.

In addition to serous atrophy, of the fat, an emaciated animal will usually have accumulations of watery fluid in the muscles.

Emaciated animals are condemned but animals that are simply thin should not be condemned.

Note: **If there is** any **normal** looking **fat** on the surface of the **heart** or around the **kidney the animal is not emaciated**.

12. Emphysema

Emphysema is defined as the presence of gas bubbles in the tissues.

Note: This condition is most common in the lungs, particularly of cattle. When lungs are affected with emphysema they won't collapse when the chest is opened. Emphysema can occur in other tissues in certain infections where the bacteria produce gas (e.g. blackleg). Occasionally emphysema of the intestinal tract is seen in pigs. The cause of intestinal emphysema is not known. Other than for blackleg emphysema is not a food safety concern and only the affected organs, or tissues are condemned.

13. Fibrosis

Fibrosis refers to the replacement of normal tissue by fibrous (scar) tissue. It is the end result of a chronic (long standing) inflammatory and repair process.

Note: The formation of scar tissue is part of the healing process. By the time the normal tissue has been replaced, by scar tissue, the agent that caused the problem is long gone. For this reason areas of scarring are generally just trimmed out.

Cirrhosis and adhesions are also caused by the presence of scar tissue. In cirrhosis the scarring is generalized, throughout the organ, rather than localized. The chest and abdominal cavities are the most common location where adhesions are seen.

14. Granulomas

Granuloma is a non-specific term which refers to a chronic inflammatory reaction.

Note: Granulomas can occur in any tissue or organ

Granulomas generally have a fleshy appearance. In some instances this makes them difficult to differentiate from tumors.

Note: Examination of the tissue under the microscope may be the only way to tell the difference between a granuloma and a tumor.

Disposition depends on whether the granuloma is still active.

Note: Active granulomas may have any of the following signs:

a) congestion (increased blood flow in the area);
b) hemorrhage (bleeding into the tissues);
c) edema (accumulations of watery fluid);
d) enlargement of lymph nodes draining the affected area

When it has been determined that a granuloma is active the affected lymph nodes and tissues in that node's drainage area are condemned.

15. Hemorrhage and Hematomas

Hemorrhages are accumulations of **<u>un-clotted</u> blood** in the tissues, or body cavities. **Hematomas** are accumulations of **<u>clotted</u> blood**.

Note: Hemorrhages tend to turn into hematomas, over time, and then they become a bruise.

Most hemorrhages, or hematomas, are localized conditions thus they only require trimming.

Note: Poisoning of cattle, with moldy sweet clover, is an exception to this general statement. In this condition hemorrhages and hematomas occur throughout the body.

Very small pinpoint hemorrhages in various organs and tissues may indicate the presence of a septicemia (generalized blood poisoning).

Note: Very small pinpoint hemorrhages are called petechial hemorrhages. Ecchymotic hemorrhages are larger but still not large enough to result in accumulations of fluid (blood) in the tissues. They are best described as blotchy hemorrhages.

Localized petechial, or ecchymotic, hemorrhages are unlikely to lead to condemnation of tissues other than the affected area but if there are indications that they were caused by a septicemia the carcass will be condemned.

Note: When septicemia is present the hemorrhages will have a wide distribution throughout the body.

16. Jaundice

Jaundice (also called icterus) refers to a yellow discoloration of body tissues and organs. Liver failure is the main cause of jaundice.

Note: In order to make a diagnosis of jaundice it is necessary to have yellow discoloration throughout the body. The yellow discoloration is most easily detected in light colored tissues such as the whites of the eye. The MIB Inspector must be careful to differentiate yellow fat from jaundice. Animals with yellow fat will not have discoloration of other tissues.

Carcasses are condemned for jaundice if there:

a) is severe yellow discoloration of the tissues;

b) are degenerative changes in the liver, kidney, or spleen;

c) are other systemic changes in the body.

Note: Carcasses with mild jaundice can be held for 24 hours. If the jaundice disappears, in that time, it can be passed otherwise it is condemned.

17. Peritonitis and Pleuritis

These terms refer to inflammatory reactions in the abdominal and thoracic (chest) cavities respectively.

Note: Peritonitis and pleuritis can be acute (recent and active infection) or chronic (of long duration).

Any bacterium agent that gains access to the abdominal, or thoracic, cavity will cause peritonitis, or pleuritis, respectively.

Note: Common causes of peritonitis include:

a) septicemias;

b) intestinal ruptures;

c) wounds to the abdomen;

d) extension of infection from abdominal organs or lymph nodes

Common causes of pleuritis include:

a) extension of pneumonia;

b) certain septicemias;

c) wounds to the chest wall

Acute active peritonitis, or pleuritis, is usually characterized by what is called a fibrinous reaction. Variable amounts of clotted fibrin, or jelly like material, will be present in the affected body cavity. Generally this material is yellow. There will be areas of congestion and hemorrhage.

Note: The MIB Inspector has to determine whether the condition is active, or not. In active peritonitis, or pleuritis, the lesions will be wet and yellow and there are usually areas of congestion, or hemorrhage. In chronic peritonitis the adhesions will be dry and will form white shiny bands, or sheets of scar tissue.

The carcass is condemned:

a) when the lesions are acute and extensive, or

b) there is emaciation, or

c) other systemic signs are present.

18. Tumors

Tumors are abnormal growths of tissue commonly referred to as cancers.

Note: There are many different types of tumors. They all have different causes and physical characteristics.

The most common tumors, seen by MIB Inspectors include cancer eye (bovine squamous cell carcinoma in cattle), hemangiomas (blood vessel tumors) lymphosarcomas (tumors of the lymph nodes) and melanomas (tumors containing large amounts of black pigment). Leucosis and Marek's disease are the most commonly encountered tumors in poultry.

Tumors may be malignant (grow rapidly and spread throughout the body) or benign (localized and generally not life threatening).

Note: Malignant tumors are capable of gaining access to the blood stream, or lymph channels. Once they gain access they are transported to other parts of the body where they will grow and produce secondary tumors. **This process of spread is called metastasis**.

Tumors are recognized as abnormal growths in any organ, tissue, or body cavity. Most, but not all, tumors are quite "fleshy".

Note: Fast growing malignant tumors often contain areas of hemorrhage, necrosis (dead tissue) and accumulations of fluid. Often they are poorly differentiated from the surrounding normal tissues because they tend to grow by infiltration (pushing into the spaces between the normal cells). Benign tumors, on the other hand, are clearly distinct from the surrounding normal tissue because they do not infiltrate.

For any particular tumor the suitability of the carcass is based on the following criteria:

a) is the tumor benign or malignant;

b) has metastasis (spread to other organs) occurred;

c) does the carcass exhibit other systemic changes such as emaciation, edema, ascites, etc

Note: The carcass is always condemned if there is evidence of:

i) metastasis beyond regional lymph nodes, or into other organs, or

ii) other systemic changes are present.

If the tumor is determined to be benign and localized only the affected tissue is trimmed and condemned.

19. Uremia

Uremia is defined as the presence of excessive amounts of chemicals (primarily urea) in the blood. These chemicals come from the metabolism (breakdown) of protein.

Note: The presence of uremia indicates failure of the urinary system. A number of diseases of the urinary tract that can cause uremia.

The only PM sign, of uremia, is the presence of a urine-like odor in the carcass.

Note: Depending on the cause there may also be abnormalities in the urinary system that can be seen by the MIB Inspector.

Carcasses affected with uremia are condemned.

Note: If the MIB Inspector is suspicious that uremia might be present (e.g. lesions in the urinary system) but there is no uremic smell to the carcass the eyeball can be sent to the laboratory for a BUN (Blood Urea Nitrogen) test. If the BUN is elevated the carcass will be condemned.

RELATED SECTIONS OF TIPM

08-A-01 PM Inspection - Red Meat Animals - General
08-A-02 PM Inspection - Red Meat Animals - Methods
08-A-04 PM Disposition after PM Inspection - All Species
08-B-01 PM Inspection - Cattle - Head
08-B-02 PM Inspection - Cattle - Thoracic Viscera
08-B-03 PM Inspection - Cattle - Abdominal Viscera
08-B-04 PM Inspection - Cattle - Carcass
08-C-01 PM Inspection - Hogs - Head
08-C-02 PM Inspection - Hogs - Thoracic Viscera
08-C-03 PM Inspection - Hogs - Abdominal Viscera
08-C-04 PM Inspection - Hogs - Carcass
08-D-01 PM Inspection - Sheep, Goats & Deer - Head
08-D-02 PM Inspection - Sheep, Goats & Deer - Thoracic Viscera
08-D-03 PM Inspection - Sheep, Goats & Deer - Abdominal Viscera
08-D-04 PM Inspection - Sheep, Goats & Deer - Carcass
08-E-01 PM Inspection - Elk & Bison - Head
08-E-02 PM Inspection - Elk & Bison - Thoracic Viscera
08-E-03 PM Inspection - Elk & Bison - Abdominal Viscera
08-E-04 PM Inspection - Elk & Bison - Carcass
08-F-01 PM Inspection - Rabbits

SUBJECT: Disposition after PM Inspection - All Species	08-A-04
REGULATORY REFERENCE AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 54	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Upon completion of the PM inspection, which is mandated by sections 47 & 67 of AR 42/2003, for red meat animals and poultry respectively, a **determination** has to be made about **what to do with the carcass**.

To decide on the proper disposition the Meat Inspection Branch (MIB) Inspector has to be able to determine what condition is present and then check his references to determine what should be done.

Most disease conditions lead to visible changes (lesions) in the carcass of the affected animal that give the MIB some indication of what, if anything, is wrong with the carcass, or any of its organs.

Note: Lesions are defined as any visible abnormality in a carcass or any of its parts regardless of cause. They may be caused by disease, or other factors such as physical injury.

The **PM examination** is **intended to detect** any **lesions**, **in the carcass**, or any of its parts. This is why the post-mortem (PM) examination is considered to be the focal point of meat inspection.

Note: A proper ante-mortem (before death) inspection is critical to detect disease conditions that may not show any PM lesions.

The **purpose** of this document is to **highlight** the **options** that a MIB Inspector has regarding the disposition of the carcass upon completion of the PM examination.

OBJECTIVE/OUTCOME

All disposition decisions will be made based on the “Disposition Instructions” that are printed in the Regulatory Services Division (RSD) Manual of Directives and Procedures.

Note: “Disposition Instructions” are issued in accordance with section 54(2) of AR 42/2003 which states, “The Director may issue instructions on how animals that are affected with diseases or conditions dealt with in those instructions are to be and may be dealt with.”

Module 6 of the Meat Inspection Manual (MIM) published by the MIB Branch of the RSD also has disposition recommendations for each disease condition that is described. It is important to recognize that in the case of a discrepancy between the “Disposition Instruction” and the MIM the “Disposition Instruction” is the final authority.

Following completion of the PM Inspection the MIB Inspector will exercise one of the following options:

1. Approve the entire carcass and all of its parts for human consumption.

2. Condemn portions of the carcass.
3. Condemn the entire carcass and all organs.

   Note: Condemned material may be suitable for use in animal food, research and other purposes providing adequate controls are in place to ensure that edible product doesn't come into contact with condemned material or that condemned material does not re-enter the human food chain illegally.

   Generally condemned materials would not be suitable for pharmaceutical purposes.

4. Place a "held" tag on the carcass and all edible viscera until a disposition decision can be made.

   Note: This option is exercised when it is necessary to send samples out for laboratory testing or in cases when the inspector has to consult with another party (e.g. the Division Veterinarian).

All diseased material will be condemned.

Condemned carcasses, or parts of carcasses will be identified and handled in a manner that avoids contamination of any equipment, or facilities, and any meat, or meat products intended for human consumption.

Note: All condemned materials must be disposed of in a manner that ensures that they will not be used for human consumption.

Held carcasses, or their parts, will remain under the control and supervision of a MIB Inspector until they are either approved, or disposed of in a proper manner.

RELATED SECTIONS OF TIPM

08-A-01 PM Inspection - Red Meat Animals - General
08-A-02 PM Inspection - Red Meat Animals - Methods
08-A-03 PM Inspection - Red Meat Animals - Findings - General
08-B-01 PM Inspection - Cattle - Head
08-B-02 PM Inspection - Cattle - Thoracic Viscera
08-B-03 PM Inspection - Cattle - Abdominal Viscera
08-B-04 PM Inspection - Cattle - Carcass
08-C-01 PM Inspection - Hogs - Head
08-C-02 PM Inspection - Hogs - Thoracic Viscera
08-C-03 PM Inspection - Hogs - Abdominal Viscera
08-C-04 PM Inspection - Hogs - Carcass
08-D-01 PM Inspection - Sheep, Goats & Deer - Head
08-D-02 PM Inspection - Sheep, Goats & Deer - Thoracic Viscera
08-D-03 PM Inspection - Sheep, Goats & Deer - Abdominal Viscera
08-D-04 PM Inspection - Sheep, Goats & Deer - Carcass
08-E-01 to 08-E-04 PM Inspection - Elk & Bison
08-F-01 PM Inspection - Rabbits
08-G-01 PM Inspection - Poultry - General
08-G-02 PM Inspection - Poultry - Methods
08-G-03 PM Inspection - Poultry - Findings - General
08-H-01 PM Inspection - Ratities

SUBJECT: PM Inspection - Cattle - Head	08-B-01
REGULATORY REFERENCES M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Section 5(c) & 6 AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 47	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Section 47 of AR 42/2003 and section 5(c) of the *Meat Inspection Act* requires a post-mortem (PM) inspection on all cattle slaughtered in a "Licensed Meat Facility" (abattoir).

Note: The PM inspection is done to detect any lesions (changes) caused by disease conditions.

Determining the presence, or absence, of disease is critical in ensuring that all parts of the animal are wholesome and fit for human consumption.

To ensure a thorough PM examination, Meat Inspection Branch (MIB) Inspectors use a systematic approach. In the following order they examine the:

1. Head
2. Thoracic (chest) viscera (organs)
3. Abdominal viscera
4. Carcass

The intent of this document is to **outline** the **procedures** that are followed during the **PM examination of the head** of cattle.

OBJECTIVE/OUTCOME

Cattle heads will be inspected in the manner set out in this document.

Note: The procedure for the PM examination of the head has been prescribed by the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

In addition to prescribing these methods the MIB is also responsible for ensuring that the individuals performing the post-mortem inspection have the necessary training, knowledge, skills and ability.

Designated abattoir personnel will prepare the head in a manner that makes it suitable for inspection.

Note: In general this preparation includes:

a) skinning the head;
b) removing the horns;
c) cleaning the head;
d) placing the head on the inspection rack

The head will be presented with all lymph nodes in situ (in place) and exposed.

Note: Salvage of the head meat and tongue will not be allowed unless the head is properly presented for the PM inspection.

A system will be in place to ensure that the head can be identified with the carcass and other internal organs and edible carcass parts until such time as all PM inspections have been completed.

Note: This is done to comply with the requirements of section 6 of the *Meat Inspection Act,* which requires that every portion of a carcass that is unfit for food must be condemned.

The head inspection should be completed before the carcass has gone past the final inspection station.

MIB Inspectors will:

1. Determine the age of the animal by reviewing reliable birth date documentation or by examining the lower incisor teeth.

   Note: Any animal that is deemed to be over 30 months of age (any portion of one of the second set of permanent incisors has broken through the gum line) has to be marked for SRM (Specified Risk Material) removal.

2. Visually observe the head to ensure that it is free of any hair, hide, horns, ingesta or any other type of contamination.

   Note: Common areas of contamination include the base of the skull, the area where the horns were attached and inside the mouth.

   The head should be held for trimming and re-inspection if there is any contamination or other dressing defects.

   The eyes should be closely examined for any evidence of cancer eye.

   Unless the cheek meat is removed on the kill floor the tonsils should be removed under the supervision of a MIB Inspector.

3. Incise (cut) the outer and inner masseter (cheek) muscles.

   Note: This is done primarily to check for Cysticercus bovis. C. bovis is the intermediate form of the beef tapeworm which affects humans. Incision, of these muscles, will also occasionally detect other conditions. The incisions should be parallel to the mandible (jawbone) and they should go right through the muscles.

4. Incise the following lymph nodes.

   a) parotid;

   b) submaxillary (mandibular);

   c) retropharyngeal

   Note: These nodes should be observed for any evidence of edema, enlargement, abscesses, grittiness, or tumors.

5. Visually examine, palpate and incise (if necessary) the tongue.

   Note: This is done to check for abscesses, actinobacillosis (wooden tongue) and other abnormalities. Localized conditions such as scars, sores and erosions are trimmed.

6. Record PM findings that result in condemnations on the MIF - 4 (Certificate of Condemnation) and on the MIF - 5 (Inspector's Daily Report).

   Note: These are official MIB documents. They must be:

   a) completed in their entirety;

   b) completed in a legible manner;

   c) signed by the MIB Inspector

   The MIF - 4 provides information, on the condemnation, that the abattoir operator can give to the owner of the animal.

RELATED SECTIONS OF TIPM

08-A-01 PM Inspection - Red Meat Animals - General
08-A-02 PM Inspection - Red Meat Animals - Methods
08-A-03 PM Inspection - Red Meat Animals - Findings - General
08-A-04 PM Disposition after PM Inspection - All Species
08-B-02 PM Inspection - Cattle - Thoracic Viscera
08-B-03 PM Inspection - Cattle - Abdominal Viscera
08-B-04 PM Inspection - Cattle - Carcass
10-A-04 SRM Removal & Control Program

SUBJECT: PM Inspection - Cattle - Thoracic Viscera	08-B-02
REGULATORY REFERENCES M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Sections 5 (c) & 6 AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 47	**Initial Release** Sept 1, 2009 **Page 1 of 4**

RATIONALE

Section 47 of AR 42/2003 and section 5(c) of the *Meat Inspection Act* requires a post-mortem (PM) inspection on all cattle slaughtered in a "Licensed Meat Facility" (abattoir).

Note: The PM inspection is done to detect any lesions (changes) caused by disease conditions.

Determining the presence, or absence, of disease is critical in ensuring that all parts of the animal are wholesome and fit for human consumption.

To ensure a thorough PM examination, Meat Inspection Branch (MIB) Inspectors use a systematic approach. In the following order they examine the:

1. Head
2. Thoracic (chest) viscera (organs)
3. Abdominal viscera
4. Carcass

The intent of this document is to **outline** the **procedures** that are followed **for** a proper **PM examination of the thoracic viscera** of cattle.

OBJECTIVE/OUTCOME

The thoracic viscera, of cattle, will be inspected in the manner set out in this document.

Note: The procedure for the PM examination of the thoracic viscera has been prescribed by the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

In addition to prescribing these methods the MIB is also responsible for ensuring that the individuals performing the post-mortem inspection have the necessary training, knowledge, skills and ability.

Designated abattoir personnel will prepare the thoracic in a manner that makes it suitable for inspection.

Note: In general this preparation includes:

a) removal of the pluck (trachea, lungs and heart);

b) placing the pluck on the examination table, or tray

A system will be in place to ensure that the thoracic viscera can be identified with the carcass and other internal organs and edible carcass parts until such time as all PM inspections have been completed.

Note: This is done to comply with the requirements of section 6 of the *Meat Inspection Act* which requires that every portion of a carcass that is unfit for food must be condemned.

MIB Inspectors will:

1. Visually examine the exposed surfaces of the lungs then palpate them and incise (cut) them if indicated.

   Note: The lungs are palpated to detect any deep lesions such as abscesses, tumors, chronic pneumonia, etc. If any lesions are detected, by palpation, the lungs are incised.

   Common abnormalities observed in the lungs include:

   a) Abscesses

      Note: Abscesses are accumulations of pus contained within a thick fibrous tissue capsule.

   b) Emphysema

      Note: Emphysema is an accumulation of air within the tissue of the lungs. It appears as small bubbles all over the lung. Affected lungs will not collapse properly.

   c) Pneumonia

      Note: Most cases of pneumonia are caused by bacterial infections that have entered the lung by the airways. This type of pneumonia (referred to as bronco-pneumonia because it comes in through the bronchi) results in consolidation of the lungs to the point where the lung tissue may be as firm as the liver. Usually the front and lower portions of the lung are affected in this type of pneumonia.

      Another form of pneumonia is embolic pneumonia. This name is given because the infection has come to the lungs as emboli (clumps of bacteria) in the blood stream. With embolic pneumonia there will be lots of small abscesses randomly scattered throughout the lung.

      A third type of pneumonia is interstitial pneumonia. In interstitial pneumonia the lungs develop a rubbery consistency and they are uniformly affected throughout. Interstitial pneumonias are caused by virus infections.

   d) Pleuritis

      Note: Pleuritis is an inflammatory reaction in the pleura. The smooth shiny tissue that covers the lungs and inner chest wall is called the pleura.

   e) Pleural adhesions

      Note: Pleural adhesions are due to the development of scar tissue in the healing process of pleuritis.

   f) Lymphomas

      Note: Lymphoma is a tumor (cancer) of the lymphatic system that commonly metastasizes (spreads) to the lung.

g) Lungworms

Note: Lungworms, when present will be found in the trachea usually at the point where the trachea divides into the left and right bronchi. They are slender worms approximately 1 to 1½ inches in length.

2. Examine the left and right bronchial, cranial and caudal mediastinal lymph nodes.

Note: These nodes should be incised 2 or 3 times.

3. Examine the heart visually and by incision. The exterior and interior surfaces, of the heart, including the heart valves should be observed visually.

Note: There are two options for incising the heart. The first is to make an incision that passes through the wall between the left and right ventricles. This allows observation of all of the heart valves. The second option is to evert the heart and make 3 to 5 shallow cuts in the musculature. These incisions should not extend all the way through to the outer surface of the heart. If there is any suspicion that the animal may be affected with *Cysticercus bovis,* (beef tapeworm cysts) more incisions can be made.

Abnormalities that may be seen in the heart include:

a) Pericarditis

Note: Pericarditis refers to inflammation of the heart. In cattle the most common cause is penetration of the heart by a nail in "Hardware Disease". Pericarditis can also develop as an extension of pleuritis. In most cases there will be heavy accumulations of yellow clotted fibrin.

b) Cysticercus bovis

Note: Cysticercus bovis is the intermediate form of a tape worm called Taenia saginata. This tape worm is commonly called the beef tape worm because it develops after humans eat beef containing the cysticerci. Cysticercus bovis will not develop in any other species other than cattle. When present this parasite is most likely going to be detected in the heart, masseter muscles, tongue and diaphragm. Although this condition is very rare it is still considered to be a dangerous parasite of humans.

c) Serous atrophy of fat

Note: Serous atrophy of fat refers to a condition when the fat has a watery and semi gelatinous appearance. It occurs when the animal is emaciated. Serous atrophy is most commonly seen in the fat around the heart because that is one of the last places to have any fat when an animal is starving.

d) Eosinophilic myositis

Note: This is a rare condition that occurs primarily in cattle. The cause has not been established. It appears as well defined areas of greenish, to grey green, discoloration of the muscle tissue in the heart. It can also affect other muscles.

4. Record PM findings that result in condemnations on the MIF - 4 (Certificate of Condemnation) and on the MIF - 5 (Inspector's Daily Report)

Note: These are official MIB documents. They must be:

a) filled out completely;

b) completed in a legible manner;

c) signed by the MIB Inspector

The MIF - 4 provides information, on the condemnation, that the abattoir operator can give to the owner of the animal.

RELATED SECTIONS OF TIPM

08-A-01 PM Inspection - Red Meat Animals - General
08-A-02 PM Inspection - Red Meat Animals - Methods
08-A-03 PM Inspection - Red Meat Animals - Findings - General
08-A-04 PM Disposition after PM Inspection - All Species
08-B-01 PM Inspection - Cattle - Head
08-B-03 PM Inspection - Cattle - Abdominal Viscera
08-B-04 PM Inspection - Cattle - Carcass

SUBJECT: PM Inspection - Cattle - Abdominal Viscera	08-B-03
REGULATORY REFERENCE M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Sections 5(c) & 6 AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 47	**Initial Release** Sept 1, 2009 **Page 1 of 5**

RATIONALE

Section 47 of AR 42/2003 and section 5(c) of the *Meat Inspection Act* requires a post-mortem (PM) inspection on all cattle slaughtered in a "Licensed Meat Facility" (abattoir).

Note: The PM inspection is done to detect any lesions (changes) caused by disease conditions.

Determining the presence, or absence, of disease is critical in ensuring that all parts of the animal are wholesome and fit for human consumption.

To ensure a thorough PM examination, Meat Inspection Branch (MIB) Inspectors use a systematic approach. In the following order they examine the:

1. Head
2. Thoracic (chest) viscera (organs)
3. Abdominal viscera
4. Carcass

The intent of this document is to **outline** the **procedures** that are followed **for** a proper **PM examination of the abdominal viscera** of cattle.

OBJECTIVE/OUTCOME

The abdominal viscera, of cattle, will be inspected in the manner set out in this document.

Note: The procedure for the PM examination of the abdominal viscera has been prescribed by the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

In addition to prescribing these methods the MIB is also responsible for ensuring that the individuals performing the post-mortem inspection have the necessary training, knowledge, skills and ability.

Designated abattoir personnel will prepare the abdominal viscera in a manner that makes it suitable for inspection.

Note: In general this preparation includes:

a) removing the viscera from the carcass;

b) placing the viscera on the examination table

A system will be in place to ensure that the viscera can be identified with the carcass and other internal organs and edible carcass parts until such time as all PM inspections have been completed.

Note: This is done to comply with the requirements of section 6 of the *Meat Inspection Act* which requires that every portion of a carcass that is unfit for food must be condemned.

MIB Inspectors will:

1. Give the liver a visual inspection and thoroughly palpate it. The hepatic lymph nodes should be examined and incised 2-3 times. The bile ducts should be opened longitudinally to observe for liver flukes.

   Note: The liver shouldn't be incised unless a deep lesion is palpated.

   Abnormalities observed in the liver include:

   a) Abscesses

      Note: Abscesses are accumulations of pus contained within a thick fibrous tissue capsule. Liver abscesses are very common in grain fattened beef cattle. In some groups of cattle 30 to 40% of the livers may be affected.

   b) Telangiectasis

      Note: Telangiectasis is an abnormality of blood vessels in the liver. On microscopic examination the lesions resemble a tumor but this is not a cancerous condition. The cause is unknown. It is often seen in association with liver abscesses and liver flukes.

      Characteristically, affected livers have reddish purple, to blue-black, spots that vary in size from pinpoint, to several centimeters.

   c) Sawdust Liver

      Note: Sawdust liver is a meat inspection term that refers to a condition where pinpoint areas of necrosis (dead tissue) are present throughout the liver. This condition is caused by localized infections caused by bacteria from the intestine.

      Lesions consist of multiple, small (1-3 mm) irregular, pale spots throughout the liver. Someone thought that the lesions looked like sawdust had been sprinkled on the liver thus the name.

   d) Adhesions

      Note: Similar to other abdominal organs the liver can be caught up in adhesions due to the formation of scar tissue from peritonitis.

   e) Melanosis

      Note: Melanosis is a condition caused by an abnormal accumulation of melanocytes. Melanocytes are connective tissue cells which contain a black pigment. They can accumulate in various body tissues including the liver. Melanosis is recognized by the presence of black spots, or streaks, in otherwise normal tissue. The cause is unknown.

   f) Liver Flukes

      Note: Liver flukes are parasitic flatworms. Two types have been reported in Alberta. They leave dark tracts throughout the liver due to their migration in the liver.

g) Carotenosis

Note: Carotenosis is another term for fatty infiltration. In this condition the fat contains red and yellow pigments similar to carotene. These become evident when there is excessive fat in tissues.

Fatty livers develop, in cattle, when their energy needs are greater than what can be provided in the feed. This results in the movement of fat from other areas in the body leading to the accumulation of excessive fat in the liver. Fatty livers are pale to yellow in color and have a greasy appearance on the cut surface.

h) Chronic Passive Congestion

Note: "Chronic Passive Congestion" refers to blood backing up into the liver due to poor circulation. It is generally caused by right sided heart failure. Because of certain peculiarities of the circulation, of blood, through the liver some parts of the individual liver lobules are more congested than other portions. The reticulated pattern of the lesion gives an appearance that has been likened to that of nutmeg thus the term nutmeg liver.

2. Examine the intestines, omentum, mesentery and mesenteric lymph nodes.

Note: For a proper examination the intestines should be spread out. Usually it is not necessary to incise the mesenteric lymph nodes. They should be incised if they are enlarged or if there is any possibility that the animal has tuberculosis. The omentum, mesentery and any other fatty tissue that is going to be used for human consumption must be free of contamination.

3. Visually examine the spleen and incise it if there are any abnormalities.

4. Visually examine the four compartments of the stomach (reticulum, rumen, omasum and abomasum).

Note: There may be evidence of localized peritonitis, or abscess formation, if the reticulum has been penetrated by a nail, or piece of wire.

5. Examine the kidneys.

Note: The PM examination of the kidneys may be done with the kidneys in the carcass or on the viscera table. In either instance they must be fully exposed for the inspector.

Common abnormalities observed in the kidney include:

a) Cysts

Note: Cysts are closed cavities, or sacs, that contain fluid. They can occur in any part of the body. They are relatively common in kidneys where they are believed to be caused by a developmental defect in the urinary tubules. When present they tend to get larger as the animal gets older.

b) Pyelonephritis

Note: Pyelonephritis is the technical term for kidney infections where the infection has gained entry to the kidney by migrating up the urinary tract. In this condition the kidneys are usually enlarged and the pelvis, of the kidney, is usually full of pus. Similar material is usually seen in the ureters and/or the bladder. Pyelonephritis tends to be more common in older cows.

c) Infarcts

Note: An infarct is an area of tissue that has died because its blood supply has been cut off. Because of the anatomy of the kidney blockage of small arteries causes death of a cone shaped area of tissue with the base of the cone on the outer surface of the kidney.

Most infarcts are pale and slightly depressed. An early infarct may be swollen and red. When infarcts are seen the inspector should closely examine the valves on the left side of the heart for any evidence of any growths on the heart valves (valvular endocarditis caused by bacterial infection). Infarcts occur when small pieces of these growths (emboli) break off then lodge in a smaller artery in the kidney.

6. Record PM findings that result in condemnations on the MIF - 4 (Certificate of Condemnation) and on the MIF - 5 (Inspector's Daily Report).

Note: These are official MIB documents. They must be:

a) completed in their entirety;

b) completed in a legible manner;

c) signed by the MIB Inspector

The MIF - 4 provides information, on the condemnation, that the abattoir operator can give to the owner of the animal.

When **localized** lesions are detected in the abdominal viscera and there is no evidence of any adverse effects on the wholesomeness of the rest of the carcass **only the affected organ** or tissue **is condemned**.

Condemnation, of the carcass and all organs, is justified when liver lesions are accompanied by jaundice and kidney lesions are accompanied by uremia.

RELATED SECTIONS OF TIPM

08-A-01 PM Inspection - Red Meat Animals - General
08-A-02 PM Inspection - Red Meat Animals - Methods
08-A-03 PM Inspection - Red Meat Animals - Findings - General
08-A-04 PM Disposition after PM Inspection - All Species
08-B-01 PM Inspection - Cattle - Head
08-B-02 PM Inspection - Cattle - Thoracic Viscera
08-B-04 PM Inspection - Cattle - Carcass
10-A-04 SRM Removal & Control Program

SUBJECT: PM Inspection - Cattle - Carcass	08-B-04
REGULATORY REFERENCES M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Sections 5(c) & 6 AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 47	**Initial Release** Sept 1, 2009 **Page 1 of 5**

RATIONALE

Section 47 of AR 42/2003 and section 5(c) of the *Meat Inspection Act* requires a post-mortem (PM) inspection on all cattle slaughtered in a "Licensed Meat Facility" (abattoir).

Note: The PM inspection is done to detect any lesions (changes) caused by disease conditions.

Determining the presence, or absence, of disease is critical in ensuring that all parts of the animal are wholesome and fit for human consumption.

To ensure a thorough PM examination, Meat Inspection Branch (MIB) Inspectors use a systematic approach. In the following order they examine the:

1. Head
2. Thoracic (chest) viscera (organs)
3. Abdominal viscera
4. Carcass

The intent of this document is to **outline** the **procedures** that are followed **for** a proper **PM examination of cattle carcasses**.

OBJECTIVE/OUTCOME

Cattle carcasses will be inspected in the manner set out in this document.

Note: The procedure for the PM examination of the carcass has been prescribed by the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

In addition to prescribing these methods the MIB is also responsible for ensuring that the individuals performing the post-mortem inspection have the necessary training, knowledge, skills and ability.

Designated abattoir personnel will prepare the carcass in a manner that makes it suitable for inspection.

Note: Proper presentation includes:

a) removing the viscera (internal organs);

b) splitting the carcass;

c) presenting the carcass before final trimming and/or washing

A system will be in place to ensure that the carcass can be matched up with the head and all internal organs until such time as all PM inspections have been completed.

Note: This is done to comply with the requirements of section 6 of the *Meat Inspection Act* which requires that every portion of a carcass that is unfit for food must be condemned.

MIB Inspectors will:

1. Conduct a visual inspection of the entire carcass.

   Note: This inspection includes the:

   a) joints;

   b) outer muscular surfaces;

   c) diaphragm;

   d) peritoneum;

   e) pleura;

   f) neck

2. Palpate and incise (if deemed necessary) any observed abnormalities.

   Examples of conditions seen on the PM examination of cattle carcasses include:

   a) Arthritis

      Note: Arthritis is defined as inflammation of a joint. One or more joints, in one or more limbs may be affected. Affected joints will be swollen. Arthritis may be infectious or non-infectious. Infectious arthritis will cause inflammatory reactions in the lymph nodes of the affected limb. When there are changes in the lymph nodes the entire quarter will be condemned. If the condition is deemed to be non-infectious only the affected joint needs to be removed.

   b) Abscesses

      Note: Abscesses are accumulations of pus enclosed in a fibrous tissue capsule. Pus can vary greatly in color, odor and consistency depending on the type of bacteria present and the age of the abscess. Abscesses and surrounding tissues must be removed from the carcass. The carcass, or individual quarters, may be condemned in the case of multiple, or severe, abscesses, or where there are inflammatory changes in the lymph nodes draining that area of the carcass.

   c) Cysticercosis

      Note: *Cysticercus bovis* is the intermediate form of a tape worm called *Taenia saginata*. This tape worm is commonly called the beef tape worm because it develops after humans eat beef containing the cysticerci. *Cysticercus bovis* only occurs in cattle. When present, it will most likely be detected in the heart, masseter (cheek) muscles or tongue. The diaphragm is also a common site but it can also be seen in any muscle of the body. Although no longer common it is still considered to be a dangerous parasite of humans.

d) Contamination

Note: Contamination is the presence of foreign material on the surface of the carcass. Most visible contamination is due to poor dressing procedures. Contaminated areas of the carcass must be trimmed in accordance with the directions of a MIB Inspector then the remainder of the carcass must be thoroughly washed.

The carcass, or portions of it, will be condemned if, in the judgment of the inspector, the contamination is so severe that it cannot be completely removed by trimming.

e) Adhesions

Note: Adhesions are accumulations of fibrous (scar) tissue that form in animals that have recovered from pleuritis, or peritonitis. In the carcass adhesions will be seen on the peritoneum, or pleura, which line the abdominal and chest walls respectively.

f) Jaundice

Note: Jaundice (also called icterus) refers to a yellow discoloration of the carcass. Liver disease and failure is the main cause of jaundice.

Carcasses are condemned for jaundice if there is severe yellow discoloration, or if there are other systemic changes in any of the organs. Carcasses that are only mildly affected can be held for 24 hours. If the jaundice disappears, in that time, the carcass can be passed otherwise it is condemned.

g) Bruising

Note: Bruises develop following injuries that cause bleeding into the muscles. With time the blood pigment (hemoglobin) breaks down. As this occurs the color of the bruise will change from dark red, to green, to yellow. Bruises are not hazardous to human health but affected tissues don't appear good so they are trimmed out. Inspectors have the authority to condemn the entire carcass when bruising is severe and widespread.

h) Warbles

Note: Warbles are the larval form of two different types of flies. The two types, which only occur in cattle, are called *Hypoderma bovis* and *Hypoderma lineatum*. When present they will be found in the back. They are located in a cyst like structure which contains a cloudy, yellow fluid. Their appearance, in the back, is seasonal. They are only seen in late winter. Usually they are only present for a month.

i) Melanosis

Note: Melanosis is a condition caused by an abnormal accumulation of melanocytes. Melanocytes are connective tissue cells which contain a black pigment. They can accumulate in any tissues of the body including the muscles and bones of the carcass. Melanosis is recognized by the presence of black spots, or streaks, in otherwise normal tissue. The cause is unknown.

j) Injection Sites

Note: The muscles of the rump and neck area should be closely examined for any evidence of injection site lesions. These will appear as small, or large, localized areas of necrosis and discoloration of muscle tissue. The severity of the lesion will vary with what was injected. Fresh injection sites usually have some hemorrhages in them.

The carcass must be held when fresh injection sites are sent to the laboratory for residue testing.

If there is any **doubt** about whether an injection site is fresh or not it should be **handled as** if it were **a fresh lesion**.

k) Eosinophillic Myositis

Note: This is a rare condition that occurs primarily in cattle. The cause has not been established. Lesions appear as well defined areas of greenish, to grey green, discoloration in the muscles. It may also be seen in the heart.

l) Xanthosis

Note: Xanthosis is a condition where abnormal amounts of yellow-brown, to bronze, pigments accumulate in the skeletal muscle. The cause of this condition, which only occurs in older animals, is unknown. Affected muscle will have a brown discoloration. This condition can also affect the heart, kidneys and adrenal glands.

m) Emaciation (cachexia)

Note: Emaciation is the technical term for an extremely wasted body condition. Animals can be thin without being emaciated. It is important for the MIB Inspector to differentiate between emaciation and thinness. If there is any **normal** looking **fat** on the surface of the heart, or around the kidney, the animal is **not emaciated**. Emaciated animals are condemned, thin ones are not.

n) Lymposarcoma

Note: Lymphosarcomas are a common malignant neoplasm (cancer) of the lymphatic system, most common in cattle. Carcass lymph nodes may be enlarged. Tumors can also appear in the muscles of the carcass.

o) Steatosis

Note: Steatosis is a form of “fatty infiltration”. In this condition large quantities of muscle are replaced by fatty tissue. The cause of this condition, which only occurs in cattle, is unknown. This condition does not make the carcass unsuitable for human consumption but it is not aesthetically pleasing.

p) Edema

Note: Edema refers to the accumulation of clear watery fluid in the muscles of the carcass. Edema can be localized, or generalized. The most common cause of generalized edema is heart failure. Localized edema is usually due to local circulation problems (in the blood, or lymph) or secondary to an inflammatory reaction. Portions of the carcass affected with edema are condemned.

3. Remove the entire spinal cord from all carcasses.
4. Keep **control** of **all carcasses, or parts of carcasses, that are "held" for whatever reason,** following the PM examination **until the final disposition has been determined.**
5. Identify all carcasses, or portions thereof, that are condemned so that they will be handled in a manner that ensures that contamination of equipment, meat, or meat products, from other carcasses, does not occur.

   Note: No part of a condemned carcass can be used for human consumption.

6. Ensure that the thoracic and lumbar vertebrae are removed from all animals that are over thirty months of age.

   Note: The vertebrae are removed to ensure removal of clusters of nerve cells called the dorsal root ganglia. Removal must be done in accordance with SRM removal procedures.

7. Record PM findings that result in condemnations on the MIF - 4 (Certificate of Condemnation) and on the MIF - 5 (Inspector's Daily Report)

   Note: These are official MIB documents. They must be:

   a) completed in their entirety;

   b) completed in a legible manner;

   c) signed by the MIB Inspector

   The MIF - 4 provides information, on the condemnation, that the abattoir operator can give to the owner of the animal.

RELATED SECTIONS OF TIPM

08-A-01 PM Inspection - Red Meat Animals - General
08-A-02 PM Inspection - Red Meat Animals - Methods
08-A-03 PM Inspection - Red Meat Animals - Findings - General
08-A-04 PM Disposition after PM Inspection - All Species
08-B-01 PM Inspection - Cattle - Head
08-B-02 PM Inspection - Cattle - Thoracic Viscera
08-B-03 PM Inspection - Cattle - Abdominal Viscera
10-A-04 SRM Removal & Control Program

SUBJECT: PM Inspection - Hogs - Head	08-C-01
REGULATORY REFERENCES M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Sections 5(c) & 6 AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 47	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Section 47 of AR 42/2003 and section 5(c) of the *Meat Inspection Act* requires a post-mortem (PM) inspection on all hogs slaughtered in a "Licensed Meat Facility" (abattoir).

Note: The PM inspection is done to detect any lesions (changes) caused by disease conditions.

Determining the presence, or absence, of disease is critical in ensuring that all parts of the animal are wholesome and fit for human consumption.

To ensure a thorough PM examination, Meat Inspection Branch (MIB) Inspectors use a systematic approach. In the following order they examine the:

1. Head
2. Thoracic (chest) viscera (organs)
3. Abdominal viscera
4. Carcass

The intent of this document is to **outline** the **procedures** that are followed **for** a proper **PM examination of the head** of pigs.

OBJECTIVE/OUTCOME

All pig heads will be inspected in the manner set out in this document.

Note: The procedure for the PM examination of the head has been prescribed by the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

In addition to prescribing these methods the MIB is also responsible for ensuring that the individuals performing the post-mortem inspection have the necessary training, knowledge, skills and ability.

Designated abattoir personnel will prepare the head in a manner that makes it suitable for inspection.

Note: In general this preparation includes ensuring that the head is:

a) clean;

b) free from hair, ingesta, or other contaminants.

The head will be presented with all lymph nodes in situ (in place) and exposed.

Note: Salvage of the head meat and tongue will not be allowed unless the head is properly presented for the PM inspection.

Heads not properly presented will be condemned, by the inspector, or skinned on the kill floor.

A system will be in place to ensure that the head can be identified with the carcass and other internal organs and edible carcass parts until such time as all PM inspections have been completed.

Note: This is done to comply with the requirements of section 6 of the *Meat Inspection Act* which requires that every portion of a carcass that is unfit for food must be condemned.

The head inspection should be completed before the carcass has gone past the final inspection station.

MIB Inspectors will:

1. Conduct a visual examination of the inner and outer surfaces of the head.

   Note: The inspector will be looking for evidence of contamination as well as for nasal discharges, ear mites, dental and cheek abnormalities and conditions of the eye.

2. Observe and incise the mandibular (sub-maxillary) lymph nodes.

   Note: Granulomas are common in the sub-maxillary nodes of pigs. They are chronic inflammatory reactions caused by fungal and yeast infections, foreign bodies, and certain bacterial infections including avian tuberculosis. They appear as fleshy lumps which may, or may not be open to the surface.

   They used to be common in free ranging pigs that were allowed to feed on dead poultry that were affected with avian tuberculosis.

3. Visually examine, palpate and incise (if necessary) the tongue.

   Note: This is done to check for abscesses, actinobacillosis (wooden tongue) and other abnormalities. Localized conditions such as scars, sores and erosions are trimmed.

4. Record PM findings that result in condemnations on the MIF - 4 (Certificate of Condemnation) and on the MIF - 5 (Inspector's Daily Report)

   Note: These are official MIB documents. They must be:

   a) completed in their entirety;

   b) completed in a legible manner;

   c) signed by the MIB Inspector

   The MIF - 4 provides information, on the condemnation, that the abattoir operator can give to the owner of the animal.

RELATED SECTIONS OF TIPM

08-A-01 PM Inspection - Red Meat Animals - General
08-A-02 PM Inspection - Red Meat Animals - Methods
08-A-03 PM Inspection - Red Meat Animals - Findings - General
08-A-04 PM Disposition after PM Inspection - All Species
08-C-02 PM Inspection - Hogs - Thoracic Viscera
08-C-03 PM Inspection - Hogs - Abdominal Viscera
08-C-04 PM Inspection - Hogs - Carcass

SUBJECT: PM Inspection - Pigs - Thoracic Viscera	08-C-02
REGULATORY REFERENCE M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Sections 5(c) & 6 AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 47	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Section 47 of AR 42/2003 and section 5(c) of the *Meat Inspection Act* requires a post-mortem (PM) inspection on all hogs slaughtered in a "Licensed Meat Facility" (abattoir).

Note: The PM inspection is done to detect any lesions (changes) caused by disease conditions.

Determining the presence, or absence, of disease is critical in ensuring that all parts of the animal are wholesome and fit for human consumption.

To ensure a thorough PM examination, Meat Inspection Branch (MIB) Inspectors use a systematic approach. In the following order they examine the:

1. Head
2. Thoracic (chest) viscera (organs)
3. Abdominal viscera
4. Carcass

The intent of this document is to **outline** the **procedures** that are followed **for** a proper **post-mortem examination of the thoracic viscera** of pigs.

OBJECTIVE/OUTCOME

The thoracic viscera, of hogs, will be inspected in the manner set out in this document.

Note: The procedure for the PM examination of the thoracic viscera has been prescribed by the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

In addition to prescribing these methods the MIB is also responsible for ensuring that the individuals performing the post-mortem inspection have the necessary training, knowledge, skills and ability.

Designated abattoir personnel will prepare the thoracic in a manner that makes it suitable for inspection.

Note: In general this preparation includes:

a) removal of the pluck (trachea, lungs and heart);

b) placing the pluck on the examination table, or tray.

A system will be in place to ensure that the thoracic viscera can be identified with the carcass and other internal organs and edible carcass parts until such time as all PM inspections have been completed.

Note: This is done to comply with the requirements of section 6 of the *Meat Inspection Act* which requires that every portion of a carcass that is unfit for food must be condemned.

MIB Inspectors will:

1. Visually examine the exposed surfaces of the lungs then palpate them and incise (cut) them if indicated.

   Note: The lungs are palpated to detect any deep lesions such as abscesses, tumors, chronic pneumonia, etc. If any lesions are detected, by palpation, the lungs are incised.

   Common abnormalities observed in the lungs of pigs include:

   a) Abscesses

      Note: Abscesses are accumulations of pus contained within a thick fibrous tissue capsule.

   b) Pneumonia

      Note: Most cases of pneumonia are caused by bacterial infections that have entered the lung by the airways. This type of pneumonia (referred to as bronco-pneumonia because it comes in through the bronchi) results in consolidation of the lungs to the point where the lung tissue may be as firm as the liver. Usually the front and lower portions of the lung are affected in this type of pneumonia.

      Another form of pneumonia is embolic pneumonia. This name is given because the infection has come to the lungs as emboli (clumps of bacteria) in the blood stream. With embolic pneumonia there will be lots of small abscesses randomly scattered throughout the lung.

      Embolic pneumonia is common in pigs that were subjected to tail biting. In this case bacterial emboli gain access to the blood stream, in the area of the tail. They are subsequently carried through the right side of the heart and are filtered out by the capillaries in the lungs. Small abscesses develop, in the lungs, wherever a bacterial emboli lodges.

   c) Pleuritis

      Note: Pleuritis is an inflammatory reaction in the pleura. The smooth shiny tissue that covers the lungs and inner chest wall is called the pleura.

   d) Pleural adhesions

      Note: Pleural adhesions are due to the development of scar tissue in the healing process of pleuritis.

2. Examine the bronchial lymph nodes and incise the left bronchial node and any others that are enlarged.

3. Observe, palpate and open the heart

   Note: In the past meat inspectors were required to make several cuts in the muscle of the heart to check for Cysticercus cellulosae. C. cellulosae is the intermediate form of the so called pork tapeworm that infects humans. This parasite is of such low incidence that it is believed to no longer exist in Canada.

   Abnormalities that may be seen in the heart include:

   a) Valvular Endocarditis

      Note: Valvular endocarditis (inflammation of the heart valves) is common in pigs that have recovered from a septicemia (blood poisoning at some time in their lives. This condition is recognized by the presence of thrombi (growths) on the heart valves. Pieces of these thrombi can break off and cause problems in other organs and tissues by blocking blood vessels and by spreading infection if bacteria are still present in the thrombi. It is because of this condition that the heart has to be opened.

   b) Pericarditis

      Note: Pericarditis refers to inflammation of the heart. In pigs pericarditis can be caused by bacterial infections via the blood stream or by extension of cases of pneumonia and/or pleurisy.

4. Record PM findings that result in condemnations on the MIF - 4 (Certificate of Condemnation) and on the MIF - 5 (Inspector's Daily Report).

   Note: These are official MIB documents. They must be:

   a) filled out completely;

   b) completed in a legible manner;

   c) signed by the MIB Inspector

   The MIF - 4 provides information, on the condemnation, that the abattoir operator can give to the owner of the animal.

RELATED SECTIONS OF TIPM

08-A-01 PM Inspection - Red Meat Animals - General
08-A-02 PM Inspection - Red Meat Animals - Methods
08-A-03 PM Inspection - Red Meat Animals - Findings - General
08-A-04 PM Disposition after PM Inspection - All Species
08-C-01 PM Inspection - Hogs - Head
08-C-03 PM Inspection - Hogs - Abdominal Viscera
08-C-04 PM Inspection - Hogs - Carcass

SUBJECT: PM Inspection - Pigs - Abdominal Viscera	08-C-03
REGULATORY REFERENCE M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Sections 5(c) & 6 AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 47	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Section 47 of AR 42/2003 and section 5(c) of the *Meat Inspection Act* requires a post-mortem (PM) inspection on all hogs slaughtered in a "Licensed Meat Facility" (abattoir).

Note: The PM inspection is done to detect any lesions (changes) caused by disease conditions.

Determining the presence, or absence, of disease is critical in ensuring that all parts of the animal are wholesome and fit for human consumption.

To ensure a thorough PM examination, Meat Inspection Branch (MIB) Inspectors use a systematic approach. In the following order they examine the:

1. Head
2. Thoracic (chest) viscera (organs)
3. Abdominal viscera
4. Carcass

The intent of this document is to **outline** the **procedures** that are followed **for** a proper **post-mortem examination of the abdominal viscera** of pigs.

OBJECTIVE/OUTCOME

The abdominal viscera, of hogs, will be inspected in the manner set out in this document.

Note: The procedure for the PM examination of the abdominal viscera has been prescribed by the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

In addition to prescribing these methods the MIB is also responsible for ensuring that the individuals performing the post-mortem inspection have the necessary training, knowledge, skills and ability.

Designated abattoir personnel will prepare the abdominal viscera in a manner that makes it suitable for inspection.

Note: In general this preparation includes:

a) removing the viscera from the carcass;

b) placing the viscera on the examination table.

A system will be in place to ensure that the viscera can be identified with the carcass and other internal organs and edible carcass parts until such time as all PM inspections have been completed.

Note: This is done to comply with the requirements of section 6 of the *Meat Inspection Act* which requires that every portion of a carcass that is unfit for food must be condemned.

MIB Inspectors will:

1. Observe and palpate the liver.

   Note: If palpation raises suspicion that a lesion may be present the liver will be incised.

2. Observe and incise the hepatic and portal lymph nodes.
3. Observe the intestines, stomach and spleen.

   Note: To perform a proper examination of the intestines they should be spread out.

   The omentum, mesentery and any other fatty tissue that is going to be used for human consumption must be free of contamination.

4. Examine the mesenteric lymph nodes.

   Note: Usually it is not necessary to incise the mesenteric lymph nodes in pigs. They should be incised if they are enlarged.

5. Visually inspect and palpate the kidneys.

   Note: The kidneys may be examined in the carcass, or on the viscera table. In either instance they must be fully exposed by peeling off the renal capsule.

   Abnormalities observed during the postmortem inspection of the abdominal viscera of pigs include:

   a) Abscesses

      Note: Abscesses are accumulations of pus contained within a thick fibrous tissue capsule.

   b) Parasitic Scars

      Note: So called “milk spots” are small white scars, usually most evident just under the capsule of the liver. They are caused by the migration of the larvae of the large roundworm of pigs (Ascaris suum), which is found in the small intestines. This used to be a very common condition but is now relatively rare due to raising hogs in facilities (e.g. slotted floors) where they don’t have access to manure with infective ascarid eggs. Heavy infestations can cause extensive fibrosis of the liver.

   c) Peritonitis

      Note: Peritonitis is the term for bacterial infection of the peritoneum. It may be localized or it may involve the entire abdomen. On the ante-mortem examination hogs with peritonitis may have distended or bloated abdomens.

   d) Cysts

      Note: Cysts are closed cavities, or sacs, containing fluid. They can occur in any part of the body but are particularly common in the kidneys of pigs. Due to a possible hereditary cause it is not unusual to see cystic kidneys in a number of pigs from the same litter. They are relatively harmless as there is normally enough functional kidney tissue left to meet the demands of the animal.

e) Enteritis

Note: Enteritis is an inflammatory condition of the intestines caused by bacterial infections, including Salmonella species, parasites, and chemical agents. Diarrhea is a common finding. In some cases the wall and inner lining of the intestine will be thickened.

f) Infarcts

Note: Infarcts are pieces of tissue that have died because their blood supply has been cut off. Infarcts are particularly common in the kidneys of hogs. Because of the structure of the kidney blockage of small arteries causes death of a cone shaped area of tissue with the base of the cone on the outer surface of the kidney. Most infarcts are pale and slightly depressed. An early infarct may be swollen and red. When infarcts are seen the inspector should closely examine the valves on the left side of the heart for any evidence of any growths on the heart valves (valvular endocarditis caused by bacterial infection). Infarcts occur when small pieces of these growths (emboli) break off then lodge in a smaller artery in the kidney.

6. Record PM findings that result in condemnations on the MIF - 4 (Certificate of Condemnation) and on the MIF - 5 (Inspector's Daily Report).

Note: These are official MIB documents. They must be:

a) completed in their entirety;

b) completed in a legible manner;

c) signed by the MIB Inspector

The MIF - 4 provides information, on the condemnation, that the abattoir operator can give to the owner of the animal.

When **localized** lesions are detected in the abdominal viscera and there is no evidence of any adverse effects on the wholesomeness of the rest of the carcass **only the affected organ** or tissue **is condemned**.

Condemnation, of the carcass and all organs, is justified when liver lesions are accompanied by jaundice and kidney lesions are accompanied by uremia.

RELATED SECTIONS OF TIPM

08-A-01 PM Inspection - Red Meat Animals - General
08-A-02 PM Inspection - Red Meat Animals - Methods
08-A-03 PM Inspection - Red Meat Animals - Findings - General
08-A-04 PM Disposition after PM Inspection - All Species
08-C-01PM Inspection - Hogs - Head
08-C-02 PM Inspection - Hogs - Thoracic Viscera
08-C-04 PM Inspection - Hogs - Carcass

SUBJECT: PM Inspection - Hogs - Carcass	08-C-04
REGULATORY REFERENCES M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Sections 5(c) & 6 AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 47	**Initial Release** Sept 1, 2009 **Page 1 of 6**

RATIONALE

Section 47 of AR 42/2003 and section 5(c) of the *Meat Inspection Act* requires a post-mortem (PM) inspection on all hogs slaughtered in a "Licensed Meat Facility" (abattoir).

Note: The PM inspection is done to detect any lesions (changes) caused by disease conditions.

Determining the presence, or absence, of disease is critical in ensuring that all parts of the animal are wholesome and fit for human consumption.

To ensure a thorough PM examination, Meat Inspection Branch (MIB) Inspectors use a systematic approach. In the following order they examine the:

1. Head
2. Thoracic (chest) viscera (organs)
3. Abdominal viscera
4. Carcass

The intent of this document is to **outline** the **procedures** that are followed **for** a proper **post-mortem examination of pig carcasses**.

OBJECTIVE/OUTCOME

Hog carcasses will be inspected in the manner set out in this document.

Note: The procedure for the PM examination of the carcass has been prescribed by the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

In addition to prescribing these methods the MIB is also responsible for ensuring that the individuals performing the post-mortem inspection have the necessary training, knowledge, skills and ability.

Designated abattoir personnel will prepare the carcass in a manner that makes it suitable for inspection.

Note: Proper presentation includes:

a) removing the viscera (internal organs);

b) splitting the carcass;

BBQ hogs that are partially dressed (i.e. they have not been split) may be submitted for inspection. If any abnormalities are observed on the exposed parts of the presented carcass, or any of its portions, that have a food safety implication the carcass shall be immediately disqualified from being approved as a partially dressed carcass and shall be subject to a complete dressing procedure and presented for a normal post-mortem inspection.

c) presenting the carcass before final trimming and/or washing.

A system will be in place to ensure that the carcass can be matched up with the head and all internal organs until such time as all PM inspections have been completed.

Note: This is done to comply with the requirements of section 6 of the *Meat Inspection Act,* which requires that every portion of a carcass that is unfit for food must be condemned.

MIB Inspectors will:

1. Conduct a visual inspection of the entire carcass.

   Note: This inspection includes the:

   a) joints;

   b) outer muscular surfaces;

   c) diaphragm;

   d) peritoneum;

   e) pleura;

   f) neck

2. Examine and incise the iliac lymph nodes.

   Note: Examination of these nodes will help in the detection of any inflammatory conditions in the hind legs including arthritis, abscesses, and other infections.

3. Palpate then incise (if deemed necessary) any observed abnormalities.

   Note: Close attention should be paid to the area of the tail head and distal spinal cord. Abscesses are common around the tail head in pigs that have been subjected to tail biting.

4. Examine the kidneys.

   Note: If the kidneys have been left in the carcass, they should be fully exposed by removal of the renal capsule, visually observed and palpated for cysts, infarcts, color variations, pinpoint red or white lesions, etc.

   Examples of conditions seen on the post-mortem examination of pig carcasses include:

   a) Arthritis

      Note: Arthritis is defined as inflammation of a joint. One or more joints, in one or more limbs may be affected. Affected joints will be swollen. Arthritis may be infectious or non-infectious. Infectious arthritis will cause inflammatory reactions in the lymph nodes of the affected limb. When there are changes in the lymph nodes the entire quarter will be condemned. If the condition is deemed to be non-infectious only the affected joint needs to be removed.

b) Abscesses

Note: Abscesses are accumulations of pus enclosed in a fibrous tissue capsule. Pus can vary greatly in color, odor and consistency depending on the type of bacteria present and the age of the abscess. Abscesses and surrounding tissues must be removed from the carcass. The carcass, or individual quarters, may be condemned in the case of multiple, or severe, abscesses, or where there are inflammatory changes in the lymph nodes draining that area of the carcass.

c) Contamination

Note: Contamination is the presence of foreign material on the surface of the carcass. Most visible contamination is due to poor dressing procedures. Contaminated areas of the carcass must be trimmed in accordance with the directions of a MIB Inspector then the remainder of the carcass must be thoroughly washed.

The carcass, or portions of it, will be condemned if, in the judgment of the inspector, the contamination is so severe that it cannot be completely removed by trimming.

d) Adhesions

Note: Adhesions are accumulations of fibrous (scar) tissue that form in animals that have recovered from pleuritis, or peritonitis. In the carcass, adhesions will be seen on the peritoneum, or pleura, which line the abdominal and chest walls respectively.

e) Jaundice

Note: Jaundice (also called icterus) refers to a yellow discoloration of the carcass. Liver disease and failure is the main cause of jaundice.

Carcasses are condemned for jaundice if there is severe yellow discoloration, or if there are other systemic changes in any of the organs. Carcasses that are only mildly affected can be held for 24 hours. If the jaundice disappears, in that time, the carcass can be passed otherwise it is condemned.

f) Bruising

Note: Bruises develop following injuries that cause bleeding into the muscles. With time the blood pigment (hemoglobin) breaks down. As this occurs the color of the bruise will change from dark red, to green, to yellow. Bruises are not hazardous to human health but affected tissues don't appear good so they are trimmed out. Inspectors have the authority to condemn the entire carcass when bruising is severe and widespread.

g) Injection Sites

Note: The muscles of the rump and neck area should be closely examined for any evidence of injection site lesions. These will appear as small, or large, localized areas of necrosis and discoloration of muscle tissue. The severity of the lesion will vary with what was injected. Fresh injection sites usually have some hemorrhages in them.

The carcass must be held when fresh injection sites are sent to the laboratory for residue testing.

If there is any **doubt** about whether an injection site is fresh or not it should be **handled as** if it were **a fresh lesion**.

h) Emaciation

Note: Emaciation is the technical term for an extremely wasted body condition. Animals can be thin without being emaciated. It is important for the MIB Inspector to differentiate between emaciation and thinness. If **normal** looking **fat** is present on the surface of the heart, or around the kidney, the animal is **not emaciated**. Emaciated animals are condemned, thin ones are not.

i) Over Scalding

Note: Over scalding gives the skin and exposed muscles a cooked appearance. If mild the affected areas can be trimmed. If it is severe the carcass or portions thereof are condemned.

j) Hyperkeratosis

Note: Hyperkeratosis is an inflammatory skin condition. Most cases occur in intensively housed pigs. The skin over the back, between the ears and sometimes in the arm pit area, becomes thickened and cracked. A deficiency of zinc is the cause.

k) Melanosis

Note: Melanosis is a condition caused by an abnormal accumulation of melanocytes. Melanocytes are connective tissue cells which contain a black pigment. They can accumulate in any tissues of the body including the muscles and bones of the carcass. Melanosis is recognized by the presence of black spots, or streaks, in otherwise normal tissue. The cause is unknown.

l) Erysipelas

Note: Erysipelas is called “Diamond Skin Disease” because of the unique diamond shaped lesions that develop on the skin. These lesions are actually infarcts of the skin caused by a blockage of blood flow. In their early stages they are bright red. Erysipelas is caused by a bacterium called Erysipelothrix rhusiopathiae. It occurs as an acute septicemic (blood poisoning) form, a cutaneous form (diamond skin) and in a chronic form generally associated with arthritis and vegetative valvular endocarditis (growths on the heart valves).

m) Frostbite

Note: Frostbite occurs when pigs are exposed to excessively cold temperatures usually during transportation. Lack of bedding and circulatory disturbances are contributing factors. Frost bite tends to occur in the extremities (ears, tails and lower limbs).

n) Imperfect Bleeding

Note: Imperfect bleeding refers to the presence of blood in the tissues due to poor bleeding technique including complete failure to bleed the animal. In severe cases, the carcass will be bright red. In milder cases localized congestion may be evident in the muscles.

o) Pale Soft Exudative Pork

Note: This condition is commonly referred to by the initials PSE. This is not a disease condition and it has no effect on the safety of the carcass. It is however, a quality issue.

It occurs in pigs that are genetically predisposed to the effects of stress. In this condition there is an exudation (movement) of water out of the cells and into the intercellular spaces. This condition occurs if there is a rapid drop in the pH, (degree of acidity) of the tissues, while the carcass is still warm. The end result is muscle tissue that is pale, soft and wet.

p) Atrophic Rhinitis

Note: This is an inflammatory condition of the nose that only occurs in pigs. It is caused by infection, at a young age, by two bacteria that act in sequence.

Snouts of affected pigs will be shortened and they may be distorted. There is usually a watery discharge from the eyes which causes black streaks on the face due to accumulations of dirt.

This disease can lead to complete destruction of the turbinate bones which act to filter large particles out of the air that is being breathed in. This makes affected pigs very susceptible to pneumonia.

q) Sexual Odor

Note: A sexual odor (boar smell) is not a food safety issue but it can make the meat unpalatable. Boars whose testicles have been retained in the abdomen will often have a strong odor. Retained testicles are often seen still attached to the carcass.

Affected carcasses can be held for 24 to 48 hours to see if the odor will dissipate. If it doesn't the plant operator should be given the option of having it condemned for sexual odor or of using the carcass in the production of spiced meat products.

r) Miscellaneous conditions that may be seen in the carcass include evidence of old and possibly infected castration wounds, urine scald (from lack of bedding) and sunburn.

5. Keep **control** of **all carcasses, or parts of carcasses, that are "held" for whatever reason,** following the PM examination **until the final disposition has been determined.**

6. Identify all carcasses, or portions thereof, that are condemned so that they will be handled in a manner that ensures that contamination of equipment, meat, or meat products, from other carcasses, does not occur.

   Note: No part of a condemned carcass can be used for human consumption.

7. Record PM findings that result in condemnations on the MIF - 4 (Certificate of Condemnation) and on the MIF - 5 (Inspector's Daily Report).

   Note: These are official MIB documents. They must be:

   a) completed in their entirety;

   b) completed in a legible manner;

   c) signed by the MIB Inspector

   The MIF - 4 provides information, on the condemnation, that the abattoir operator can give to the owner of the animal.

RELATED SECTIONS OF TIPM

08-A-01 PM Inspection - Red Meat Animals - General
08-A-02 PM Inspection - Red Meat Animals - Methods
08-A-03 PM Inspection - Red Meat Animals - Findings - General
08-A-04 PM Disposition after PM Inspection - All Species
08-C-01 PM Inspection - Hogs - Head
08-C-02 PM Inspection - Hogs - Thoracic Viscera
08-C-03 PM Inspection - Hogs - Abdominal Viscera

SUBJECT: PM Inspection - Sheep, Goats & Deer - Head	08-D-01
REGULATORY REFERENCES M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Sections 5(c) & 6 AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 47	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Section 47 of AR 42/2003 and section 5(c) of the *Meat Inspection Act* requires a post-mortem (PM) inspection on all red meat animals slaughtered in a "Licensed Meat Facility" (abattoir).

Note: The PM inspection is done to detect any lesions (changes) caused by disease conditions.

Determining the presence, or absence, of disease is critical in ensuring that all parts of the animal are wholesome and fit for human consumption.

To ensure a thorough PM examination, Meat Inspection Branch (MIB) Inspectors use a systematic approach. In the following order they examine the:

1. Head
2. Thoracic (chest) viscera (organs)
3. Abdominal viscera
4. Carcass

The intent of this document is to **outline** the **procedures** that are followed **for** a proper **post-mortem examination of the head** of sheep, goats and deer.

OBJECTIVE/OUTCOME

All sheep, lamb, goat and deer heads will be inspected in the manner set out in this document.

Note: The procedure for the PM examination of the head has been prescribed by the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

In addition to prescribing these methods the MIB is also responsible for ensuring that the individuals performing the post-mortem inspection have the necessary training, knowledge, skills and ability.

Designated abattoir personnel will prepare the head in a manner that makes it suitable for inspection.

Note: In general this preparation includes:

a) skinning the head;

b) removing the horns;

c) cleaning the head;

d) placing the head on the inspection rack

The head will be presented with all lymph nodes in situ (in place) and exposed.

Note: Salvage of the head meat and tongue will not be allowed unless the head is properly presented for the PM inspection.

A system will be in place to ensure that the head can be identified with the carcass and other internal organs and edible carcass parts until such time as all PM inspections have been completed.

Note: This is done to comply with the requirements of section 6 of the *Meat Inspection Act* which requires that every portion of a carcass that is unfit for food must be condemned.

The head inspection should be completed before the carcass has gone past the final inspection station.

MIB Inspectors will:

1. Determine the age of the animal by examining the lower incisor teeth.

   Note: Condemned animals that are deemed to be over 12 months must be sampled in accordance with the Scrapie Surveillance Protocol. For the purpose of this protocol any animal in which at least one permanent central incisor has erupted is considered to be one year of age.

2. Visually observe the head to ensure that it is free of any hair, hide, horns, ingesta or any other type of contamination.

   Note: Common areas of contamination include the base of the skull, the area where the horns were attached and inside the mouth.

   The head should be held for trimming and re-inspection if there is any contamination or other dressing defects.

   Various species of *Cysticerci* may be found in sheep but none of them are pathogenic for humans therefore it is not necessary to incise the outer and inner masseter (cheek) muscles of sheep or goats.

   Sheep and deer may be affected with nose bots. The bots seen in sheep are the larvae of a fly called *Oestrus ovis*. They live in the sinuses. They may be a nasal discharge in affected animals.

3. Incise sub-maxillary (mandibular) lymph nodes.

   Note: These nodes should be observed for any evidence of edema, enlargement, abscesses, grittiness, or tumors.

   Sheep, and to a lesser extent goats may have abscessed lymph nodes, including those in the head, due to CLA. This condition is more common in sheep because they are subjected to more frequent wounds from shearing. The bacteria which causes CLA is spread by dirty shearing equipment. Affected nodes will have a thick dry cheesy type of pus that often appears to be layered like an onion. Abscesses are more common in the body nodes but they can appear in any lymph node. This condition is not dangerous to humans but may cause emaciation in severely affected animals.

   These nodes are palpated in partially dressed lambs that weigh less than 25 kgs. Those that reveal any abnormality on palpation are incised.

4. Visually examine, palpate and incise (if necessary) the tongue.

   Note: This is done to check for abscesses and other abnormalities. Localized conditions such as scars, sores and erosions are trimmed if the tongue is going to be salvaged.

5. Record PM findings that result in condemnations on the MIF - 4 (Certificate of Condemnation) and on the MIF - 5 (Inspector's Daily Report).

   Note: These are official MIB documents. They must be:

   a) completed in their entirety;

   b) completed in a legible manner;

   c) signed by the MIB Inspector

   The MIF - 4 provides information, on the condemnation, that the abattoir operator can give to the owner of the animal.

RELATED SECTIONS OF TIPM

08-A-01 PM Inspection - Red Meat Animals - General
08-A-02 PM Inspection - Red Meat Animals - Methods
08-A-03 PM Inspection - Red Meat Animals - Findings - General
08-A-04 PM Disposition after PM Inspection - All Species
08-D-02 PM Inspection - Sheep, Goats & Deer - Thoracic Viscera
08-D-03 PM Inspection - Sheep, Goats & Deer - Abdominal Viscera
08-D-04 PM Inspection - Sheep, Goats & Deer - Carcass

SUBJECT: PM Inspection - Sheep, Goats & Deer - Thoracic Viscera	08-D-02
REGULATORY REFERENCES M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Sections 5(c) & 6 AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 47	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Section 47 of AR 42/2003 and section 5(c) of the *Meat Inspection Act* requires a post-mortem (PM) inspection on all red meat animals slaughtered in a "Licensed Meat Facility" (abattoir).

Note: The PM inspection is done to detect any lesions (changes) caused by disease conditions.

Determining the presence, or absence, of disease is critical in ensuring that all parts of the animal are wholesome and fit for human consumption.

To ensure a thorough PM examination, Meat Inspection Branch (MIB) Inspectors use a systematic approach. In the following order they examine the:

1. Head
2. Thoracic (chest) viscera (organs)
3. Abdominal viscera
4. Carcass

The intent of this document is to **outline** the **procedures** that are followed **for** a proper **post-mortem examination of the thoracic viscera** of sheep, goats and deer.

OBJECTIVE/OUTCOME

The thoracic viscera, of sheep, goats and deer, will be inspected in the manner set out in this document.

Note: The procedure for the PM examination of the thoracic viscera has been prescribed by the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

In addition to prescribing these methods the MIB is also responsible for ensuring that the individuals performing the post-mortem inspection have the necessary training, knowledge, skills and ability.

Designated abattoir personnel will prepare the thoracic in a manner that makes it suitable for inspection.

Note: In general this preparation includes:

a) removal of the pluck (trachea, lungs and heart);
b) placing the pluck on the examination table, or tray

A system will be in place to ensure that the thoracic viscera can be identified with the carcass and other internal organs and edible carcass parts until such time as all PM inspections have been completed.

Note: This is done to comply with the requirements of section 6 of the *Meat Inspection Act* which requires that every portion of a carcass that is unfit for food must be condemned.

MIB Inspectors will:

1. Visually examine the exposed surfaces of the lungs then palpate them and incise (cut) them if indicated.

   Note: The lungs are palpated to detect any deep lesions such as abscesses, tumors, chronic pneumonia, etc. If any lesions are detected, by palpation, the lungs are incised.

   Common abnormalities observed in the lungs include:

   a) Abscesses

      Note: Abscesses are accumulations of pus contained within a thick fibrous tissue capsule.

      Sheep, and to a lesser extent goats may have abscesses in the lymph nodes of the chest due to CLA. Affected nodes will have a thick dry cheesy type of pus that often appears to be layered like an onion. Abscesses are more common in the body nodes but they can appear in any lymph node. This condition is not dangerous to humans but may cause emaciation in severely affected animals.

   b) Pneumonia

      Note: Most cases of pneumonia are caused by bacterial infections that have entered the lung by the airways. This type of pneumonia (referred to as bronco-pneumonia because it comes in through the bronchi) results in consolidation of the lungs to the point where the lung tissue may be as firm as the liver. Usually the front and lower portions of the lung are affected in this type of pneumonia.

      Another form of pneumonia is embolic pneumonia. This name is given because the infection has come to the lungs as emboli (clumps of bacteria) in the blood stream. With embolic pneumonia there will be lots of small abscesses randomly scattered throughout the lung.

   c) Pleuritis

      Note: Pleuritis is an inflammatory reaction in the pleura. The smooth shiny tissue that covers the lungs and inner chest wall is called the pleura.

   d) Pleural adhesions

      Note: Pleural adhesions are due to the development of scar tissue in the healing process of pleuritis.

   e) Lungworms

      Note: Lungworms, when present will be found in the trachea usually at the point where the trachea divides into the left and right bronchi. They are slender worms approximately 1 to 1½ inches in length.

2. Examine the bronchial lymph nodes visually and by palpation.

   Note: These nodes are only incised when abnormalities are detected on the visual examination, or during palpation.

3. Examine the heart visually and by palpation.

   Note: The heart does not need to be opened unless abnormalities are detected on palpation. When the heart is opened it should be opened in a manner that allows visualization of whatever abnormality was palpated.

   Abnormalities that may be seen in the heart include:

   a) Pericarditis

      Note: Pericarditis refers to inflammation of the heart. It can be caused by penetration of the heart by a nail in "Hardware Disease" but this is not as common in small ruminants as it is in cattle. Pericarditis can also develop as an extension of pleuritis. In most cases there will be heavy accumulations of yellow clotted fibrin.

   b) Serous atrophy of fat

      Note: Serous atrophy of fat refers to a condition when the fat has a watery and semi gelatinous appearance. It occurs when the animal is emaciated. Serous atrophy is most commonly seen in the fat around the heart because that is one of the last places to have any fat when an animal is starving.

4. Record PM findings that result in condemnations on the MIF - 4 (Certificate of Condemnation) and on the MIF - 5 (Inspector's Daily Report).

   Note: These are official MIB documents. They must be:

   a) filled out completely;

   b) completed in a legible manner;

   c) signed by the MIB Inspector

   The MIF - 4 provides information, on the condemnation, that the abattoir operator can give to the owner of the animal.

RELATED SECTIONS OF TIPM

08-A-01 PM Inspection - Red Meat Animals - General
08-A-02 PM Inspection - Red Meat Animals - Methods
08-A-03 PM Inspection - Red Meat Animals - Findings - General
08-A-04 PM Disposition after PM Inspection - All Species
08-D-01 PM Inspection - Sheep, Goats & Deer - Head
08-D-03 PM Inspection - Sheep, Goats & Deer - Abdominal Viscera
08-D-04 PM Inspection - Sheep, Goats & Deer - Carcass

SUBJECT: PM Inspection - Sheep, Goats & Deer - Abdominal Viscera	08-D-03
REGULATORY REFERENCES M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Sections 5(c) & 6 AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 47	**Initial Release** Sept 1, 2009 **Page 1 of 4**

RATIONALE

Section 47 of AR 42/2003 and section 5(c) of the *Meat Inspection Act* requires a post-mortem (PM) inspection on all red meat animals slaughtered in a "Licensed Meat Facility" (abattoir).

Note: The PM inspection is done to detect any lesions (changes) caused by disease conditions.

Determining the presence, or absence, of disease is critical in ensuring that all parts of the animal are wholesome and fit for human consumption.

To ensure a thorough PM examination, Meat Inspection Branch (MIB) Inspectors use a systematic approach. In the following order they examine the:

1. Head
2. Thoracic (chest) viscera (organs)
3. Abdominal viscera
4. Carcass

The intent of this document is to **outline** the **procedures** that are followed **for** a proper **post-mortem examination of the abdominal viscera** of sheep, goats & deer.

OBJECTIVE/OUTCOME

The abdominal viscera (organs), of sheep, goats and deer, will be inspected in the manner set out in this document.

Note: The procedure for the PM examination of the abdominal viscera has been prescribed by the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

In addition to prescribing these methods the MIB is also responsible for ensuring that the individuals performing the post-mortem inspection have the necessary training, knowledge, skills and ability.

Designated abattoir personnel will prepare the abdominal viscera in a manner that makes it suitable for inspection.

Note: In general this preparation includes:

a) removing the viscera from the carcass;

b) placing the viscera on the examination table.

A system will be in place to ensure that the viscera can be identified with the carcass and other internal organs and edible carcass parts until such time as all PM inspections have been completed.

Note: This is done to comply with the requirements of section 6 of the *Meat Inspection Act* which requires that every portion of a carcass that is unfit for food must be condemned.

MIB Inspectors will:

1. Give the liver a visual inspection and thoroughly palpate it. The hepatic lymph nodes should be examined and incised 2-3 times. The bile ducts should be opened longitudinally to observe for liver flukes.

   Note: The liver shouldn't be incised unless a deep lesion is palpated.

   Abnormalities observed in the liver include:

   a) Abscesses

      Note: Abscesses are accumulations of pus contained within a thick fibrous tissue capsule.

      Sheep, and to a lesser extent goats may have abscessed lymph nodes due to CLA, including those of the abdomen. Because this condition is generally due to infection of shearing wounds abscesses are more common in the lymph nodes of the body. Affected nodes will have a thick dry cheesy type of pus that often appears to be layered like an onion. This condition is not dangerous to humans but may cause emaciation in severely affected animals.

   b) Adhesions

      Note: Similar to other abdominal organs the liver can be caught up in adhesions due to the formation of scar tissue from peritonitis.

   c) Melanosis

      Note: Melanosis is a condition caused by an abnormal accumulation of melanocytes. Melanocytes are connective tissue cells which contain a black pigment. They can accumulate in various body tissues including the liver. Melanosis is recognized by the presence of black spots, or streaks, in otherwise normal tissue. The cause is unknown. This condition is seen more frequently in sheep than in any other species.

   d) Liver Flukes

      Note: Liver flukes are parasitic flatworms. Two types have been reported in Alberta. They leave dark tracts throughout the liver due to their migration in the liver.

   e) Chronic Passive Congestion

      Note: "Chronic Passive Congestion" refers to blood backing up into the liver due to poor circulation. It is generally caused by right sided heart failure. Because of certain peculiarities of the circulation, of blood, through the liver some parts of the individual liver lobules are more congested than other portions. The reticulated pattern of the lesion gives an appearance that has been likened to that of nutmeg thus the term nutmeg liver.

f) Cysticerci

Note: Two types of Cysticerci will be seen in sheep. Cysticercus ovis and Cysticercus tenuicollis. Cysticercus ovis is usually found in the muscle but may be found throughout the abdomen as well. Cysticercus tenuicollis is usually seen in the abdomen often attached to the liver. This parasite is a larger cyst than C. ovis. It has a long stretched out neck which accounts for its name. The irony of these parasites is that they are not harmful for humans but they are harmful to dogs and other carnivores. A rare example of food fit for humans but not for animals.

2. Examine the intestines, omentum, mesentery and mesenteric lymph nodes.

Note: For a proper examination the intestines should be spread out. Usually it is not necessary to incise the mesenteric lymph nodes. They should be incised if they are enlarged or if there is any possibility that the animal has tuberculosis. The omentum, mesentery and any other fatty tissue that is going to be used for human consumption must be free of contamination.

3. Visually examine the spleen and incise it if there are any abnormalities.
4. Visually examine the four compartments of the stomach (reticulum, rumen, omasum and abomasum).

Note: There may be evidence of localized peritonitis, or abscess formation, if the reticulum has been penetrated by a nail, or piece of wire.

5. Examine the kidneys.

Note: The PM examination of the kidneys may be done with the kidneys in the carcass or on the viscera table. In either instance they must be fully exposed for the inspector.

Common abnormalities observed in the kidney include:

a) Cysts

Note: Cysts are closed cavities, or sacs, that contain fluid. They can occur in any part of the body. They are relatively common in kidneys where they are believed to be caused by a developmental defect in the urinary tubules. When present they tend to get larger as the animal gets older.

b) Infarcts

Note: An infarct is an area of tissue that has died because its blood supply has been cut off. Because of the anatomy of the kidney blockage of small arteries causes death of a cone shaped area of tissue with the base of the cone on the outer surface of the kidney.

Most infarcts are pale and slightly depressed. An early infarct may be swollen and red. When infarcts are seen the inspector should closely examine the valves on the left side of the heart for any evidence of any growths on the heart valves (valvular endocarditis caused by bacterial infection). Infarcts occur when small pieces of these growths (emboli) break off then lodge in a smaller artery in the kidney.

6. Record PM findings that result in condemnations on the MIF - 4 (Certificate of Condemnation) and on the MIF - 5 (Inspector's Daily Report).

Note: These are official MIB documents. They must be:

a) completed in their entirety;

b) completed in a legible manner;

c) signed by the MIB Inspector

The MIF - 4 provides information, on the condemnation, that the abattoir operator can give to the owner of the animal.

When **localized** lesions are detected in the abdominal viscera and there is no evidence of any adverse effects on the wholesomeness of the rest of the carcass **only the affected organ** or tissue **is condemned**.

Condemnation, of the carcass and all organs, is justified when liver lesions are accompanied by jaundice and kidney lesions are accompanied by uremia.

RELATED SECTIONS OF TIPM

08-A-01 PM Inspection - Red Meat Animals - General
08-A-02 PM Inspection - Red Meat Animals - Methods
08-A-03 PM Inspection - Red Meat Animals - Findings - General
08-A-04 PM Disposition after PM Inspection - All Species
08-D-01 PM Inspection - Sheep, Goats & Deer - Head
08-D-02 PM Inspection - Sheep, Goats & Deer - Thoracic Viscera
08-D-04 PM Inspection - Sheep, Goats & Deer - Carcass

SUBJECT: PM Inspection - Sheep, Goats & Deer - Carcass	08-D-04
REGULATORY REFERENCE M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Sections 5(c) & 6 AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 47	**Initial Release** Sept 1, 2009 **Page 1 of 5**

RATIONALE

Section 47 of AR 42/2003 and section 5(c) of the *Meat Inspection Act* requires a post-mortem (PM) inspection on all red meat animals slaughtered in a "Licensed Meat Facility" (abattoir).

Note: The PM inspection is done to detect any lesions (changes) caused by disease conditions.

Determining the presence, or absence, of disease is critical in ensuring that all parts of the animal are wholesome and fit for human consumption.

To ensure a thorough PM examination, Meat Inspection Branch (MIB) Inspectors use a systematic approach. In the following order they examine the:

1. Head
2. Thoracic (chest) viscera (organs)
3. Abdominal viscera
4. Carcass

The intent of this document is to **outline** the **procedures** that are followed **for** a proper **post-mortem examination of the carcass** of sheep, goats and deer.

OBJECTIVE/OUTCOME

All sheep, goat and deer carcasses will be inspected in the manner set out in this document.

Note: The procedure for the PM examination of the carcass has been prescribed by the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

In addition to prescribing these methods the MIB is also responsible for ensuring that the individuals performing the post-mortem inspection have the necessary training, knowledge, skills and ability.

Designated abattoir personnel will prepare the carcass in a manner that makes it suitable for inspection.

Note: Proper presentation includes:

a) removing the viscera (internal organs);

b) splitting the carcass;

c) presenting the carcass before final trimming and/or washing

A system will be in place to ensure that the carcass can be matched up with the head and all internal organs until such time as all PM inspections have been completed.

Note: This is done to comply with the requirements of section 6 of the *Meat Inspection Act* which requires that every portion of a carcass that is unfit for food must be condemned.

MIB Inspectors will:

1. Conduct a visual inspection of the entire carcass.

   Note: This inspection includes the:

   i. joints;
   ii. outer muscular surfaces;
   iii. diaphragm;
   iv. peritoneum;
   v. pleura;
   vi. neck

2. Visually examine the entire carcass and superficial body lymph nodes (pres-scapular and pre-femoral). Abnormalities will be palpated and incised if deemed necessary.

   Note: Sheep and goats are affected by a unique disease called Caseous Lymphadenitis (CLA). This condition can affect any lymph node in the body including those of the carcass.

   Examples of conditions seen on the post-mortem examination of sheep, goat an deer carcasses include:

   a) Arthritis

      Note: Arthritis is defined as inflammation of a joint. One or more joints, in one or more limbs may be affected. Affected joints will be swollen. Arthritis may be infectious or non-infectious. Infectious arthritis will cause inflammatory reactions in the lymph nodes of the affected limb. When there are changes in the lymph nodes the entire quarter will be condemned. If the condition is deemed to be non-infectious only the affected joint needs to be removed.

   b) Abscesses

      Note: Abscesses are accumulations of pus enclosed in a fibrous tissue capsule. Pus can vary greatly in color, odor and consistency depending on the type of bacteria present and the age of the abscess. Abscesses and surrounding tissues must be removed from the carcass. The carcass, or individual quarters, may be condemned in the case of multiple, or severe, abscesses, or where there are inflammatory changes in the lymph nodes draining that area of the carcass.

      As mentioned above sheep, and to a lesser extent goats may have abscessed lymph nodes due to CLA. This condition is more common in sheep because they are subjected to more frequent wounds from shearing. The bacteria which causes CLA is spread by dirty shearing equipment. Affected nodes will have a thick dry cheesy type of pus that often appears to be layered like an onion. Abscesses are more common in the body nodes but they can appear in any lymph node. This condition is not dangerous to humans but may cause emaciation in severely affected animals.

c) Cysticercosis

Note: *Cysticercus ovis* is the intermediate form of a tapeworm called *Taenia ovis*. This is the most common *Cysticercus* seen by meat inspectors. Many animals from the same flock may be affected if dogs are with the sheep and are allowed to eat dead sheep carcasses. The adult tapeworm lives in dogs and other carnivores. This parasite is harmless to humans thus it is acceptable to attempt salvage by trimming them out. On occasion carcasses that are severely affected may be condemned for aesthetic reasons. Condemned carcasses and trimmed material must not be fed to dogs.

d) Contamination

Note: Contamination is the presence of foreign material on the surface of the carcass. Most visible contamination is due to poor dressing procedures. Contaminated areas of the carcass must be trimmed in accordance with the directions of a MIB Inspector then the remainder of the carcass must be thoroughly washed.

The carcass, or portions of it, will be condemned if, in the judgment of the inspector, the contamination is so severe that it cannot be completely removed by trimming.

e) Adhesions

Note: Adhesions are accumulations of fibrous (scar) tissue that form in animals that have recovered from pleuritis, or peritonitis. In the carcass, adhesions will be seen on the peritoneum, or pleura, which line the abdominal and chest walls respectively.

f) Jaundice

Note: Jaundice (also called icterus) refers to a yellow discoloration of the carcass. Liver disease and failure is the main cause of jaundice.

Carcasses are condemned for jaundice if there is severe yellow discoloration, or if there are other systemic changes in any of the organs. Carcasses that are only mildly affected can be held for 24 hours. If the jaundice disappears, in that time, the carcass can be passed otherwise it is condemned.

g) Bruising

Note: Bruises develop following injuries that cause bleeding into the muscles. With time the blood pigment (hemoglobin) breaks down. As this occurs the color of the bruise will change from dark red, to green, to yellow. Bruises are not hazardous to human health but affected tissues don't appear good so they are trimmed out. Inspectors have the authority to condemn the entire carcass when bruising is severe and widespread.

h) Melanosis

Note: Melanosis is a condition caused by an abnormal accumulation of melanocytes. Melanocytes are connective tissue cells which contain a black pigment. They can accumulate in any tissues of the body including the muscles and bones of the carcass. Melanosis is recognized by the presence of black spots, or streaks, in otherwise normal tissue. The cause is unknown. Melanosis is more common in sheep than it is in other species.

i) Injection Sites

Note: The muscles of the rump and neck area should be closely examined for any evidence of injection site lesions. These will appear as small, or large, localized areas of necrosis and discoloration of muscle tissue. The severity of the lesion will vary with what was injected. Fresh injection sites usually have some hemorrhages in them.

The carcass must be held when fresh injection sites are sent to the laboratory for residue testing.

j) Emaciation (cachexia)

Note: Emaciation is the technical term for an extremely wasted body condition. Animals can be thin without being emaciated. It is important for the MIB Inspector to differentiate between emaciation and thinness. If there is any **normal** looking **fat** on the surface of the heart, or around the kidney, the animal is **not emaciated**. Emaciated animals are condemned, thin ones are not.

k) Edema

Note: Edema refers to the accumulation of clear watery fluid in the muscles of the carcass. Edema can be localized, or generalized. The most common cause of generalized edema is heart failure. Localized edema is usually due to local circulation problems (in the blood, or lymph) or secondary to an inflammatory reaction. Portions of the carcass affected with edema are condemned.

3. Keep **control** of **all carcasses, or parts of carcasses, that are "held" for whatever reason,** following the PM examination **until the final disposition has been determined.**

4. Identify all carcasses, or portions thereof, that are condemned so that they will be handled in a manner that ensures that contamination of equipment, meat, or meat products, from other carcasses, does not occur.

Note: No part of a condemned carcass can be used for human consumption.

5. Record PM findings that result in condemnations on the MIF - 4 (Certificate of Condemnation) and on the MIF - 5 (Inspector's Daily Report).

Note: These are official MIB documents. They must be:

a) completed in their entirety;

b) completed in a legible manner;

c) signed by the MIB Inspector

The MIF - 4 provides information, on the condemnation, that the abattoir operator can give to the owner of the animal.

RELATED SECTIONS OF TIPM

08-A-01 PM Inspection - Red Meat Animals - General
08-A-02 PM Inspection - Red Meat Animals - Methods
08-A-03 PM Inspection - Red Meat Animals - Findings - General
08-A-04 PM Disposition after PM Inspection - All Species
08-D-01 PM Inspection - Sheep, Goats & Deer - Head
08-D-02 PM Inspection - Sheep, Goats & Deer - Thoracic Viscera
08-D-03 PM Inspection - Sheep, Goats & Deer - Abdominal Viscera

SUBJECT: PM Inspection - Elk and Bison - Head	08-E-01
REGULATORY REFERENCES M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Sections 5(c) & 6 AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 47	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Section 47 of AR 42/2003 and section 5(c) of the *Meat Inspection Act* requires a post-mortem (PM) inspection on all red meat animals slaughtered in a "Licensed Meat Facility" (abattoir).

Note: The PM inspection is done to detect any lesions (changes) caused by disease conditions.

Determining the presence, or absence, of disease is critical in ensuring that all parts of the animal are wholesome and fit for human consumption.

To ensure a thorough PM examination, Meat Inspection Branch (MIB) Inspectors use a systematic approach. In the following order they examine the:

1. Head
2. Thoracic (chest) viscera (organs)
3. Abdominal viscera
4. Carcass

The intent of this document is to **outline** the **procedures** that are followed **for** a proper **post-mortem examination of the head** of elk & bison.

OBJECTIVE/OUTCOME

All elk & bison heads will be inspected in the manner set out in this document.

Note: The procedure for the PM examination of the head has been prescribed by the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

In addition to prescribing these methods the MIB is also responsible for ensuring that the individuals performing the post-mortem inspection have the necessary training, knowledge, skills and ability.

Designated abattoir personnel will prepare the head in a manner that makes it suitable for inspection.

Note: In general this preparation includes:

a) skinning the head;

b) removing the horns (bison);

c) cleaning the head;

d) placing the head on the inspection rack

The head will be presented with all lymph nodes in situ (in place) and exposed.

Note: Salvage of the head meat and tongue will not be allowed unless the head is properly presented for the PM inspection.

A system will be in place to ensure that the head can be identified with the carcass and other internal organs and edible carcass parts until such time as all PM inspections have been completed.

Note: This is done to comply with the requirements of section 6 of the *Meat Inspection Act* which requires that every portion of a carcass that is unfit for food must be condemned.

The head inspection should be completed before the carcass has gone past the final inspection station.

MIB Inspectors will:

1. Visually observe the head to ensure that it is free of any hair, hide, horns, ingesta or any other type of contamination.

   Note: Common areas of contamination include the base of the skull, the area where the horns were attached and inside the mouth.

   The head should be held for trimming and re-inspection if there is any contamination or other dressing defects.

2. Incise the following lymph nodes.
   a) parotid
   b) sub-maxillary (mandibular)
   c) retropharyngeal

   Note: These nodes should be observed for any evidence of edema, enlargement, abscesses, grittiness, or tumors.

3. Visually examine, palpate and incise (if necessary) the tongue.

   Note: This is done to check for abscesses and other abnormalities. Localized conditions such as scars, sores and erosions are trimmed.

4. Record PM findings that result in condemnations on the MIF - 4 (Certificate of Condemnation) and on the MIF - 5 (Inspector's Daily Report)

   Note: These are official MIB documents. They must be:
   a) completed in their entirety;
   b) completed in a legible manner;
   c) signed by the MIB Inspector

   The MIF - 4 provides information, on the condemnation, that the abattoir operator can give to the owner of the animal.

RELATED SECTIONS OF TIPM

08-A-01 PM Inspection - Red Meat Animals - General
08-A-02 PM Inspection - Red Meat Animals - Methods
08-A-03 PM Inspection - Red Meat Animals - Findings - General
08-A-04 PM Disposition after PM Inspection - All Species
08-E-02 PM Inspection - Elk & Bison - Thoracic Viscera
08-E-03 PM Inspection - Elk & Bison - Abdominal Viscera
08-E-04 PM Inspection - Elk & Bison - Carcass

SUBJECT: PM Inspection - Elk & Bison - Thoracic Viscera	08-E-02
REGULATORY REFERENCES M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Sections 5(c) & 6 AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 47	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Section 47 of AR 42/2003 and section 5(c) of the *Meat Inspection Act* requires a post-mortem (PM) inspection on all red meat animals slaughtered in a "Licensed Meat Facility" (abattoir).

Note: The PM inspection is done to detect any lesions (changes) caused by disease conditions.

Determining the presence, or absence, of disease is critical in ensuring that all parts of the animal are wholesome and fit for human consumption.

To ensure a thorough PM examination, Meat Inspection Branch (MIB) Inspectors use a systematic approach. In the following order they examine the:

1. Head
2. Thoracic (chest) viscera (organs)
3. Abdominal viscera
4. Carcass

The intent of this document is to **outline** the **procedures** that are followed **for** a proper **post-mortem examination of the thoracic viscera** of elk & bison.

OBJECTIVE/OUTCOME

The thoracic viscera (organs) of elk and bison will be inspected in the manner set out in this section.

Note: The procedure for the PM examination of the thoracic viscera has been prescribed by the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

In addition to prescribing these methods the MIB is also responsible for ensuring that the individuals performing the post-mortem inspection have the necessary training, knowledge, skills and ability.

Designated abattoir personnel will prepare the thoracic in a manner that makes it suitable for inspection.

Note: In general this preparation includes:

a) removal of the pluck (trachea, lungs and heart);

b) placing the pluck on the examination table, or tray

A system will be in place to ensure that the thoracic viscera can be identified with the carcass and other internal organs and edible carcass parts until such time as all PM inspections have been completed.

Note: This is done to comply with the requirements of section 6 of the *Meat Inspection Act* which requires that every portion of a carcass that is unfit for food must be condemned.

MIB Inspectors will:

1. Visually examine the exposed surfaces of the lungs then palpate them and incise (cut) them if indicated.

   Note: The lungs are palpated to detect any deep lesions such as abscesses, tumors, chronic pneumonia, etc. If any lesions are detected, by palpation, the lungs are incised.

   Common abnormalities observed in the lungs include:

   a) Abscesses

      Note: Abscesses are accumulations of pus contained within a thick fibrous tissue capsule.

   b) Emphysema

      Note: Emphysema is an accumulation of air within the tissue of the lungs. It appears as small bubbles all over the lung. Affected lungs will not collapse properly.

   c) Pneumonia

      Note: Most cases of pneumonia are caused by bacterial infections that have entered the lung by the airways. This type of pneumonia (referred to as bronco-pneumonia because it comes in through the bronchi) results in consolidation of the lungs to the point where the lung tissue may be as firm as the liver. Usually the front and lower portions of the lung are affected in this type of pneumonia.

      Another form of pneumonia is embolic pneumonia. This name is given because the infection has come to the lungs as emboli (clumps of bacteria) in the blood stream. With embolic pneumonia there will be lots of small abscesses randomly scattered throughout the lung.

      A third type of pneumonia is interstitial pneumonia. In interstitial pneumonia the lungs develop a rubbery consistency and they are uniformly affected throughout. Interstitial pneumonias are caused by virus infections.

   d) Pleuritis

      Note: Pleuritis is an inflammatory reaction in the pleura. The smooth shiny tissue that covers the lungs and inner chest wall is called the pleura.

   e) Pleural adhesions

      Note: Pleural adhesions are due to the development of scar tissue in the healing process of pleuritis.

f) Echinococcus Cysts

Note: Echinococcus cysts may be seen in the lungs of elk. They are the intermediate forms of a tapeworm of carnivores (dogs, coyotes & wolves). They are much larger than the Cysticercus cysts that are seen in other ruminant species. An Echinococcus cyst may be several inches in diameter.

Care should be taken to ensure that fluid from incised cysts doesn't contact the eyes of the inspector.

The presence of these cysts does not affect the suitability of the carcass for human consumption.

2. Examine the mediastinal lymph nodes and incise any that are enlarged.
3. Examine the heart visually and by palpation. Palpated abnormalities should be incised.

   Abnormalities that may be seen in the heart include:

   a) Pericarditis

   Note: Pericarditis refers to inflammation of the heart. Pericarditis can also develop as an extension of pleuritis. In most cases there will be heavy accumulations of yellow clotted fibrin.

   b) Serous atrophy of fat

   Note: Serous atrophy of fat refers to a condition when the fat has a watery and semi gelatinous appearance. It occurs when the animal is emaciated. Serous atrophy is most commonly seen in the fat around the heart because that is one of the last places to have any fat when an animal is starving.

4. Record PM findings that result in condemnations on the MIF - 4 (Certificate of Condemnation) and on the MIF - 5 (Inspector's Daily Report).

   Note: These are official MIB documents. They must be:

   a) filled out completely;

   b) completed in a legible manner;

   c) signed by the MIB Inspector

   The MIF - 4 provides information, on the condemnation, that the abattoir operator can give to the owner of the animal.

RELATED SECTIONS OF TIPM

08-A-01 PM Inspection - Red Meat Animals - General
08-A-02 PM Inspection - Red Meat Animals - Methods
08-A-03 PM Inspection - Red Meat Animals - Findings - General
08-A-04 PM Disposition after PM Inspection - All Species
08-E-01 PM Inspection - Elk & Bison - Head
08-E-03 PM Inspection - Elk & Bison - Abdominal Viscera
08-E-04 PM Inspection - Elk & Bison - Carcass

SUBJECT: PM Inspection - Elk & Bison - Abdominal Viscera	08-E-03
REGULATORY REFERENCES M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Sections 5(c) & 6 AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 47	**Initial Release** Sept 1, 2009 **Page 1 of 4**

RATIONALE

Section 47 of AR 42/2003 and section 5(c) of the *Meat Inspection Act* requires a post-mortem (PM) inspection on all red meat animals slaughtered in a "Licensed Meat Facility" (abattoir).

Note: The PM inspection is done to detect any lesions (changes) caused by disease conditions.

Determining the presence, or absence, of disease is critical in ensuring that all parts of the animal are wholesome and fit for human consumption.

To ensure a thorough PM examination, Meat Inspection Branch (MIB) Inspectors use a systematic approach. In the following order they examine the:

1. Head
2. Thoracic (chest) viscera (organs)
3. Abdominal viscera
4. Carcass

The intent of this document is to **outline** the **procedures** that are followed **for** a proper **post-mortem examination of the abdominal viscera** of elk and bison.

OBJECTIVE/OUTCOME

The abdominal viscera (organs) of elk and bison will be inspected in the manner set out in this document.

Note: The procedure for the PM examination of the thoracic viscera has been prescribed by the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

In addition to prescribing these methods the MIB is also responsible for ensuring that the individuals performing the post-mortem inspection have the necessary training, knowledge, skills and ability.

Designated abattoir personnel will prepare the thoracic in a manner that makes it suitable for inspection.

Note: In general this preparation includes:

a) removal of the pluck (trachea, lungs and heart);

b) placing the pluck on the examination table, or tray.

A system will be in place to ensure that the thoracic viscera can be identified with the carcass and other internal organs and edible carcass parts until such time as all PM inspections have been completed.

Note: This is done to comply with the requirements of section 6 of the *Meat Inspection Act* which requires that every portion of a carcass that is unfit for food must be condemned.

MIB Inspectors will:

1. Give the liver a visual inspection and thoroughly palpate it. The hepatic lymph nodes should be examined and incised 2-3 times. The bile ducts should be opened longitudinally to observe for liver flukes.

   Note: The liver shouldn't be incised unless a deep lesion is palpated.

   Abnormalities observed in the liver include:

   a) Abscesses

      Note: Abscesses are accumulations of pus contained within a thick fibrous tissue capsule.

   b) Adhesions

      Note: Similar to other abdominal organs the liver can be caught up in adhesions due to the formation of scar tissue from peritonitis.

   c) Liver Flukes

      Note: Liver flukes are parasitic flatworms. Two types have been reported in Alberta. They leave dark tracts throughout the liver due to their migration in the liver.

   d) Chronic Passive Congestion

      Note: "Chronic Passive Congestion" refers to blood backing up into the liver due to poor circulation. It is generally caused by right sided heart failure. Because of certain peculiarities of the circulation, of blood, through the liver some parts of the individual liver lobules are more congested than other portions. The reticulated pattern of the lesion gives an appearance that has been likened to that of nutmeg thus the term nutmeg liver.

2. Examine the intestines, omentum, mesentery and mesenteric lymph nodes.

   Note: For a proper examination the intestines should be spread out. Usually it is not necessary to incise the mesenteric lymph nodes. They should be incised if they are enlarged or if there is any possibility that the animal has tuberculosis. The omentum, mesentery and any other fatty tissue that is going to be used for human consumption must be free of contamination.

   The mesenteric lymph nodes of elk must be examined closely for any evidence of tuberculosis (TB).

   In elk TB gains access to the body through the intestines and cause the formation of abscess in the mesenteric lymph nodes. TB abscesses contain liquid creamy white to yellow pus.

   In other species (cattle & bison) TB enters via the lungs thus initial lesions are seen in the mediastinal lymph nodes. In these species there is a granulomatous (fleshy) reaction in the lymph nodes rather than the liquid pus evident in elk.

3. Visually examine the spleen and incise it if there are any abnormalities.

4. Visually examine the four compartments of the stomach (reticulum, rumen, omasum and abomasum).

   Note: There may be evidence of localized peritonitis, or abscess formation, if the reticulum has been penetrated by a nail, or piece of wire.

5. Examine the kidneys.

   Note: The PM examination of the kidneys may be done with the kidneys in the carcass or on the viscera table. In either instance they must be fully exposed for the inspector.

   Common abnormalities observed in the kidney include:

   a) Cysts

      Note: Cysts are closed cavities, or sacs, that contain fluid. They can occur in any part of the body. They are relatively common in kidneys where they are believed to be caused by a developmental defect in the urinary tubules. When present they tend to get larger as the animal gets older.

   b) Infarcts

      Note: An infarct is an area of tissue that has died because its blood supply has been cut off. Because of the anatomy of the kidney blockage of small arteries causes death of a cone shaped area of tissue with the base of the cone on the outer surface of the kidney.

      Most infarcts are pale and slightly depressed. An early infarct may be swollen and red. When infarcts are seen the inspector should closely examine the valves on the left side of the heart for any evidence of any growths on the heart valves (valvular endocarditis caused by bacterial infection). Infarcts occur when small pieces of these growths (emboli) break off then lodge in a smaller artery in the kidney.

6. Record PM findings that result in condemnations on the MIF - 4 (Certificate of Condemnation) and on the MIF - 5 (Inspector's Daily Report).

   Note: These are official MIB documents. They must be:

   a) completed in their entirety;

   b) completed in a legible manner;

   c) signed by the MIB Inspector

The MIF - 4 provides information, on the condemnation, that the abattoir operator can give to the owner of the animal.

When **localized** lesions are detected in the abdominal viscera and there is no evidence of any adverse effects on the wholesomeness of the rest of the carcass **only the affected organ** or tissue **is condemned**.

Condemnation, of the carcass and all organs, is justified when liver lesions are accompanied by jaundice and kidney lesions are accompanied by uremia.

RELATED SECTIONS OF TIPM

08-A-01 PM Inspection - Red Meat Animals - General
08-A-02 PM Inspection - Red Meat Animals - Methods
08-A-03 PM Inspection - Red Meat Animals - Findings - General
08-A-04 PM Disposition after PM Inspection - All Species
08-E-01 PM Inspection - Elk & Bison - Head
08-E-02 PM Inspection - Elk & Bison - Thoracic Viscera
08-E-04 PM Inspection - Elk & Bison - Carcass

SUBJECT: PM Inspection - Elk & Bison - Carcass	08-E-04
REGULATORY REFERENCES M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Sections 5(c) & 6 AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 47	**Initial Release** Sept 1, 2009 **Page 1 of 4**

RATIONALE

Section 47 of AR 42/2003 and section 5(c) of the *Meat Inspection Act* requires a post-mortem (PM) inspection on all red meat animals slaughtered in a "Licensed Meat Facility" (abattoir).

Note: The PM inspection is done to detect any lesions (changes) caused by disease conditions.

Determining the presence, or absence, of disease is critical in ensuring that all parts of the animal are wholesome and fit for human consumption.

To ensure a thorough PM examination, Meat Inspection Branch (MIB) Inspectors use a systematic approach. In the following order they examine the:

1. Head
2. Thoracic (chest) viscera (organs)
3. Abdominal viscera
4. Carcass

The intent of this document is to **outline** the **procedures** that are followed **for** a proper **PM examination of elk & bison carcasses**.

OBJECTIVE/OUTCOME

All elk & bison carcasses will be inspected in the manner set out in this document.

Note: The procedure for the PM examination of the thoracic viscera has been prescribed by the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

In addition to prescribing these methods the MIB is also responsible for ensuring that the individuals performing the post-mortem inspection have the necessary training, knowledge, skills and ability.

Designated abattoir personnel will prepare elk and bison carcasses in a manner that makes it suitable for inspection.

Note: Proper presentation includes:

a) removing the viscera (internal organs);

b) splitting the carcass;

c) presenting the carcass before final trimming and/or washing

A system will be in place to ensure that the thoracic viscera can be identified with the carcass and other internal organs and edible carcass parts until such time as all PM inspections have been completed.

Note: This is done to comply with the requirements of section 6 of the *Meat Inspection Act* which requires that every portion of a carcass that is unfit for food must be condemned.

MIB Inspectors will:

1. Conduct a visual inspection of the entire carcass.

   Note: This inspection includes the:

   a) joints;
   b) outer muscular surfaces;
   c) diaphragm;
   d) peritoneum;
   e) pleura;
   f) neck

2. Palpate and incise (if deemed necessary) any observed abnormalities.

   Examples of conditions seen on the post-mortem examination of elk and bison carcasses include:

   a) Arthritis

      Note: Arthritis is defined as inflammation of a joint. One or more joints, in one or more limbs may be affected. Affected joints will be swollen. Arthritis may be infectious or non-infectious. Infectious arthritis will cause inflammatory reactions in the lymph nodes of the affected limb. When there are changes in the lymph nodes the entire quarter will be condemned. If the condition is deemed to be non-infectious only the affected joint needs to be removed.

   b) Abscesses

      Note: Abscesses are accumulations of pus enclosed in a fibrous tissue capsule. Pus can vary greatly in color, odor and consistency depending on the type of bacteria present and the age of the abscess. Abscesses and surrounding tissues must be removed from the carcass. The carcass, or individual quarters, may be condemned in the case of multiple, or severe, abscesses, or where there are inflammatory changes in the lymph nodes draining that area of the carcass.

   c) Cysticercosis

      Note: Cysticerci detected in elk carcasses are of no concern for human health. They are the intermediate forms of tapeworms that affect carnivores such as dogs, wolves and coyotes.

   d) Contamination

      Note: Contamination is the presence of foreign material on the surface of the carcass. Most visible contamination is due to poor dressing procedures. Contaminated areas of the carcass must be trimmed in accordance with the directions of a MIB Inspector then the remainder of the carcass must be thoroughly washed.

      The carcass, or portions of it, will be condemned if, in the judgment of the inspector, the contamination is so severe that it cannot be completely removed by trimming.

e) Adhesions

Note: Adhesions are accumulations of fibrous (scar) tissue that form in animals that have recovered from pleuritis, or peritonitis. In the carcass, adhesions will be seen on the peritoneum, or pleura, which line the abdominal and chest walls respectively.

f) Jaundice

Note: Jaundice (also called icterus) refers to a yellow discoloration of the carcass. Liver disease and failure is the main cause of jaundice.

Carcasses are condemned for jaundice if there is severe yellow discoloration, or if there are other systemic changes in any of the organs. Carcasses that are only mildly affected can be held for 24 hours. If the jaundice disappears, in that time, the carcass can be passed otherwise it is condemned.

g) Bruising

Note: Bruises develop following injuries that cause bleeding into the muscles. With time the blood pigment (hemoglobin) breaks down. As this occurs the color of the bruise will change from dark red, to green, to yellow. Bruises are not hazardous to human health but affected tissues don't appear good so they are trimmed out. Inspectors have the authority to condemn the entire carcass when bruising is severe and widespread.

h) Injection Sites

Note: The muscles of the rump and neck area should be closely examined for any evidence of injection site lesions. These will appear as small, or large, localized areas of necrosis and discoloration of muscle tissue. The severity of the lesion will vary with what was injected. Fresh injection sites usually have some hemorrhages in them.

The carcass must be held when fresh injection sites are sent to the laboratory for residue testing.

If there is any **doubt** about whether an injection site is fresh or not it should be **handled as** if it were **a fresh lesion**.

i) Emaciation (cachexia)

Note: Emaciation is the technical term for an extremely wasted body condition. Animals can be thin without being emaciated. It is important for the MIB Inspector to differentiate between emaciation and thinness. If there is any normal looking fat on the surface of the heart, or around the kidney, the animal is not emaciated. Emaciated animals are condemned, thin ones are not.

j) Edema

Note: Edema refers to the accumulation of clear watery fluid in the muscles of the carcass. Edema can be localized, or generalized. The most common cause of generalized edema is heart failure. Localized edema is usually due to local circulation problems (in the blood, or lymph) or secondary to an inflammatory reaction. Portions of the carcass affected with edema are condemned.

3. Keep **control** of **all carcasses, or parts of carcasses, that are "held" for whatever reason,** following the PM examination **until the final disposition has been determined.**
4. Identify all carcasses, or portions thereof, that are condemned so that they will be handled in a manner that ensures that contamination of equipment, meat, or meat products, from other carcasses, does not occur.

   Note: No part of a condemned carcass can be used for human consumption.
5. Record PM findings that result in condemnations on the MIF - 4 (Certificate of Condemnation) and on the MIF - 5 (Inspector's Daily Report).

   Note: These are official MIB documents. They must be:

   a) completed in their entirety;

   b) completed in a legible manner;

   c) signed by the MIB Inspector

   The MIF - 4 provides information, on the condemnation, that the abattoir operator can give to the owner of the animal.

RELATED SECTIONS OF TIPM

08-A-01 PM Inspection - Red Meat Animals - General
08-A-02 PM Inspection - Red Meat Animals - Methods
08-A-03 PM Inspection - Red Meat Animals - Findings - General
08-A-04 PM Disposition after PM Inspection - All Species
08-E-01 PM Inspection - Elk & Bison - Head
08-E-02 PM Inspection - Elk & Bison - Thoracic Viscera
08-E-03 PM Inspection - Elk & Bison - Abdominal Viscera

SUBJECT: PM Inspection- Rabbits	08-F-01
REGULATORY REFERENCES M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Section 5(c) AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 47	**Initial Release** Sept 1, 2009 **Page 1 of 4**

RATIONALE

Section 47 of AR 42/2003 and section 5(c) of the *Meat Inspection Act* requires a post-mortem (PM) inspection on all red meat animals slaughtered in a "Licensed Meat Facility" (abattoir).

Note: The PM inspection is done to detect any lesions (changes) caused by disease conditions.

Determining the presence, or absence, of disease is critical in ensuring that all parts of the animal are wholesome and fit for human consumption.

The intent of this document is to **outline** the **procedures** that are followed **for** a proper **PM examination of rabbits**.

OBJECTIVE/OUTCOME

Domestic rabbits will be inspected in the manner set out in this document.

Note: The procedure for the PM examination of the carcass has been prescribed by the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

In addition to prescribing these methods the MIB is also responsible for ensuring that the individuals performing the post-mortem inspection have the necessary training, knowledge, skills and ability.

Abattoir personnel will present the carcass and viscera in a manner that facilitates examination of all external and internal surfaces and the viscera.

Note: To accomplish this the abattoir operator must:

a) ensure that plant personnel know how to properly present carcasses for inspection;

b) provide adequate lighting;

c) provide adequate space both for the presenter and the inspector.

Examples of improper presentation include:

a) contaminated viscera requiring the inspector to continually wash his/her hands;

b) viscera still attached to the carcass and not adequately separated from the abdominal cavity, or fat;

c) missing viscera.

MIB Inspectors will monitor the manner of presentation and take appropriate action when standards are not met. Actions will include communication of required corrective measures to the appropriate plant personnel.

MIB Inspectors will:

1. Conduct a thorough visual examination of the entire carcass.

   Note: This examination will include all exterior surfaces of the carcass, the inner surfaces of the abdomen and chest cavities and all of the viscera.

2. Manipulate viscera to facilitate visual examination of the heart, liver and spleen.
3. Palpate the following organs and parts of the carcass:
   a) liver;
   b) both kidneys;

      Note: The ureters should also be observed visually.

   c) popliteal and iliac lymph nodes;
   d) lymph nodes of the neck;
   e) pelvic muscles and muscles of the flank.

      Note: These are common sites for cysts, bruises and abscesses.

   Common Abnormalities seen during the post-mortem inspection of rabbits include:

   a) Abscesses

      Note: Abscesses are accumulations of pus enclosed in a fibrous tissue capsule. Pus can vary greatly in color, odor and consistency depending on the type of bacteria present and the age of the abscess.

      Based on MIB Inspector's judgment, carcasses with small well defined superficial abscesses (or scratches with only slight infection) not affecting the underlying tissues, can be trimmed.

      When there are deep carcass abscesses, or there are multiple abscesses in the internal cavities, or organs, a systemic infection will be deemed to exist and the carcass will be condemned.

   b) Bruises

      Note: Bruises are caused by injuries that cause bleeding into the tissues. As the blood pigment (hemoglobin) breaks down, over time, the color of the bruise will change from dark red to green to yellow.

      Bruising is not a food safety issue but affected areas should be trimmed out.

      Due to their small size the entire carcass of rabbits is more likely to be condemned, for bruising than other red meat animals.

   c) Blood Clots

      Note: Carcasses with a large number of blood clots, or muscle hemorrhages, due to excessive, or improper stunning will be condemned.

d) Contamination

Note: Contamination simply refers to contact between edible portions of the carcass and anything that is inherently dirty.

Sound dressing procedures are very important in reducing the chance of contamination.

Common sources of contamination in rabbits include:

i) Fur;

ii) Feces (manure from the lower gastro-intestinal tract);

iii) Ingesta (stomach contents);

iv) Extraneous materials including grease stains and other foreign material.

Contaminated tissues can be trimmed from the carcass providing they are not too extensive. Contaminated internal organs are condemned and discarded. Carcasses that are excessively contaminated will be condemned.

e) Cysts

Note: Cysts are defined as any closed cavity, or sac, containing fluid.

In rabbits cysts are common in the pelvic muscles, or flank. They may be trimmed providing a thorough examination of the viscera reveals no evidence of a systemic condition.

f) Emaciation

Note: Emaciation is the technical term for an extremely wasted body condition. Animals can be thin without being emaciated. It is important for the MIB Inspector to differentiate between emaciation and thinness. If there is any **normal** looking **fat** on the surface of the heart, or around the kidney, the animal is **not emaciated**. Emaciated animals are condemned, thin ones are not.

g) Hepatitis

Note: Hepatitis means inflammation of the liver. It is recognized by the presence of multiple white, or yellow, spots, of variable sizes and shapes. In some cases the only change will be the presence of multiple pinpoint red spots.

In rabbits, most cases are caused by a microscopic parasite called coccidia.

h) Septicemia or Toxemia

Note: These are generalized conditions which affect the entire body.

Signs consist of small pinpoint hemorrhages on body organs, or tissues.

Affected carcasses are condemned.

i) Miscellaneous Conditions

Note: Rabbits may be affected by any other condition that affects red meat animals including tumors.

The reader is referred to the Regulatory Services Division Meat Inspection Manual or to TIPM document 08-A-03 for information on other disease conditions that may occur.

4. Record PM findings that result in condemnations on the MIF - 4 (Certificate of Condemnation) and on the MIF - 5 (Inspector's Daily Report).

Note: These are official MIB documents. They must be:

a) completed in their entirety;

b) completed in a legible manner;

c) signed by the MIB Inspector.

The MIF - 4 provides information, on the condemnation, that the abattoir operator can give to the owner of the animal.

RELATED SECTIONS OF TIPM

08-A-01 PM Inspection - Red Meat Animals - General
08-A-02 PM Inspection - Red Meat Animals - Methods
08-A-03 PM Inspection - Red Meat Animals - Findings - General
08-A-04 PM Disposition after PM Inspection - All Species

SUBJECT: PM - Poultry - General	08-G-01
REGULATORY REFERENCE M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Section 5(c) AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 47, 66 & 67	**Initial Release** Sept 1, 2009 **Page 1 of 4**

RATIONALE

Most disease conditions cause visible changes (lesions) in the carcass of the affected animal therefore, the post-mortem (PM) examination is considered to be the focal point of meat inspection.

Note: Lesions are defined as any visible abnormality in a carcass or any of its parts regardless of cause. They may be caused by disease, or other factors such as physical injury.

The **PM examination** is **intended to detect** any **lesions**, **in the carcass**, or any of its parts.

Examination to determine the presence or absence of disease is critical in ensuring that all parts of the bird are wholesome and fit for human consumption.

Note: A proper ante-mortem (before death) inspection is critical in detecting birds affected with disease conditions that may not result in visible changes in the carcass or internal organs.

The need for a PM inspection is mandated in both the Alberta *Meat Inspection Act* (MIA) and in the Alberta *Meat Inspection Regulation* (AR 42/2003).

Note: Section 5(c), of the MIA states that PM inspection must be performed before a carcass, or any of its parts, can be sold, or offered for sale.

Section 67 of AR 42/2003 requires a complete post-mortem inspection of poultry immediately after slaughter.

The **purpose** of this document is to **outline**, in general terms, **responsibilities** of Meat Inspection Branch (MIB) **Inspectors** and abattoir **personnel** in relation to PM inspections in poultry and ratites (ostriches, rheas & emus).

OBJECTIVE/OUTCOME

PM inspections of all poultry, including ratites, will be conducted, by “duly appointed” inspectors, immediately following slaughter.

Note: “Duly appointed” inspectors are defined as individuals appointed under section 2(1) of the *Meat Inspection Act* of Alberta.

All PM inspections will be done in accordance with the methods prescribed by the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

Note: The MIB is responsible for ensuring that all MIB Inspectors have the necessary training, knowledge, skills and ability to conduct a proper PM inspection.

Poultry carcasses may harbor bacteria such as *E. coli, Campylobacter and Salmonella sp*. To minimize the chance of accidental infection it is very important for MIB Inspectors to be careful about their personal sanitary procedures (e.g. frequent hand washing). It is "Common Industry Practice" for them to wear plastic, or rubber, gloves providing that the gloves are thin enough to ensure sensitivity, of the fingers, during palpation.

The PM inspection will include all parts of the carcass, viscera and any other portions that are going to be used for human consumption.

The abattoir operator will provide suitable facilities and properly trained personnel to assist the MIB Inspector in the conduct of a proper PM examination.

Note: Suitable facilities include:

a) Adequate lighting;

b) Adequate space;

c) The ability to physically separate and **detain** any **carcasses and their parts,** in which abnormalities are detected;

d) Salvage racks, or lines;

e) Personnel knowledgeable about proper presentation methods.

Trained abattoir personnel will assist the MIB Inspector in the conduct of the PM inspection by:

1. Cleaning the carcass and it's parts in a hygienic manner.
2. Presenting the carcass and its parts in a manner that allows effective and efficient PM inspection and which ensures that all viscera are associated with the appropriate carcass.

Note: Consistent presentation is essential in ensuring optimal inspection efficiency and effectiveness for all classes of poultry. All carcasses must be hung in a manner that facilitates the examination of the external surfaces of the carcass, the internal cavity of the carcass and all of the viscera.

Following are some examples of improper presentation:

a) Carcasses arriving at the inspection station with any part of the carcass other than the back facing the inspector;

b) Carcasses hung by one leg;

c) Carcasses arriving with a swinging motion excessive enough to interfere with the inspection process;

d) Lack of uniformity relating to the viscera including but not restricted to the following:

i. Viscera on the opposite side of the carcass;

ii. Viscera in the middle of the abdominal opening;

iii. Contaminated viscera requiring the inspector to continually wash his/her hands;

iv. Viscera not properly separated from the abdominal cavity, or abdominal fat;

v. Viscera caught up in the shackle;

vi. No viscera.

In abattoirs where automatic evisceration equipment separates the viscera from the carcass the viscera sets must be positioned so that they arrive at the inspection station with their respective carcasses.

e) Internal carcass errors including but not restricted to the following:

i) Inadequate opening cuts examples of which include the anus, or cloaca, remaining in the carcass or the presence of cross strips of skin or any other obstacle to proper inspection. A cut to within 2 cm of the keel is considered to be adequate for chickens and 3 cm for turkeys;

ii) Carcasses arriving where the viscera does not properly reflect the abdominal flap;

iii) Carcasses arriving with one or more organs left inside;

iv) Contamination of inner surfaces;

v) Mutilations caused by venting, or evisceration, equipment

3. Maintaining an appropriate line speed.

Note: Evisceration line speed shall not exceed the ability of the MIB inspector to perform a proper PM inspection or the ability of facility personnel to adequately perform their duties.

4. Re-hanging of carcasses, as required, in accordance with the recommendations of the MIB Inspector.

Note: Carcasses that have not been opened (drawn) or that have two legs out of the shackle (i.e. hung by the neck or wing) can be re-hung for reprocessing. They must be re-hung as soon as possible and must be kept separate from other carcasses awaiting disposition, or salvage. They must not be allowed to accumulate to the point where deterioration occurs.

5. Removal of condemned carcasses.

Note: The removal of condemned carcasses, before or after evisceration, must be done, as directed by the MIB Inspector, by a designated helper that has been trained to remove and dispose of such carcasses in a manner that limits any contamination of on-line facility personnel and/or equipment.

MIB Inspectors will:

1. Monitor presentation compliance at the inspection station.
2. Take appropriate action when standards are not met.

   Note: MIB Inspectors have the authority and responsibility to take immediate action if abattoir personnel don't provide appropriate assistance during PM inspection procedures.

   Actions that may be taken include:

   a) slowing down the rate of slaughter;

   b) temporary suspension of inspection services until the situation has been corrected
3. Record PM findings that result in condemnations on the MIF - 4 (Certificate of Condemnation) and on the MIF - 5 (Inspector's Daily Report).

   Note: These are official MIB documents. They must be:

   a) completed in their entirety;

   b) completed in a legible manner;

   c) signed by the MIB Inspector

   The MIF - 4 provides information, on the condemnation, that the abattoir operator can give to the owner of the animal.

   The MIF – 5 provides a summary of all condemnations and the code (reason) for the condemnation.
4. Provide the abattoir operator a copy of the **"Poultry Postmortem Cards"** when applicable.

   Note: The use of this card is at the discretion of the MIB Inspector, thus this requirement is not always applicable.

Written procedures will be on file stipulating the processing steps for contaminated viscera that is salvaged for other purposes.

Note: Specific, approved procedures are required to ensure that salvaged viscera won't end up with, or in, products intended for human consumption.

RELATED SECTIONS OF TIPM

08-A-04 PM Disposition after PM Inspection - All Species
08-G-02 PM Inspection - Poultry - Methods
08-G-03 PM Inspection - Poultry - Findings - General
08-H-01 PM Inspection - Ratites

SUBJECT: PM Inspection - Poultry - Methods	08-G-02
REGULATORY REFERENCE M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Section 5(c) AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 47, 66 & 67	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Most disease conditions cause visible changes (lesions) in the carcass of the affected animal therefore, the post-mortem (PM) examination is considered to be the focal point of meat inspection.

Note: Lesions are defined as any visible abnormality in a carcass, or any of its parts, regardless of cause. They may be caused by disease, or other factors such as physical injury.

PM examinations are **intended to detect lesions**, **in the carcass**, or any of its parts.

Note: Ensuring that a proper PM examination is conducted requires attention to detail including the use of recognized examination techniques.

The need for a PM inspection is mandated in both the Alberta *Meat Inspection Act* (MIA) and in the Alberta *Meat Inspection Regulation* (AR 42/2003).

Note: Section 5(c), of the MIA states that PM inspection must be performed before a carcass, or any of its parts, can be sold, or offered for sale.

Examination to determine the presence or absence of disease is critical in ensuring that all parts of the bird are wholesome and fit for human consumption.

Note: A proper ante-mortem (before death) inspection is critical in detecting birds affected with disease conditions that may not result in visible changes in the carcass or internal organs.

The need for a PM inspection is also mandated in both the *Meat Inspection Act* and in AR 42/2003.

Note: Section 5(c), of the Alberta *Meat Inspection Act* requires a post-mortem inspection before a carcass or any of its parts can be sold or offered for sale.

Section 67 of AR 42/2003 requires a complete post-mortem inspection of poultry immediately after slaughter.

The **purpose** of this document is to **outline PM examination techniques** that apply, **in** principle to all **poultry** including ratites (ostriches, rheas & emus).

OBJECTIVE/OUTCOME

Meat Inspection Branch (MIB) Inspectors will follow a routine that ensures that a thorough PM examination is conducted.

Note: The PM inspection of poultry, with the exception of ratites, is primarily visual but palpation (feeling) and/or incision (cutting) may be required in certain instances.

Proper positioning of the carcass and viscera, by abattoir personnel is very important in ensuring that nothing is missed.

MIB Inspectors will visually inspect the:

1. Exterior of the carcass.

   Note: Common findings include signs of fractures, bruises, blisters, tumors, skin conditions, etc.

2. Head and feet.

   Note: Generally this isn't done if they are removed, from the carcass, prior to evisceration.

3. Abdominal cavity

   Note: Common findings in the abdomen include contamination, tumors, generalized infections, etc.

4. Viscera

   Note: Common findings include evidence of peritonitis, organ tumors, etc.

   To properly visualize all of the viscera, particularly the heart, liver and spleen the inspector may need to grasp it.

Palpation will be conducted as required.

Note: In most instances palpation is not a major part of the PM examination of poultry but it is important under certain conditions. It is an important tool whenever the MIB Inspector suspects the presence of lesions that may not be readily apparent visually.

Palpation should be a routine practice on all lots of fowl and mature turkeys due the greater incidence of neoplasms and other conditions in these birds.

While not listed as specific post-mortem inspection techniques MIB Inspectors have two other tools at their disposal:

1. Sense of smell;

   Note: The first indication of an abnormality may be an abnormal smell.

2. Digital cameras for consultation purposes.

   Note: Regardless of how much experience a MIB Inspector has, there will always be things that are not clear cut.

   In these instances it is highly recommended that they consult with their Regional Supervisor, Area Manager and/or the Division Veterinarian.

   Pictures taken with a digital camera are valuable tools for consultation purposes.

Competent abattoir personnel, one (1), or more, will be positioned next to the MIB so they can assist with the PM inspection.

In accordance with the directions of the MIB Inspector the assistant will:

1. **Remove** obviously condemnable **carcasses <u>before</u> evisceration**.

   Note: Instances where large numbers of birds are affected with generalized disease would be an example where birds may be condemned and removed before evisceration.

2. Remove condemned carcasses and viscera from the evisceration line following the PM inspection.
3. Trim defects, on line, or remove the carcass to a reconditioning rack, or line.

   Note: Items such as breast blisters, bruises, fractures, minor contamination, etc. may be efficiently removed on line. Processing defects including contamination of the abdominal cavity with feces, bile or crop contents, over scalding, mutilation, etc. may take too much time for on line trimming.

   Whenever there is insufficient time to do the job properly the affected bird must be discarded or placed on a reconditioning rack or line or removed and disposed of if one is available.

The following tables categorize the different types of common defects that require the removal of the broiler chicken, fowl or turkey carcass from the evisceration line.

Note: In these tables the term NTOL means “Not Trimmable on the Line”. The intent is to allow, in some instances, salvage by reconditioning at a different location (e.g. on a salvage rack). A number of conditions too extensive for removal on the line will result in condemnation of the entire carcass and viscera.

RELATED SECTIONS OF TIPM

08-A-04 PM Disposition after PM Inspection - All Species
08-G-01 PM Inspection - Poultry - General
08-G-03 PM Inspection - Poultry - Findings - General
08-H-01 PM Inspection - Ratites

Attachment - TIPM Document 08-G-02

Carcass Defects	Chicken	Turkey	Fowl
Ascities/Peritonitis	X	X	X
Cellulitis (NTOL) and Peri-Cloacal Cellulitis	X	X	X
Dark Colored Carcasses	X	X	X
Emaciation (extreme thinness)	X	X	X
Inadequate Bleeding (bright red carcass)	X	X	X
Keel Abscess/ Infected Breast Blister (NTOL)	X	X	X
Pendulous Crop (with emaciation)	X	X	X
Septicemia / Toxemia	X	X	X
Xanthomatosis			X
Avian Keratoacanthoma (NTOL)	X		X
Extensive Bruising (NTOL)	X	X	X
Extensive Dermatitis (NTOL)	X	X	X
Extensive Mutilation (NTOL)	X	X	X
Marek's Disease (cutaneous form, NTOL)	X	X	X

Viscera Defects	Chicken	Turkey	Fowl
Adenocarcinoma		X	
Airsacculitis	X		X
Ascities	X	X	
Contamination: (Fecal, bile, Ingesta, Extraneous Material, Intestine/Cloaca)	X	X	X
Hepatitis	X	X	X
Lymphoid Leukosis		X	
Visceral Marek's	X		
Salpingitis/Peritonitis	X	X	X
Septicemia/Toxemia	X	X	X
Other Conditions, e.g., Osteomyelitis, Tumors	X	X	X

Internal cavity defects	Chicken	Turkey	Fowl
Adenocarcinoma			X
Airsacculitis			X
Contamination (Fecal, Bile, Ingesta, Extraneous material)	X	X	X
Pericloacal Cellulitis	X	X	X
Salpingitis/Peritonitis	X	X	X
Other conditions i.e., Odor, Emaciation, Tumors	X	X	X

SUBJECT: PM Inspection - Poultry - Findings - General	08-G-03
REGULATORY REFERENCE M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Section 5(c) AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 47, 66 & 67	**Initial Release** Sept 1, 2009 **Page 1 of 9**

RATIONALE

Most disease conditions cause visible changes (lesions) in the carcass of affected birds therefore, the post-mortem (PM) examination is considered to be the focal point of meat inspection.

Note: Lesions are defined as any visible abnormality in a carcass, or any of its parts, regardless of cause. They may be caused by disease, or other factors such as physical injury.

The **PM examination** is **intended to detect** any **lesions**, **in the carcass**, or any of its parts.

Examination to determine the presence or absence of disease is critical in ensuring that all parts of the bird are wholesome and fit for human consumption.

Note: A proper ante-mortem (before death) inspection is critical in detecting birds affected with disease conditions that may not result in visible changes in the carcass, or internal organs.

The need for a PM inspection is mandated in both the Alberta *Meat Inspection Act* (MIA) and in the Alberta *Meat Inspection Regulation* (AR 42/2003).

Note: Section 5(c), of the MIA states that PM inspection must be performed before a carcass, or any of its parts, can be sold, or offered for sale.

Section 67 of AR 42/2003 requires a complete post-mortem inspection of poultry immediately after slaughter.

The **purpose** of this document is to **outline**, in general terms, **common abnormalities** encountered, by Meat Inspection Branch (MIB) Inspectors, in **poultry**.

OBJECTIVE/OUTCOME

Poultry carcasses and viscera will be closely examined for lesions (abnormalities).

Following is a list of abnormalities, in poultry, commonly seen by MIB Inspectors:

Note: **This listing is not intended to be comprehensive** nor is it intended to provide sufficient information for the reader to perform a PM examination. It is simply intended to provide the reader with some basic understanding about what inspectors are looking for.

For more information the reader is referred to module 6 of the Regulatory Services Division Meat Inspection Manual (MIM)**.** All MIB Inspectors have a complete copy of the MIM and there should be copies of module 6, in the meat inspector's office, at every abattoir.

1. **Adenocarcinoma**

   Adenocarcinomas are the **most common** type of **tumor** (cancer) seen in **fowl**.

   Affected birds will be thin. Numerous whitish to yellow nodules may be seen throughout the intestines and the mesentery (tissue that suspends the intestine from the upper abdominal wall). These nodules which are usually 3 mm to 5 mm in size are often present on the duodenum (first part of the small intestine) Palpation (feeling) may reveal smaller nodules that feel like grains of sand.

   Carcasses are condemned when there are multiple tumors or, if metastasis (spread) to other organs has occurred, or there is any indication of emaciation, or other systemic change.

2. **Airsacculitis**

   Airsacculitis refers to infection and/or inflammation of the air sacs which are located in the body cavity of all birds. Normal air sacs are very thin and transparent.

   This condition causes variable degrees of thickening and cloudiness to these membranes. In the earliest stages there is only mild thickening and cloudiness. In later stages there will be accumulations of yellow cheesy material on the air sacs.

   Disposition of the carcass depends on the severity of the lesion. In mild cases the carcass can be approved after removal of the air sacs providing no other tissues are affected. The entire carcass will be condemned when there are other changes including peritonitis, emaciation, cyanosis, etc.

3. **Arthritis**

   Arthritis is defined as inflammation of a joint. One or more joints in one, or both, legs, or wings, may be affected.

   Note: It is possible to have inflammation without infection.

   Arthritis can be caused by infection, or injury. The final disposition depends on the inspector's judgment of whether infection is present or not.

   Note: When infection is present the joint fluid is usually cloudy due to the presence of pus. In non-infectious arthritis (caused by injury or degenerative joint disease) there will be increased joint fluid but it will have a normal clear appearance or, at worst, it will only contain some blood.

   Birds with arthritis that show systemic changes (e.g. emaciation) will be condemned. In milder cases only the affected leg is removed and condemned.

   In the case of non- infectious arthritis simply removing the affected joint may be all that is required.

4. **Ascites**

   Ascites is a condition in which there is an accumulation of watery fluid in the abdomen. This condition is particularly common in broiler chickens. The basic cause is heart failure precipitated by rapid growth. Affected birds will have swollen abdomens due to the accumulation of watery fluid.

Disposition of the carcass depends on the severity of the condition and whether there are any other systemic effects. Birds are condemned if there are signs of systemic effects including cyanosis, emaciation and generalized edema (accumulation of fluid in the tissues) affecting the muscle tissues or under the skin.

5. Bruising

Bruises are areas of discoloration caused by the breakdown of blood pigments (hemoglobin). Bruises will develop wherever a significant amount of bleeding has occurred. The color of a bruise will vary from dark red, to green, to yellow, depending on the stage of hemoglobin breakdown.

Mild bruises can be trimmed out. If the bruising is extensive the entire carcass may be condemned.

6. Cellulitis

Cellulitis is an infectious process that results in the accumulation of cheesy pus like material in the tissues of birds.

Note: **Birds do not** produce significant amounts of fibrous (scar) tissue in response to infections thus they do not **form abscesses**.

Any species of bacteria that gain access to the body, through the skin, is capable of causing cellulitis. Access occurs through puncture wounds or scratches therefore cellulitis can occur anywhere in the body.

Note: The two most common areas for cellulitis, in poultry, is around the cloacal opening (vent) and the breast. Cellulitis around the vent is more common in broilers while cellulitis of the breast is more common in turkeys where it is often secondary to a breast blisters.

A common sign of cellulitis, in unopened carcasses, is thickened, yellow colored, skin along with a honeycombed appearance. The thick underlying cheesy material, of cellulitis, is readily apparent once the skin is opened.

Disposition of the carcass depends on the severity of the condition. Carcasses with only slight thickening and yellowing of the skin and no apparent affect in the underlying tissues can be trimmed on-line.

Note: Birds with evidence of cellulitis around the cloaca should be removed from the line for closer examination to determine the severity.

Chicken carcasses with skin lesions smaller than 2 cm x 2cm, including lesions on the legs and the wings, of any dimension, may be passed if the handling of these carcasses is included in the abattoirs HACCP system.

Note: The MIB Inspector will determine, on a case by case basis, the criteria for the size of lesions that may be trimmed on-line for turkeys. As a guideline lesions larger than 3 to 4 cm at their greatest width are considered to be too extensive for trimming.

7. Contamination

There are many potential sources of contamination for the carcass, or viscera. Examples include feces (manure), ingesta (stomach contents), bile and external material such as grease. Most forms of contamination are obvious to the naked eye. Bile will cause discoloration of any tissue that it comes into contact with.

Note: Improper adjustment of automatic evisceration machines may result in a portion of the intestines remaining with the giblet pack. This is also considered to be a form of contamination.

Depending on the extent of contamination the carcass may be trimmed, or condemned in its entirety.

Note: Contaminated viscera should always be discarded.

In plants where viscera is being harvested the MIB Inspector will evaluate viscera harvesting operations to ensure that they are adequate and conducted in accordance with the facility's written program.

Note: Handling of condemned viscera is not considered to be a significant problem providing the abattoir is not harvesting edible viscera or if an effective program is included within a **written program,** which ensures that contaminated viscera are not harvested as edible.

8. Cyanosis (Dark Colored Carcasses)

Cyanosis is caused by a lack of oxygen.

Note: Birds that are under stress from transportation, crowding, lack of ventilation, severe climatic conditions, etc. may be short of oxygen at the time of death.

Cyanosis is characterized by darkening of affected carcasses.

Note: The degree of darkening will vary.

Severely affected carcasses (those in which the breast muscle is as dark as the leg muscles) will be condemned. If there is only slight discoloration of the breast muscle the carcass can be passed providing it is in good body condition.

9. Emaciation

Emaciation is the technical term for a carcass that is in an extremely wasted (thin) or poor condition.

Note: Emaciated carcasses will not have any normal fat. Remaining fat have a water jelly like appearance. This condition is called serous atrophy of fat. There will also be pronounced wasting of muscle tissues (most evident in the breast) and the muscles will be dark.

Emaciated carcasses are condemned.

Note: It is important for the MIB Inspector to differentiate between carcasses that are thin and those that are emaciated. The condition of the fat is the main differentiating feature.

10. Hepatitis

Hepatitis is the technical term for inflammation of the liver. Many different infectious agents including viruses, bacteria and parasites can cause hepatitis in birds.

Depending on the cause the lesions of hepatitis will vary greatly. In most cases there will be evidence of necrosis (death of tissue) within the liver. Areas of necrosis appear as variable sized pale areas. In some cases the liver will be swollen and discolored. Pinpoint (petechial) or blotchy (ecchymotic) hemorrhages may be present.

In all cases of hepatitis the liver is condemned. The carcass is not condemned unless there is evidence of emaciation, or other systemic changes.

Note: As a guideline the carcass and remaining viscera will be passed if the liver has a normal size, sharp edges, regardless of its color.

It is important for the MIB Inspector to differentiate between hepatitis and a condition called fatty liver. Fatty livers will be light brown, to yellow and will have a greasy texture on their cut surface. Fatty livers may actually float if the condition is advanced. Fatty livers are caused by metabolic imbalances and have no affect on the suitability of the carcass for human consumption.

11. Keratoacanthoma

This is a skin tumor of birds.

Note: This tumor used to be called a "Squamous Cell Carcinoma".

Classical signs, of this tumor, consist of deep craters, or ulcers, in the skin. They have raised edges.

Note: These ulcers can occur anywhere on the body and in some cases will spread (metastasize) to internal organs.

The entire carcass is condemned when the skin lesions are too extensive for trimming, or if the tumor has spread to the internal organs, or the bird is showing evidence of emaciation. When the lesions are few in number and the bird is in good condition only the affected areas are trimmed.

12. Leiomyoma and Leiomyosarcoma

These are muscle tumors. The leiomyoma is benign (non life threatening) and the leiomyosarcoma is malignant (life threatening because they will spread).

Leiomyomas will range from pea to golf ball size. They are usually firm and encapsulated. The cut surface has a smooth, white, shiny appearance. They often develop in the muscles in the wall of the oviduct.

Leiomyosarcomas tend to originate in the intestinal tract. While similar in appearance they are not as well encapsulated as the leiomyoma.

Note: It is not uncommon to see secondary tumors in the liver, or lungs.

The carcass is always condemned if there is evidence of metastasis to the liver, or lungs, or if there is evidence of emaciation, or other systemic changes.

13. Leukosis Sarcoma Group

The Avian Leukosis Sarcoma Group includes many different types of tumors that occur in chickens. Lymphoid Leukosis is the type that occurs most frequently. It also goes by the names of "Big Liver Disease", "Visceral Lymphoma" and "Lymphomatosis".

Note: Tumors in the Leukosis group do not occur in birds under 6 weeks of age thus they are **not seen in broilers**.

The tumors vary in size from pinpoint to large nodules. They occur with greatest frequency in the spleen and liver but may also occur in the intestines, mesentery, peritoneum, ovaries, testicles, heart and kidneys.

Affected carcasses are condemned.

14. Marek's Disease

Marek's Disease is a tumor of chickens caused by a Herpes virus. There are three distinct forms of Marek's disease namely the nervous, cutaneous and visceral forms.

Note: The nervous form will only be detected on the ante-mortem (before death) inspection.

The cutaneous form is characterized by the formation of nodules in the feather follicles.

Note: Most tumors only fill the feather follicle but, in some cases, they may be up to several cm in diameter.

Lesions in the visceral form are very similar to those in the Leukosis Sarcoma Group.

Note: Marek's Disease will affect young birds thus may be seen in broilers. The development of a vaccine has greatly reduced the frequency of Marek's Disease.

Birds with the nervous, or visceral form, are condemned. Skin lesions may be trimmed if not too severe.

15. Mutilation

Mutilation refers to conditions such as PM (after death) fractures, torn skin and muscle, crushing, etc.

Note: Faulty adjustment of automatic dressing equipment is the primary cause of mutilation.

The carcass is condemned when lesions are so extensive that trimming is not an option. When the damage is minor, or localized, the affected portions are trimmed and condemned.

16. Overscald

Overscald occurs when carcasses are left in the scalding tank too long or the water is too hot.

In this condition the superficial muscle layers, particularly of the breast, will have a cooked appearance.

Note: Carcasses that have been over scalded will often have torn skin. The scalding softens the skin making it more susceptible to tearing. The primary concern with this condition is contamination of the carcass by materials that gain entry through the torn skin.

Carcasses are condemned when there is noticeable cooking of the breast muscles, tears in the skin and mutilation of the carcass.

Note: When there is only mild cooking and the tears in the skin are localized (e.g. wings only) the carcass can be passed following removal of the affected area(s).

When the skin has not been broken and there is moderate, or deep, cooking the carcass can be used following manual, or mechanical, deboning. The carcass is passed, intact, if the skin is not broken and there is only slight white discoloration of the superficial layers of the breast muscle.

17. Pendulous Crop

This condition occurs in both chickens and turkeys. The crop will be severely distended and the contents are usually liquid and often have a sour smell.

Note: The excessive size of the crop increases the chance of contaminating the carcass from spilled contents from rupture of the crop as it is being removed.

The carcass is condemned if there is evidence of emaciation or if a sour odor remains with the carcass, after the crop has been removed.

18. Peritonitis

Peritonitis refers to inflammation of the peritoneum.

Note: The peritoneum is the smooth, shiny, thin tissue that covers the viscera and inner wall of the abdomen.

Peritonitis is seen most often in fowl.

Note: Any species of bacteria that enters the abdomen is capable of causing peritonitis. In fowl, peritonitis is usually due to an extension of salpingitis (see below).

Yolk sac infections are a common cause of peritonitis in broilers but affected birds seldom survive to get to slaughter.

Peritonitis shows up as an accumulation of whitish, to yellow, opaque, cheesy material in the abdomen. In many cases there is also an odor as well.

Affected carcasses are condemned.

19. Salpingitis

Salpingitis is the term for inflammation of the oviduct. The oviduct is the tubular organ in which the egg develops.

Note: Most cases, in broiler pullets and hens, are caused by infection with a bacterium called E. coli.

In laying hens the oviduct will be filled with cheesy material that often has a foul smell. Peritonitis may also be present and many birds will be thin or emaciated.

In pullets the lesion may be the size of a single egg or may fill the entire organ.

Note: Pullets often have air sacculitis along with salpingitis.

Carcasses are condemned if there is evidence of peritonitis and/or air sacculitis, emaciation or other systemic changes.

When the lesions are confined to the oviduct and there is no evidence of emaciation, the carcass can be passed.

20. Septicemia and Toxemia

Septicemia means the presence of disease causing organisms (bacteria, or viruses) in the blood. Toxemia refers to the presence of toxins (poisons) in the blood.

Note: There will be some degree of toxemia in cases of septicemia from the toxins produced by the infectious agent but it is possible to have poisons in the blood without any infectious agents being present. For example toxins could be absorbed from an area of cellulitis, or an area of necrosis (dead tissues). Liver and kidney failure will also cause toxemia.

It is very difficult to differentiate between these two conditions as their symptoms are relatively non specific.

Ante-mortem symptoms consist of listlessness and depression. Affected birds may have a bluish tinge to the skin.

Note: A fever is a differentiating feature. There is usually a fever with a septicemia but not in a toxemia.

Symptoms, on the PM inspection, consist of darkened muscles and the presence of hemorrhages.

Note: Hemorrhages usually indicate septicemia rather than toxemia. Also septicemia is often accompanied by any one, or more, of the following conditions: air sacculitis, perihepatitis, pericarditis and/or enlargement of the spleen.

Carcasses affected with septicemia, or toxemia, are condemned.

21. Squamous Cell Carcinoma

See above under Keratoacanthoma.

22. Synovitis

Synovitis refers to inflammation of the synovial membranes. Synovial membranes are present in joints and tendon sheaths. A number of different infectious agents can cause synovitis.

Note: In broilers and turkeys a specific condition called “Infectious Synovitis” is caused by infection with a micro-organism called “Mycoplasma synoviae”. There are also viruses that cause synovitis.

In cases of infectious synovitis, other lesions consist of an enlarged liver and spleen and greenish discoloration of the internal organs. The hock joint is often swollen due to the accumulation of fluid. Other joints can also be affected.

Another type of synovitis (caused by a reovirus) results in inflammation of the Achilles tendon. In this condition it is not uncommon for the Achilles tendon to rupture resulting in bleeding and eventual bruise formation.

Carcasses are condemned for synovitis when there is evidence of emaciation, or other systemic changes.

23. Xanthomatosis

This is a rare skin condition of fowl. Generally it doesn't have any effect on the overall health of the bird.

Nodular swelling of the wattles is common in this condition.

Note: In addition there may also be swellings in the breast, abdomen and legs.

In early cases the nodular swellings are soft and contain small amounts of honey colored liquid. Older lesions are firm and have a chalky appearance on the cut surface.

The carcass is condemned when the lesions are extensive, or there is evidence of emaciation, or other systemic changes.

RELATED SECTIONS OF TIPM

08-A-04 PM Disposition after PM Inspection - All Species
08-G-01 PM Inspection - Poultry - General
08-G-02 PM Inspection - Poultry - Methods
08-H-01 PM Inspection - Ratites

SUBJECT: PM Inspection- Ratites	08-H-01
REGULATORY REFERENCES M-9 RSA 200 *Meat Inspection Act* (Current to 4/29/2009) Section 5(c) AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 47, 66 & 67	**Initial Release** Sept 1, 2009 **Page 1 of 3**

RATIONALE

Most disease conditions cause visible changes (lesions) in the carcass of the affected animal therefore, the post-mortem (PM) examination is considered to be the focal point of meat inspection.

Note: Lesions are defined as any visible abnormality in a carcass or any of its parts regardless of cause. They may be caused by disease, or other factors such as physical injury.

The **PM examination** is **intended to detect** any **lesions**, **in the carcass**, or any of its parts.

Examination to determine the presence or absence of disease is critical in ensuring that all parts of the animal are wholesome and fit for human consumption.

Note: A proper ante-mortem (before death) inspection is critical in detecting animals affected with disease conditions that may not result in visible changes in the carcass or internal organs.

The need for a PM inspection is mandated in both the Alberta *Meat Inspection Act* (MIA) and in the Alberta *Meat Inspection Regulation* (AR 42/2003).

Note: Section 5(c), of the MIA states that PM inspection must be performed before a carcass, or any of its parts, can be sold, or offered for sale.

Sections 66 & 67 of AR 42/2003 state the requirements for the PM inspection of poultry following slaughter. Ratites (ostriches, emus, rheas, etc.) are covered by these sections.

The **purpose** of this document to **outline PM techniques,** which apply, in principle, to the inspection of **ratites**.

OBJECTIVE/OUTCOME

PM inspections will be conducted, by “duly appointed” inspectors, on all ratites, immediately following their slaughter.

Note: “Duly appointed” inspectors are defined as individuals appointed under section 2(1) of the MIA.

The term **ratite** applies to a number of large flightless birds including **ostriches, emus** and **rheas**. These birds are susceptible to the same disease conditions as poultry. The principles in the TIPM documents, for poultry, that are referenced at the end of this document also apply to ratites.

All PM inspections will be done in accordance with the methods prescribed by the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

Note: The MIB is responsible for ensuring that all MIB Inspectors have the necessary training, knowledge, skills and ability to conduct a proper PM inspection.

MIB Inspectors will:

1. Use the techniques of visual examination, palpation and incision while conducting a routine post-mortem examination of ratites.

   Visual Examination

   All parts of the carcass and internal organs will be observed visually. This simply means that the inspector looks at everything.

   Note: The inspector needs to follow a set pattern, or sequence, to ensure that everything is looked at. Proper positioning of the internal organs, by abattoir personnel is also very important in ensuring that nothing is missed.

   Palpation

   Internal organs intended for human consumption will be palpated.

   Note: Palpation is defined as physically feeling, or touching, an object.

   Palpation will be sufficiently firm to detect deep-seated lesions.

   Note: When there are no abnormalities palpation makes it unnecessary to incise the organ. Incision will often affect the sale value of the organ.

   Incision

   Certain organs will be incised routinely and others will be incised at the discretion of the MIB Inspector.

   Note: Incision is often the only way to tell what is causing a swelling. Inspectors must exercise caution to ensure that incision doesn't cause contamination of the carcass or other edible organs.

2. The following structures will be inspected visually.

   a) Head and feet

      Note: This is only done when the head and feet are not removed from the carcass before evisceration. MIB Inspectors should pay particular attention to the eyes and sinuses for any evidence of infection.

   b) Exterior of the carcass

      Note: Common findings include signs of bruises, blisters, tumors, skin conditions, etc.

   c) Interior of the carcass before removal of the viscera

      Note: This is done so that the abdominal and the thoracic air sacs can be observed while they are still in position.

      The kidneys should also be observed while they are still in the carcass then removed for closer examination.

      The interior should also be observed following removal of the viscera.

3. The viscera will be observed and the following organs will be palpated and incised if deemed necessary:
    a) Heart
    b) Lungs
    c) Liver
    d) Spleen
    e) Kidneys
    f) Esophagus
    g) Gizzard
    h) Intestines

    Note: The heart must be incised through the intra-ventricular septum to expose the inner surfaces for observation.

    The liver, spleen and kidneys should be palpated routinely.

    The neck, heart, gizzard and liver may be salvaged as edible if handled and processed in a sanitary manner.

    Kidneys cannot be salvaged for human consumption unless the producer provides data indicating that heavy metals (primarily Cadmium) are within a range acceptable to Health Canada.

While not listed as specific post-mortem inspection techniques, MIB Inspectors have three other tools at their disposal:

1. Sense of smell;

    Note: Often the first indication of an abnormality may be an abnormal smell.

2. Digital cameras for consultation purposes;

    Note: Regardless of how much experience an inspector has things will come up that are unclear. In these instances it is highly recommended that the inspector consult with their Regional Supervisor, Area Manager and/or the Division Veterinarian. Pictures taken with a digital camera are valuable tools for consultation purposes.

3. Laboratory Examination.

    Note: It is not always possible to determine the cause of a lesion. Laboratory examination can help with this determination. For example tissue samples could be submitted for microscopic examination. Another example would be the submission of an injection site lesion to determine whether antibiotics are present.

    Determination of the cause is important in determining whether the condition requires condemnation or not. The carcass and its portions have to be detained, under a held tag, until laboratory test results come back.

RELATED SECTIONS OF TIPM

08-A-04 PM Disposition after PM Inspection - All Species

08-G-01 PM Inspection - Poultry - General

08-G-03 PM Inspection - Poultry - Findings - General

SUBJECT: Trichinosis - Control of	09-A-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 54 Meat Facility Standards (MFS) Sections 3.3 (a) to (f) inclusive	**Initial Release** Sept 1, 2009 **Page 1 of 6**

RATIONALE

Trichinosis and Trichinellosis are names for a disease, of pigs and humans, caused by infection with a parasitic worm called Trichinella spiralis.

The life cycle of this parasite is as follows:

1. The adult worm lives in the wall of the small intestine of humans, or pigs.
2. Adult females lay their eggs and newly hatched larvae penetrate lymph vessels in the wall of the intestine.
3. Once they have entered the lymphatic circulation the larvae will reach general circulation and eventually the muscles of the body.
4. The larvae will remain in the muscle, in a dormant (inactive) state, until they are eaten by another pig, or human being.
5. The larvae then develop into an adult worm in the intestine and the cycle repeats.

Note: Symptoms of infection, in humans, may appear within 12 hours of eating infected pork. At first there will be "intestinal flu-like" symptoms. This is due to the migration of the ingested *T. spiralis* larvae in the intestinal wall.

When the larvae are in the blood stream there will be symptoms of edema (watery fluid) around the eyes along with fever. These symptoms will generally appear within 5 to 7 days. By the 10^{th} day and depending on the severity of the infection affected individuals may exhibit intense muscular pain, difficulty breathing and weakening of pulse and blood pressure. Death may occur if the infection is severe enough.

In most instances the patient suffers variable degrees of rheumatic muscular pain for the rest of their lives.

Trichinosis is very rare in Canada and has not been detected in Alberta hogs for many years.

Proper cooking of pork **will prevent** human **infection** with Trichinella spiralis.

Note: Cooking temperatures of 58^0 C, or higher, will kill the parasite.

Trichinellosis, in pigs, has been designated as a "**Reportable Disease**" under the Heath of Animals Act (Canada).

Note: Anyone knowing of, or suspecting, the presence of a "Reportable Disease" must notify the Canadian Food Inspection Agency (CFIA). Upon notification the CFIA will assume responsibility for monitoring and control.

In addition to listing trichinellosis as a "Reportable Disease" **the CFIA Trichinella control program includes the following elements**:

1. Regular testing of the mature pig population in Canada.

   Note: This is a serological (blood) test that is conducted on approximately 15,000 sows every 5 years.

2. Annual testing of hog carcasses at federally registered abattoirs.

   Note: All testing is done using a muscle digestion test. Under this program approximately 30,000 market hog, 3,000 breeder hogs and 200 wild boar carcasses are tested each year.

3. Implementation of immediate and appropriate eradication measures whenever Trichinella spiralis is detected.

   Note: Eradication measures will include herd quarantines and depopulation.

4. Controlling the feeding of waste human food, or garbage, to hogs.

   Note: This is done in accordance with sections 112 & 113 of the *Health of Animals Regulation* (Canada). All hog producers that want to feed food wastes (e.g. from grocery stores, bakeries, etc.) must be registered and issued a permit. Registered farms are subjected to regular CFIA inspections to ensure that all garbage is properly cooked before feeding it to hogs. **Meat and restaurant waste can't be fed to pigs** even with a permit.

This CFIA Trichinella control program allows Canada to demonstrate that our hog population is almost free of trichinae and our testing methods are consistent with the requirements of the Office International des Epizooties (OIE). This provides market access of Canadian pork products to other countries (export).

Note: Although the results of routine monitoring of Canadian pork indicates that the risk of infection is virtually nonexistent, the CFIA will continue to monitor for *Trichinella spiralis* because of the ever present possibility that the parasite could be re-introduced to swine herds by other susceptible wildlife species. Bears and rats are two common species that can be affected with Trichinella spiralis.

Another role of the CFIA is to ensure that the Canadian consumer is protected through the use of appropriate processing techniques e.g. cooking, freezing, curing, etc.

Note: Meat, or meat products, that contain striated (skeletal) muscle and have the appearance of cooked product, and products that are usually eaten without further cooking must be treated in a manner that has been proven to effectively destroy all T. spiralis.

OBJECTIVE/OUTCOME

Pork, or meat products that contain pork striated (skeletal) muscle, that have the appearance of a cooked product or that are customarily eaten without further cooking will be heated, cured, frozen, or otherwise treated in such a manner to destroy all *Trichinella spiralis*.

Note: This requirement **does not apply to forms of fresh pork** containing striated muscle, **and pork products** including, but not restricted to, fresh un-smoked sausages, side bacon, Wiltshire bacon, smoked pork jowls, and any other prepared meat products **that DON'T appear to be cooked.**

The following methods **will** effectively **destroy T. spiralis**

Heat

Heating Process to ensure the destruction of *Trichinella* in Pork Meat	
Minimal Internal Temperature (°C)	**Minimum time**
49	21 Hours
50	9.5 Hours
52	4.5 Hours
53	2.0 Hours
54	1.0 Hours
55	30 minutes
56	15 minutes
57	6 minutes
58	3 minutes
59	2 minutes
60	1 minutes
62	1 minutes
63	Instant

Note: The cooking process must ensure that all parts of the product reach the required temperature. The temperature at the center of the largest portion being heated must be recorded to ensure that all parts were properly heated.

All parts of all products must be entirely submerged in the water bath throughout the heating process.

The time taken to bring the middle portions of the product from 15^0 C to 49^0 C must not exceed 2 hours unless the product is cured, or fermented.

Time does not need to be monitored when internal product temperatures of 59^0 C to 62^0 C are reached, providing the product's minimum thickness exceeds 5.1 cm and refrigeration of the product does not begin within 5 minutes of reaching an internal temperature of 59^0 C.

Freezing

Any of the following methods of freezing will destroy T. spiralis.

Products must be kept **frozen at the indicated temperature** for an **uninterrupted length of time** that is **equal to**, or longer than, the **time specified** in the following tables:

Method #1

Time Required to Destroy *Trichinella spiralis* at - 25^0 C, or Lower.	
Group 1 pork products with maximum thickness of 25 cm	10 days
Group 2 pork products with thickness between 25 - 50 cm	20 days

Note: To effectively kill *Trichinella spiralis* at - 25^0 C or lower, all insulating packaging material must be removed before the product is frozen and boxes must be stacked in a manner that permits air circulation. This will allow the product to reach -25^0 C as soon as possible. **Spacers are required and shrink wrap is NOT allowed.**

Freezer Temperature	**Minimum Number of Days (uninterrupted)**	
(°C)	**Group 1**	**Group 2**
- 15	20	30
- 23	10	-
- 25	-	20
- 29	6	12

Method # 2

Note: In the above table Group 1 products are less than 15 cm thick.

Group 2 consists of products that are 15-50 cm thick.

For this method to be effective all insulating packaging material must be removed before the freezing process is started and boxes must be stacked in a manner that permits air circulation. This will allow the product to reach the desired temperature as soon as possible. **Spacers are required and shrink wrap is NOT allowed.**

Method #3

For this method, **products must be frozen before starting** the **treatment period**. The product is then held in accordance with one of the time and temperature combinations in the following table:

Freezing Method # 3 to Ensure Destruction of *Trichinella*	
Product *Internal* Temperature(°C)	**Minimum Time (hours)**
-18.0	106
-21.0	82
-23.5	63
-26.0	48
-29.0	35
-32.0	22
-35.0	8
-37.0	½

Note: Temperature must be measured to the next lowest tenth of a degree C or, in the case of less sensitive thermometers, to the next lowest full degree C (e.g. if the thermometer can't read -23.5^0 C, the temperature shall be taken and recorded as -24^0 C.

For **each lot**, the **internal temperature** must be **monitored by a thermocouple** placed **in the CENTRE of the thickest piece** of meat **and in the warmest location of the freezer** (e.g. well away from the cooling equipment).

With this method, spacers are not required and it is acceptable to have shrink wrap around the pallets.

All smokehouses, other cooking devices, freezers, or other rooms, or devices used to destroy *Trichinella spiralis* will be equipped with accurate (calibrated) thermometers and recording devices.

Note: To provide proof of satisfactory treatment, time and temperature must be recorded continuously.

Hog carcasses will be identified in a manner that will make it possible for the MIB Inspector, or operator of the abattoir, to determine the farm of origin.

Note: In the event that the CFIA determines that *Trichinella spiralis* is present in a herd of pigs a recall of animals sent for slaughter would be expected.

A properly applied tattoo (in accordance with section 73(a) of AR42/2003 should provide suitable identification of whole carcasses.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Trichinosis- Control of"** will be met when:

1. Written **"Trichinella Control Procedures"**, for all products produced, in the "Licensed Meat Facility" (facility), are on file.

   Note: These procedures must:

   a) ensure that the proper combination of time and temperature, as listed in the tables in the preceding section, is met;

   b) meet all of the requirements of section 9-3 subsections (a) to (f) of the MFS

2. Calibrated and up-to-date, "**Trichinella Control Records"** are on file.

   Note: These records must demonstrate that products were treated in accordance with the written **"Trichinella Control Procedures"** and as a minimum must include:

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

a) date;

b) time;

c) product name;

d) amount of product;

e) internal temperature reached;

f) time the product was held at that temperature (if required);

g) initials of responsible facility personnel

3. Only properly calibrated thermometers are used to determine temperatures.

   Note: **"Calibration Records"** for these thermometers must be on file.

4. On site observations demonstrate that hog carcasses are properly identified.

   Note: Identification must be detailed enough to ensure that carcasses can be traced back to their source.

RELATED SECTIONS OF TIPM

03-G-03 Nitrate & Nitrite Addition
03-G-04 Fermented Meats
03-G-06 Product Cooking

SUBJECT: Cysticercosis - Control of	09-A-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 47 & 54	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Cysticerci are the intermediate forms of various types of tapeworms.

Note: Cysticerci appear as small, but readily visible, cream, to yellow colored, fluid filled cysts. Those that occur in cattle and pigs are the most common. Cysticercus ovis are approximately the size of a mustard seed, and are by far the most common cysticercus seen by meat inspectors in Alberta. Two of the cysticerci seen in sheep are much larger.

The most important cysticercus, from the standpoint of meat safety, is Cysticercus bovis. This is the only cysticercus found in cattle.

Note: Even though **the incidence of this parasite is low,** Meat Inspection Branch (MI) Inspectors make cuts in the masseter (cheek) muscles and the heart of all cattle to ensure that it is not present. The diaphragm is also another location that will reveal the presence of C. bovis if it is present in the carcass.

Theoretically C. cellulosae could also be a food safety hazard.

Note: It is believed that **C. cellulosae**, which **affects pigs**, has been eliminated from the Canadian swine population therefore MIB Inspectors don't make incisions, in the masseter muscles, or hearts, of pigs to look for this parasite.

The adult tapeworms of C. bovis, or C. cellulosae, develop in the human intestine after viable cysts are eaten. Cattle, or pigs, become infected when their feed is contaminated with the feces of people that have the adult tapeworm.

C. bovis and C. cellulosae have been designated as "Reportable Diseases" under the Health of Animals Act (Canada).

Note: Anyone that even suspects the presence of a "Reportable Disease" must notify the Canadian Food Inspection Agency (CFIA).

The salvage of meat, from carcasses affected with C. bovis, will only be allowed if all of the requirements set out by the CFIA are met.

Note: In the event that C. cellulosae was ever detected in a **pig** carcass **salvage** of meat would **not** be **allowed**. The entire carcass and all viscera would be condemned and properly disposed of under the supervision of a CFIA inspector. The CFIA would also go to the farm of origin to implement control and eradication procedures.

Three species of **cysticerci** occur in **sheep**. They are C. ovis, C. pisiformis and C. tenuicollis. These are the most common cysticerci seen by MIB Inspectors.

Note: These cysticerci are **not a food safety hazard** because the adult tapeworms, which develop from these cysts, are parasites of the canine species (e.g. dogs, wolves, coyotes, etc.).

Although there is no human health risk, severely affected carcasses may be condemned for aesthetic (appearance) reasons.

Affected carcasses should not be fed to dogs, particularly those that are in contact with sheep, as this will serve to perpetuate the cycle.

OBJECTIVE/OUTCOME

All cattle, sheep and swine will be subjected to a complete and thorough post-mortem examination.

Note: A complete and thorough post-mortem examination will ensure the detection of cysticerci when they are present.

Salvage of meat from carcasses affected with C. bovis (beef tapeworm cyst), for human consumption, will be done under the immediate supervision of a veterinarian or MIB Inspector.

Note: The veterinarian, or MIB Inspector, will ensure that:

a) any condemned portion containing a cyst and immediately surrounding tissue is removed from the carcass and properly disposed of **AND**

b) the rest of the carcass, or any associated meat product is held in a freezer at -10^0 C, or lower, for a minimum of 10 days **OR**

c) the meat is heated, throughout, to a temperature of at least 60^0 C.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Cysticercosis- Control"** will be met when:

1. Written **"Cysticercosis Control Procedures"**, for handling meat products that are going to be salvaged, for human consumption, from a carcass affected with C. bovis are on file.

   Note: These procedures must:

   a) be developed specifically for the "Licensed Meat Facility" (facility);

   b) meet all of the requirements of items (A) and (B) or item (C) listed in the preceding section of this document

2. Salvaged meat products are treated in accordance with the written procedure.
3. Calibrated thermometers are used to determine temperatures.
4. **"Calibration Records"** are kept for the thermometers.
5. Calibrated and up-to-date, **Cooking, or Freezing, Records** are kept.

   Note: At a minimum these records must include:

   a) date;

   b) time;

   c) product name;

   d) amount of product;

   e) internal temperature reached, or freezer temperature maintained;

   f) time the product was held at that temperature (if required);

   g) initials of responsible facility personnel

RELATED SECTIONS OF TIPM

03-B-03 Calibration Procedures - Records of
03-G-06 Product Cooking
08-B-01 PM Inspection - Cattle - Head
08-B-02 PM Inspection - Cattle - Thoracic Viscera
08-B-04 PM Inspection - Cattle - Carcass
08-D-03 PM Inspection - Sheep, Goats & Deer - Abdominal Viscera
08-D-04 PM Inspection - Sheep, Goats & Deer - Carcass

SUBJECT: Meat Products - Protein Content of	09-B-01
REGULATORY REFERENCE SOR/90-288 *Meat Inspection Regulations*, 1990 (Canada) Schedule 1 Note: This is federal rather than provincial legislation.	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

When fillers are added to meat products the consumer has the right to know how much protein, in the final product, was derived from meat, or meat products.

Test results, from an independent laboratory, should be available to confirm that the products are in compliance with minimum protein requirements.

OBJECTIVE/OUTCOME

Meat products will meet the "Meat Product Protein" requirements of Schedule 1 of SOR/90-288.

Note: A couple of **examples** from Schedule 1 are **uncooked meat products containing filler** and **cooked** meat products containing filler.

The schedule requires that uncooked meat products, containing filler, have at least 9.5% "Meat Product Protein" and at least 11% total protein. **Cooked meat products**, containing filler, must have at least 11.5% "Meat Product Protein" and at least 13% total protein.

"Meat Product Protein" is defined as protein that has been derived from meat or meat by products. Protein from mechanically separated meat and partially defatted fatty tissue can be considered when calculating meat product protein content.

Some products, e.g. **white pudding and haggis are exempt** from the minimum protein requirements of Schedule 1.

Schedule 1 can be viewed at:

http://laws.justice.gc.ca/en/ShowFullDoc/cr/SOR-90-288///en

Labels will accurately reflect the actual protein content of each meat product.

Note: When a portion of a food product has the appearance of a meat product only that part needs to meet the above minimum protein requirements.

When a meat product is blended with a non-meat product and has the appearance of a meat product, the entire preparation must meet the minimum protein requirements.

Minimum protein requirements don't apply when a meat product is used only for flavoring and the final product is not perceived, or generally recognized, by consumers, to have the nutritional qualities normally associated with a meat product.

Independent laboratory test results verifying the protein content of each meat product will be on file.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Meat Products- Protein Content of"** will be met when*:*

1. Laboratory test results are on file for all pre-packaged and labeled products.

   Note: Final test results must demonstrate that products meet the "Meat Product Protein" requirements of Schedule 1 of SOR/90-288.

2. Documented reformulations, or recipes, are on file.

   Note: These reformulations must show what has been done, to adjust the protein content, when laboratory tests indicate the product was not in compliance.

RELATED SECTIONS OF TIPM

09-B-02 Meat Products - Fat Content of

11-C-01 Label Information for Pre-packaged Retail Products

11-C-03 Label Information for Bulk Shipping Containers

SUBJECT: Meat Products - Fat Content of	09-B-02
REGULATORY REFERENCE SOR/90-288 *Meat Inspection Regulations*, 1990 (Canada) Schedule 1 Note: This is federal rather than provincial legislation.	**Initial Release** Sept 1, 2009 **Page 1 of 1**

RATIONALE

Consumers have the right to know that various types of ground meat products have acceptable maximum levels of fat. They also need to be assured that products such as lard and suet meet acceptable standards.

Test results, from an independent laboratory, should be available to confirm that the products are in compliance with acceptable standards.

OBJECTIVE/OUTCOME

Meat products will meet the "Maximum Fat Content" requirements of Schedule I of SOR/90-288 (STANDARDS FOR MEAT PRODUCTS).

Note: The only products, in Schedule I, for which maximum fat levels are stated, are the four different types of ground meat. The maximum allowable limits are:

a) 30% in Regular;
b) 23% in Medium;
c) 17% in Lean;
d) 10% in Extra Lean

The schedule also lists various chemical requirements for lard, leaf lard and suet. The chemical requirements include but are not limited to:

a) relative density;
b) refractive index;
c) saponification value

Schedule I can be viewed at:
http://laws.justice.gc.ca/en/ShowFullDoc/cr/SOR-90-288///en

The actual fat content, of each ground meat product, will be accurately stated on the label.

Independent laboratory test results will be on file.

Note: These results must verify that the:

a) fat content of ground meat products are within the maximum allowable limits;
b) the chemical parameters for lard, leaf lard and suet have been met

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Meat Products- Fat Content of"** will be met when*:*

Laboratory test results are on file for all pre-packaged and labeled ground meat products showing that they meet the "Maximum Fat" requirements of Schedule I of SOR/90-288.

Note: Laboratory test results must also be on file that verify that the chemical composition of products such as lard are within the parameters set out in Schedule I of SOR/90/288.

RELATED SECTIONS OF TIPM

09-B-01 Meat Products - Protein Content of
11-C-01 Label Information for Pre-packaged Retail Products
11-C-03 Label Information for Bulk Shipping Containers

SUBJECT: Water Retention & Absorption - Red Meat	09-B-03
REGULATORY REFERENCES None	**Initial Release** Sept 1, 2009
	Page 1 of 3

RATIONALE

Certain processes, primarily directed towards ensuring the safety of the finished meat product, require exposure to water.

Note: Examples of processes considered essential in ensuring food safety include washing of carcasses and immersion of edible offal in water for chilling.

Whenever meat and meat products are exposed to water it is inevitable that a certain amount of water will be absorbed and/or retained.

Note: At the time this document was written there was no provision in federal, or provincial, *Meat Inspection Regulations* for the retention of water, by single ingredient meat products except those for dressed poultry carcasses in section 25 of the federal *Meat Inspection Regulations* (MIR)

The **United States Department of Agriculture** (USDA) has regulations limiting the amount of water that can be retained in red meat products.

The Canadian Food Inspection Agency (CFIA) is considering the possibility of amending the MIR to harmonize them with the USDA "Final Rule".

The operator, of a "Licensed Meat Facility" (facility), must determine the amount of water retention, or absorption, which is unavoidable during the application of processes essential for food safety.

Note: **Retained water is** defined as water that was **not added intentionally,** or as a product ingredient.

The amount of **water retained**, or absorbed, in the finished product, **must not exceed** what has been determined to be the **unavoidable amount**.

Note: Good process control measures have to be in place if the operator, of the facility, is going to continuously ensure that the amount of retained water, in raw products, is, in fact, unavoidable.

Labels must state how much water has been retained, or absorbed.

Note: The retained water statement, on the label, must be prominent. It must disclose the maximum amount of water and how it became incorporated.

OBJECTIVE/OUTCOME

Note: The **content** of this section is **based on** information in the CFIA "**Meat Hygiene Manual of Procedures"**. This information **applies primarily to organ meat** rather than to carcasses, or portions of carcasses.

The facility will have a written and validated "**Retained Water Control Program**", in place for edible offal that is exposed to water during processing.

Note: This program must ensure that prescribed requirements for water retention are met.

A **"Retained Water Control Program"** is **NOT required for the following** post evisceration processes where water is used to:

a) flush stomachs, small intestines, large intestines, rectum, braided marrow gut, and chitterlings to remove digestive tract contents;

b) flush, or scald stomachs, tongues, lips, intestines and rumen parts;

c) wash excess blood from products such as hearts, livers, brains, tendons, etc;

d) wash beef heads

If these scalded, flushed, or washed, **products are subsequently chilled by immersion** in water and/or ice a written **"Retained Water Control Program" IS required**.

The "**Retained Water Control Program**" will include testing methods to ensure that edible offal has no more than 0.5% retained water.

Note: No further testing is required if weights of the product, taken before and after the final rinse, or chilling, show that the operator is within the 0.5% tolerance limit.

Data will be available proving that the retention of water, in raw, edible offal during post-evisceration processing is an inevitable consequence of processes required to ensure food safety.

Note: Examples would include activities such as chilling by immersion in water and washing to remove contamination.

The maximum percentage of retained water will be calculated and disclosed on the label.

Note: The retained water statement must be prominently located on the principal display panel and should state the product "contains up to x% retained water" or, "with x% absorbed water.

Existing labels can be modified by using pressure sensitive stickers, or indelible ink rubber stamps with the appropriate statement relating to the percentage of retained water.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for "**Water Retention & Absorption - Red Meat"** will be met when**:**

1. A written and validated **"Retained Water Control Program"**, has been developed and is on file.

   Note: This program must cover all edible offal that has been exposed to water after completion of dressing procedures.

2. Valid methods are in place to calculate water retention, or absorption.

   Note: To be valid these methods must be reproducible and verifiable. For example a facility might choose to weigh carcasses, and products following evisceration, before final washes and chilling and again before packaging, or shipping.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

3. Water retention data is on file for edible offal that has been in contact with water as a part of the post-evisceration process.
4. Appropriate procedures will be in place to deal with instances where the water retention, or absorption limits have been exceeded.

Note: The amount of retained water must be declared on the label when the amount exceeds 0.5% and subsequent batches will be monitored. If subsequent testing reveals that retained water levels remain above 0.5%, then corrective steps will be instituted.

When testing reveals less than 0.5% water uptake, the amount of retained water does not have to be declared on the label. In these instances the facility has to run annual water retention tests to verify that they are still below 0.5%.

RELATED SECTIONS OF TIPM

09-B-04 Water Retention & Absorption- Poultry
11-C-01 Label Information for Pre-packaged Retail Products
11-C-03 Label Information for Bulk Shipping Containers

SUBJECT: Water Retention & Absorption - Poultry	09-B-04
REGULATORY REFERENCE SOR/90-288 *Meat Inspection Regulations*, 1990 (Canada) Section 25 Note: This is federal rather than provincial legislation.	**Initial Release** Sept 1, 2009 **Page 1 of 4**

RATIONALE

Certain processes, which are primarily directed towards ensuring safety of finished poultry products, require exposure to water.

Note: Examples of processes considered essential in ensuring food safety include washing of carcasses and immersion of carcasses, portions of carcasses, giblets, etc. in water for chilling.

Whenever poultry products are exposed to water it is inevitable that a certain amount of water will be absorbed and/or retained.

The operator, of the facility, must determine the amount of water retention, or absorption, which is unavoidable during the application of processes that are essential for food safety.

Note: **Retained water is** defined as water that was **not added intentionally,** or as a product ingredient.

The amount of **water retained**, or absorbed, in the finished product, **must not exceed** what has been determined to be the **unavoidable amount**.

Note: Good process control measures have to be in place if the operator, of a "Licensed Meat Facility" (facility), is going to continuously ensure that the amount of retained water, in raw products, is, in fact, unavoidable.

Labels must state how much water has been retained, or absorbed.

Note: The retained water statement, on the label, must be prominent. It must disclose the maximum amount of water and how it became incorporated**.**

Information in this document **is considered to be "Common Industry Practice"**.

Note: Although there is no provincial legislation, regarding water retention in poultry, it is highly recommended that the operator of a "Licensed Meat Facility" comply with federal standards.

OBJECTIVE/OUTCOME

A written and validated **"Retained Water Control Program"**, will be on file

Note: This program must ensure that allowances, listed in the following table are met.

Product	Weight of Dressed Carcass	Maximum Weight Increase
Turkeys	Under 4.5 kg	8.0%
	4.5 kg to under 9 kg	6.0%
	9 kg and over	5.5%
Chickens	Under 2.3 kg	8.0%
	2.3 kg and over	6.0%
Other species	Any weight	6.0%
Giblets	Any weight	4.0%

The above table is taken from section 25 of SOR/90-288 (federal MIR).

In addition to the above: detached necks, and other salvaged portions (e.g. breasts, breast fillets, wings, legs, thighs, drumsticks, etc.) must meet an 8% maximum weight increase allowance.

The following **products** are **exempt from** a **"Retained Water Control Program"**

a) multi-ingredient poultry products such as basted turkey carcasses, with, or without, giblets;

b) giblets within a basted turkey carcass

The following **processes** involving the use of water following evisceration are also **exempt from** a **"Retained Water Control Program"**:

a) flushing gizzards and chitterlings to remove digestive tract contents;

b) removing the lining from gizzards;

c) removing gall bladders from livers;

d) removing the pericardial sac from hearts;

e) scalding paws (feet);

f) washing hearts, livers, gizzards, paws, etc. to remove excess blood;

g) washing to remove contents from the mouth and nasal passages of head and feet-on carcasses

A written and validated **"Retained Water Control Program"** is **required** if any of these scalded, flushed, or washed, **products** are **subsequently chilled** by contact with water and/or ice.

The "**Retained Water Control Program**" will include testing methods which ensure that the retained water in poultry products does not exceed the stated limits.

Note: **Testing of Carcasses**

Ongoing retained water monitoring **tests** are **not required for dressed carcasses**, or packaged carcass portions **if** a **"Physical Water Pick-up Test"**, on **50 carcasses** shows:

a) an **average percentage weight increase**, for the test carcasses, of **less than half of the regulatory allowances AND**

b) **all carcasses meet** the **regulatory limits** for percentage weight increase

A **"Physical Water Pick-up Test"** is **conducted as follows:**

a) at least fifty (50) whole, untrimmed poultry carcasses are selected at random;

b) each carcass is identified;

c) each carcass is weighed twice with the first weight being taken before the carcass enters the first carcass washer following inspection and the second weight being taken before packaging as whole carcasses, or as parts, after normal chilling and drainage times have been observed;

d) both weights are recorded for each carcass;

e) the following information, for each carcass will be recorded on a data collection sheet:

i) initial and final individual carcass weights;

ii) percentage weight increase, or decrease, for each carcass with the initial carcass weight being the denominator for this percentage calculation;

iii) average weight increase, or decrease for the entire group;

iv) number of carcasses with retained water levels above regulatory limits with a 20% allowance to account for inherent biological, processing and measurement variability

A maximum of three (3) out of every 50 birds are allowed to retain, or absorb, 20% more water than the allowable regulatory limits.

For example, the specified regulatory maximum for broiler chickens weighing up to 2.3 kg is 8%.

20% of 8 is 1.6 therefore, 3 of 50 carcasses are allowed to have a percentage weight increase of up to 9.6%.

f) completed data sheets will be kept on file as a record of water retention, or absorption

A **"Physical Water Pick-up Test"** will be **conducted at least once a year** to verify that carcasses still meet the requirements of the test.

Testing of Giblets, Detached Necks and Salvaged Portions

A minimum of 50 portions e.g. giblets (as a group, or individual hearts, livers & gizzards) detached necks, skinless breasts, etc. can be weighed in bulk to obtain both initial and final weights.

No further ongoing testing is required if initial testing results, on 50 portions, reveals water retention of less than 0.4%.

When testing reveals excessive water retention, or absorption, **the next lot will be tested. If results of the second test also show excessive water retention**, or absorption**, processes will be implemented to reduce the amount of retained**, or absorbed, **water.**

Note: The following methods are effective in reducing water retention or absorption:

a) minimizing the surface area of flesh exposed to water by avoiding small cuts, preventing cuts or tears in the skin, or complete trussing of the carcass;

b) promotion of better drainage by separating neck muscles from the overlying skin, or removing the necks before washing;

c) reducing the amount of ice and/or water used;

d) reducing the length of time products are left in the ice water;

e) draining chill tanks, or vats, at least ½ hour before removing the carcasses;

f) draining carcasses on a drip line and squeezing out water that has accumulated beneath the skin by hand;

g) using automated equipment

Products NOT in compliance with the maximum allowable limits for water retention and absorption **will be handled appropriately**.

Note: Appropriate methods of handling products that are not in compliance include:

a) handling as inedible material (e.g. for animal food, or disposed of);

b) draining until they are in compliance;

c) cutting up, skinning, or boning out and incorporating non-compliant products with other packaged product in proportions that ensure that the final mixture is in compliance

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for "**Water Retention & Absorption - Poultry"** will be met when:

1. A written and validated **"Retained Water Control Program"**, has been developed and is on file.

   Note: This program must cover all poultry products exposed to water after completion of dressing procedures.

2. Valid methods are in place to calculate water retention, or absorption.

   Note: To be valid these methods must be reproducible and verifiable.

3. Water retention data is on file for carcasses and other poultry products that are in contact with water as a part of the post-evisceration process.

   Note: Data sheets, from "Physical Water Pick-up Tests", will meet this requirement.

4. Appropriate procedures will be in place to deal with instances where the water retention, or absorption limits have been exceeded.

   Note: For example, if giblets are found to have more than 0.5% retained water the excess amount must be declared on the label and subsequent batches need to be monitored.

   If subsequent testing reveals that the giblets still exceed 0.5%, then corrective steps need to be taken. When testing reveals less than 0.5% water uptake, the amount of retained water does not have to be declared on the label. In these instances the facility has to run annual water retention tests to verify that they are still below 0.5%.

RELATED SECTIONS OF TIPM

09-B-03 Water Retention & Absorption - Red Meat

11-C-01 Label Information for Pre-packaged Retail Products

11-C-03 Label Information for Bulk Shipping Containers

SUBJECT: Inedible Material - Handling & Storage of - General	10-A-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1, 18(1)(b)(ii) & 18(1)(f) Meat Facility Standards (MFS) Sections A.2.4.2, 2.5 (1, 2 & 3), C.1.1.3, E.1.1.1	**Initial Release** Sept 1, 2009 **Revision Date** Sept 1, 2011 **Page 1 of 3**

RATIONALE

Care has to be taken to ensure that inedible products are kept separate from edible products at all times.

Note: Complete separation is required to ensure that inedible materials are not accidentally, or fraudulently, added to meat products that have been approved for human consumption.

There are **two** basic **types** of **inedible meat** products:

1. Portions of the carcass that by their nature are **not salvaged** for human consumption, e.g. hides, horns, certain internal organs, etc.

   Note: Actually, any portion, of a healthy animal, that is not contaminated, or affected with a disease condition, may be considered suitable for human consumption. There is a wide variation, between ethnic groups, as to what is suitable for human consumption and what isn't.

2. Entire carcasses or portions of carcasses, which **have been condemned** by a MIB Inspector.

   Note: Common reasons for condemnation include the presence of disease, or contamination. Carcasses that are dead on arrival, or that have died in the holding pens, are also condemned.

It is particularly important that condemned meat products be closely supervised because some of these products could be a source of disease for humans, or other animals, if they are not handled and disposed of in an appropriate manner.

OBJECTIVE/OUTCOME

The "Licensed Meat Facility" (facility) will develop and implement appropriate facilities and procedures for the handling and storage of inedible meat, or meat products, until such time as they have been properly disposed of, or salvaged, for other purposes.

Note: These procedures must effectively prevent the contamination of edible meat products.

Non- condemned inedible material can be salvaged for:

a) animal food;

b) research, educational, or pharmaceutical (drug production) purposes;

c) bait

Condemned materials may be used for the same purposes but **only if approved by a Meat Inspection Branch** (MIB) **Inspector.**

The **salvage of Specified Risk Material** (SRM), from beef carcasses, is **NOT ALLOWED** under any circumstances.

Until they have been disposed of, removed for disposal, or salvaged for other purposes, all inedible meat products will be:

1. Properly identified.
2. Kept separate from edible meat product.
3. Denatured in an approved manner (as required).

   Note: Denaturing is defined as making a meat product unfit for eating by adding an un-wholesome substance that will adversely affect the appearance and/or taste of the product.

   Condemned meat products must be denatured, if in the opinion of a MIB Inspector, the product is likely to be mistaken for a product suitable for human consumption.

4. Placed in an approved inedible container.
5. Moved to the inedible room, or area, of the abattoir.

   Note: To minimize the chance of contact with edible meat products, inedible material must be removed immediately and in a sanitary manner, from areas where edible products are handled, or processed. Sanitary removal includes removal by the shortest possible distance.

Condemned material will be maintained under rigid inspectional control until such time as it has been properly salvaged, or disposed of.

Appropriate sanitation procedures will be in place.

Note: These procedures must ensure that equipment, used for edible meat products, coming into contact with condemned meat products will be cleaned and sanitized before reuse.

Abattoir personnel and MIB Inspectors that handle condemned meat products are required to wash their hands and clean and sanitize their work clothing and equipment before handling any edible product.

Waste products such as manure, paunch and viscera contents will be disposed of in an appropriate manner.

Note: Generally any method that won't lead to the creation of a sanitary problem on the premises is acceptable. The storage of these types of waste in, or near, the abattoir is not acceptable.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Inedible Material- Handling and Storage of - General"** will be met when*:*

1. Up-to-date written **"Inedible Separation, Storage & Disposal Procedures"**, specific for the facility, are on file.

   Note: These procedures must:

   a) have detailed handling instructions for all types of inedible products, including those that are to be disposed of and those that will be salvaged for approved purposes;

   b) stipulate the facilities and equipment that may be used and operational controls that need to be in place for the salvage of inedible product for other legitimate purposes

2. On site observations demonstrate that the "**Inedible Separation, Storage & Disposal Procedures**" are being implemented as written.

RELATED SECTIONS OF TIPM

02-D-01 Inedible Facilities, Equipment & Containers
02-D-02 Inedible Room or Area
10-A-02 Inedible Material (condemned) - Handling & Storage of
10-A-03 Inedible Material (non-condemned) - Handling & Storage of
10-A-04 SRM Removal & Control Program
10-A-05 Inedible Material - Removal & Receipt of
10-A-06 Inedible Material - Disposal Methods
10-B-01 Salvage for Animal Food
10-B-02 Salvage for Miscellaneous Purposes

SUBJECT: Inedible Material (condemned) - Handling & Storage of	10-A-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1, 18(1)(b)(ii), 18(1)(f), 49, 51 & 55 AR 229/2000 *Destruction and Disposal of Dead Animals Regulation* Sections 2(1), 2(4) and 2(7)(a) Meat Facility Standards (MFS) Sections A.2.4.2, 2.5 (1, 2 & 3), C.1.1.3, E.1.1.1	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2011 **Page 1 of 3**

RATIONALE

Condemned meat products are defined as carcasses, or portions of carcasses, including organs, that have been determined, by a Meat Inspection Branch (MIB) Inspector, to be affected with disease, or any other abnormal condition, that makes them unfit for human consumption.

Condemned meat products must be properly handled to ensure that they are not accidentally, or fraudulently, mixed with edible meat products.

Note: Condemned meat products have the potential to spread disease to humans and/or other animals if they are not handled and disposed of in a sanitary manner.

A “Licensed Meat Facility’ (abattoir) that wants to salvage condemned materials, for any purpose, must have appropriate facilities for the safe handling of these materials.

Note: Appropriate facilities will minimize contamination risks as condemned materials are salvaged, stored and handled in any manner.

OBJECTIVE/OUTCOME

Appropriate facilities and procedures will be developed and implemented for the handling and storage of condemned meat, or meat products, until such time as they have been properly disposed of, or salvaged for other purposes.

Note: These procedures must be effective in preventing the contamination of edible meat products.

Condemned material will be:

1. Maintained under the control of a MIB Inspector until such time as it has been properly salvaged, or disposed of.
2. Clearly identified as condemned material.

   Note: MIB Inspectors are required to use the “MI - 8 Condemned Tag” to identify condemned material. These tags, which have been formally approved by the MIB, may be applied directly to the condemned meat product, or on containers.
3. Kept separate from edible meat products at all times.

   Note: This can be accomplished by placing condemned products in an approved inedible container, and/or by moving them into the inedible room, or area, of the abattoir.

   To minimize any chance of contact with edible meat products, condemned material must be removed immediately and in a sanitary manner, from areas where edible products are handled, or processed.

Sanitary removal includes removal by the shortest possible distance.

Under no circumstances can condemned material be stored in processing areas for edible products.

4. Denatured in an appropriate manner, when directed to do so by a MIB Inspector.

   Note: Denaturing is defined as making a meat product unfit for eating by adding an un-wholesome substance that will adversely affect the appearance and/or taste of the product.

   Generally denaturing will be required if the MIB Inspector is of the opinion that the product may be mistaken for an edible product.

   Two common methods of denaturing include the addition of a chemical called Birkolene B, or charcoal.

   Poultry parts or carcasses are exempt from denaturing requirements when they are placed in the inedible trough and thus mixed with inedible product. All red meat parts must be denatured.

   Denaturing, when required, must be done in an inedible room, or area.

All containers and utensils used to collect, store, handle or process condemned material will be clearly distinguishable from similar containers, or utensils, used for edible material.

Note: Containers should be clearly marked with the word "CONDEMNED".

Adequate facilities will be present to ensure complete separation of materials salvaged for animal food during chilling, packing, marking, denaturing and storage of the product.

Appropriate sanitation procedures will be in place.

Note: These procedures must ensure that equipment coming into contact with condemned meat products be cleaned and sanitized before reuse.

Plant personnel and MIB Inspectors that handle condemned meat products are required to wash their hands and clean and sanitize their work clothing and equipment before handling any edible product.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Inedible Material (condemned)- Handling & Storage of"** will be met when*:*

1. Written, abattoir specific **"Condemned Material Handling Procedures"**, are on file.

   Note: These procedures must:

   a) have detailed handling instructions for all types of condemned products, including those that are to be disposed of and those that will be salvaged for approved purposes;
   b) stipulate the facilities and equipment that may be used and the operational controls that need to be in place for the salvage of condemned product for other legitimate purposes

2. On site observations demonstrate that the "**Condemned Material Handling Procedures**" are being implemented.

RELATED SECTIONS OF TIPM

02-D-01 Inedible Facilities, Equipment & Containers
02-D-02 Inedible Room or Area
10-A-01 Inedible Material - Handling & Storage of - General
10-A-03 Inedible Material (non-condemned) - Handling & Storage of
10-A-04 SRM Removal & Control Program
10-A-06 Inedible Material - Disposal Methods
10-B-01 Salvage for Animal Food

SUBJECT: Inedible Material (non-condemned) - Handling & Storage of	10-A-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1, 18(1)(b)(ii) & 18(1)(f) Meat Facility Standards (MFS) Sections A.2.4.2, 2.5 (1, 2 & 3), C.1.1.3, E.1.1.1	**Initial Release** Sept 1, 2009 **Page 1 of 1**

RATIONALE

To prevent the accidental, or fraudulent, mixing of non-condemned inedible materials with edible meat products care must be taken to ensure that these products are handled in a sanitary manner and that they are stored separate from edible product.

OBJECTIVE/OUTCOME

Appropriate facilities and procedures will be developed and implemented for the handling and storage and disposal of non-condemned inedible meat products, until such time as they have been properly disposed of, or salvaged for other purposes.

Note: These procedures must be effective in preventing the contamination of edible meat products.

The **salvage of Specified Risk Material** (SRM), from beef carcasses, is **NOT ALLOWED** under any circumstances.

All inedible containers and utensils used for inedible material will be clearly distinguished from containers and utensils that are used for edible products.

Products which by their nature are not edible or suitable for other purposes, will be collected and handled in a sanitary manner which minimizes any chance of cross contaminating edible meat products until they are disposed of.

Note: These products include beef hides, hair, feathers, etc.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Inedible Material (non-condemned)-Handling & Storage of"** will be met when:

1. Up-to-date written **"Inedible Material Handling Procedures"**, which are specific for the "Licensed Meat Facility" (facility), are on file.

   Note: These procedures must:

   a) have detailed handling instructions for all types of non- condemned products, including those that are to be disposed of and those that will be salvaged for approved purposes;

   b) stipulate the facilities and equipment that may be used and the operational controls that need to be in place for the salvage of non-condemned product for other legitimate purposes

2. On site observations demonstrate that the **"Inedible Material Handling Procedures"** are implemented and meet regulatory requirements

RELATED SECTIONS OF TIPM

02-D-01 Inedible Facilities, Equipment & Containers
02-D-02 Inedible Room or Area
10-A-01 Inedible Material - Handling & Storage of - General
10-A-05 Inedible Material - Removal & Receipt of
10-A-06 Inedible Material - Disposal Methods

SUBJECT: SRM Removal & Control Program	10-A-04
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1, 18(1)(b)(ii), 18(1)(f) & 54 Meat Facility Standards (MFS) Sections A.2.4.2, 2.5 (1, 2 & 3), C.1.1.3, E.1.1.1	**Initial Release** Sept 1, 2009 **Page 1 of 8**

RATIONALE

The removal of Specified Risk Material (SRMs) from cattle slaughtered prevents tissues that may contain BSE infectivity from entering the human food chain.

Note: **This document** has been written **primarily for** the **handling of SRMs in an abattoir** but certain aspects apply to other licensed meat facilities including those operated by a licensed mobile butcher. **The term "abattoir" will be used in** the rest of **this document**.

Following the discovery of BSE, in Canada, in May of 2003, "Health Canada" and the "Canadian Food Inspection Agency" (CFIA) made changes to the federal *Food and Drug Regulations* and the *Health of Animals Regulations* which required the exclusion of SRMs from human food.

In addition, on July 12, 2007, the new "Enhanced Feed Ban" and related regulatory amendments came into effect.

Note: This ban prohibits the use of SRMs in all animal feeds, pet foods and fertilizers.

This prohibition applies to SRMs removed from healthy slaughter cattle, cattle dead stock, and condemned carcasses.

If the **SRMs** have **not** been **removed** the **entire carcass** must be **handled as if** all of its tissues were **SRM**.

These regulatory changes have made it necessary for an abattoir to develop systems for containing SRMs and reducing the risk of cross contamination.

Operational controls, such as the use of separate knives for exclusive use on SRMs, must be put into place.

Note: **An abattoir specific written "SRM Removal and Control Program" must be developed** and implemented**.**

The brain, spinal cord, trigeminal ganglia, eyes, tonsils, and dorsal root ganglia, of cattle over thirty months of age and the distal ileum, in cattle of all ages, are classified as SRM.

Note: Ganglia are clusters of nerve cells located outside of the brain, or spinal cord.

The trigeminal ganglia (left and right) are located, in the skull, close to the brain. They are visible as enlargements on the fifth cranial nerve.

Dorsal root ganglia are clusters of nerve cells located between the vertebrae all along the spine. Removal of the vertebrae effectively removes these ganglia.

For practical purposes the entire skull has been designated as SRM because removal of the skull gets rid of the brain, trigeminal ganglia, eyes and tonsils.

OBJECTIVE/OUTCOME

A written **"SRM Removal and Control Program"**, will be on file at the abattoir.

Note: In accordance with CFIA legislation the operator of the abattoir is responsible for the proper removal and disposal of SRMs and for ensuring that SRMs are not incorporated into any edible meat products.

The basic objective of the **"SRM Removal and Control Program"** is to control the hazards associated with SRMs by:

a) ensuring the removal of all SRMs;

b) preventing contamination of edible meat products, by SRMs, during slaughter and cutting/boning operations;

c) minimizing the chance of contaminating ruminant (cattle, sheep, etc.) animal feeds with SRMs (prohibited proteins of ruminant origin)

The written **"SRM Removal and Control Program"** will be:

1. Implemented
2. Updated as required

Note: Changes to Health Canada or CFIA regulations, relating to SRMs, come into effect immediately and the "SRM Control Program" will require updating whenever theses regulatory changes occur.

The abattoir operator and the Meat Inspection Branch (MIB) Inspector assigned to the abattoir will understand and carryout their respective roles as follows:

Abattoir Responsibilities

The abattoir operator will:

1. Ensure that animals over thirty (30) months (OTM) are identified.

   Note: When documentation is available, it shall be used as the primary means of determining the age of animals. Alternatively, the operator may decide to treat all slaughtered animals as being derived from OTM. If ageing is done by dentition, **MIB Inspectors are ageing** in abattoirs. Despite this assistance, the operator is still legally responsible for ensuring that animals are properly aged.

2. Establish procedures to ensure that the identity of all animals is maintained until SRMs have been removed.

   Note: If the identity of a carcass is lost, that carcass must be handled as if it was OTM of age.

   It is recommended that OTM cattle be slaughtered at the end of the day.

   This makes it easier to maintain their identity. It also minimizes the chance of contaminating meat and meat products from UTM animals.

3. Stain all SRM as follows:

   a) whole, or part, carcasses of OTM animals will be marked with a meat marking dye along the entire vertebral column;

      Note: Only dyes that have been approved by the Head of the MIB can be used.

   b) cattle condemned and euthanized, on the ante-mortem inspection and those

that are found dead must be visibly marked along their spines

Note: The carcasses of these animals must be marked with a wide stripe, from the back of the head and along the full length of the spine, using a conspicuous, indelible dye that contrasts with the color of the animal.

Staining is **not required if ALL INEDIBLE MATERIALS FROM ALL ANIMAL SPECIES are being disposed of on the premises of the abattoir**.

4. **Ensure** the **complete removal of SRMs** from all animals.

Note: SRMs include the **distal ileum** from **animals** of **any age** and the **following tissues in animals 30 months of age or older (OTM)**:

a) skull;

A **special permit**, from the **CFIA**, is **required to allow** the **release of** the poll and **horns, for mounting**.

b) brain;

c) eyes;

d) palatine tonsils;

e) trigeminal ganglia;

f) spinal cord;

g) dorsal root ganglia;

Note: carcasses of condemned animals containing SRM, any inedible material mixed with SRM shall be handled as SRM. Inedible material from floor waste where SRM is removed or handled and/or solids that have been recovered from wastewater shall be handled as SRM.

5. Develop a system for reworking carcasses in cases of incomplete SRM removal.

Note: Reworked carcasses must be:

a) handled in a manner that minimizes the chance of contaminating other meat products with SRM;

b) presented for subsequent inspection by the MIB Inspector

6. Handle all SRMs as “Inedible Meat Products” and segregate SRMs as soon as possible after removal during slaughter, or at the time of cutting/boning the carcass.

Note: If the vertebral column is going to be removed later it must be stained immediately after dressing operations have been completed.

Segregation is accomplished by collecting all SRMs (including SRMs separated from the carcass, SRMs from the floor and gross SRM debris) into designated clearly identified SRM containers.

SRM containers must be leak proof and stored, if possible, in a designated section of the inedible products area.

If the operator chooses not to segregate, or is not approved, by the MIB, to segregate SRM from the other inedible material then all materials will be handled as if they were SRM and the requirement to stain will still apply.

7. Keep appropriate daily written SRM records:

Note: As a minimum these records will include:

a) name and address of the abattoir;

b) date of SRM removal and staining;

c) combined weight of SRM & carcasses considered to be SRM;

d) number of carcasses;

e) name of the dye used;

f) CCIA tag numbers;

g) date and method of destruction or containment

h) date of transportation of SRM from the establishment;

i) name and address of the person, or company, transporting the SRM;

Individuals, or companies, transporting SRM must have a CFIA permit.

j) name and address of final destination of the SRM;

The abattoir operator is responsible for ensuring, and including in the written program, that only transport vehicles with a valid permit are to be used to remove SRM from the facility.

Individuals, or companies, receiving SRM also need a CFIA permit.

k) All records must be retained for 10 years.

Under the terms of the CFIA "Enhanced Feed Ban" **mobile butchers** and **other licensed meat facilities are** also **required to keep these records**.

CFIA permits will be in place for the collection, transportation, receipt of, or processing of, SRMs.

Note: In accordance with CFIA policy, the transportation of cattle carcasses, with SRM intact, to another facility, for deboning, cutting and wrapping, etc. requires a CFIA permit. In addition the facility receiving these carcasses must have a CFIA SRM harvesting permit.

A CFIA permit is also required for the movement of carcasses containing SRM.

When a carcass containing SRM is moved to another provincially licensed abattoir each half of the carcass must be tagged with an MIF-2 "SRM Held Tag" tag.

The MIB Inspector at the receiving abattoir will notify the MIB Inspector at the shipping abattoir when the SRMs have been removed. Following notification, the MIB Inspector at the shipping abattoir will verify the removal by filling out the appropriate columns on the MIF - 3 "Control Sheet for MIF - 2 (Red) and MIF - 7 (Green) Held Tags".

Abattoirs still require a CFIA permit even if the SRMs are going to be subjected to containment, or destruction, at the abattoir.

MIB Inspector Responsibilities

MIB Inspectors will:

1. Determine the age of all cattle.

   Note: Approved methods of age determination include:

   a) examination of the incisor teeth or;

   b) verification of approved birth date documents

   When dentition is used to age an animal, **MIB Inspectors have the option of filling out an MIA - 4A "Verification of SRM Removal and Condemnation" form** for the facility operator to give to the animal owner.

   Ages don't need to be determined if ALL carcasses are handled as if they are OTM.

2. **Ensure that the entire small intestine, from animals of ALL AGES, is removed** and put into a designated SRM container.

   Note: The **removal of the entire small intestine** only **applies when the operator does not have permission to remove just the ileum**.

   To obtain permission, to remove only the ileum, the abattoir operator must develop, implement and maintain an approved written procedure that ensures removal of the entire distal ileum. This procedure would be included in the "SRM Removal and Control Program" for the abattoir. The distal ileum is defined as the ileo-cecal junction and at least 200cm of the attached and uncoiled small intestine proximal to the ileo-cecal junction must be removed.

3. Monitor the removal of SRM, from animals 30 months of age, or older, to ensure:

   a) removal of the tongue at least 2.5 cm (1 inch) anterior to its base;

   b) **placement** of **all parts of the skull in a designated SRM inedible bin** following removal of the cheek meat and tongue;

      Note: The above two steps ensure the removal and disposal of the brain, eyes, palatine and lingual tonsils and trigeminal ganglia.

   c) complete removal and disposal of the spinal cord from each half of the split carcass including those that are improperly split;

      Note: **The spinal cord must also be removed from carcasses that are UTM as it is an inedible product.**

      In abattoirs where the same splitting saw is used for both OTM & UTM animals **the saw must be cleaned and sanitized after use on an OTM animal before it can be used again on an UTM animal**.

      If the splitting saw is equipped with an automatic rinse system, the exhaust water must be directed away from carcasses and other edible products to prevent cross contamination. The waste water should be treated as SRM and collected into an SRM container.

      Chain link gloves should not be used to remove the spinal cord because of the high risk of gross contamination of edible portions of the carcass with SRM.

d) observe removal of the vertebral column on the kill floor;

Note: When the vertebral column is removed on the kill floor the MIB Inspector will document the removal on the MIF - 3. In these cases, a MIF - 2 tag (red SRM Removal Tag) is not required.

e) implement the following procedures when the vertebral column isn't removed on the kill floor:

i. mark the exposed vertebral canal at the level of the cervical, thoracic, lumbar and sacral vertebrae with regular stamp ink;

ii. place a MIF - 2 tag on each half of the carcass;

iii. record the following information in the appropriate columns of the MIF – 3:

- Slaughter Date
- MIF - 2 Numbers
- Owner's Name

f) place the inspection stamp on the carcass;

Note: When the MIB Inspector has finished the OTM carcass should be placed on a separate rail in the chilling cooler.

g) ensure that SRMs are handled in a manner that prevents them from being used in human food, farm animal feeds, pet foods or fertilizers

Note: In this role, MIB inspectors are required to oversee the identification, removal, segregation, storage and shipment, or disposal of SRM material from OTM carcasses that are intended for human consumption.

All parts of carcasses from animals that were condemned on an ante-mortem inspection, or found dead at the abattoir must be handled as SRM.

Verification of Removal of Dorsal Root Ganglia

The following steps will be taken to verify removal of the Dorsal Root Ganglia:

1. The **abattoir operator will ensure that the vertebrae** from each half of the carcass and the held tags **are placed in a separate designated SRM container** and are retained for examination by a "Meat Inspector".
2. Following observation of the removed vertebral column and associated held tags the MIB Inspector will verify the SRM removal by dating and signing the appropriate columns of the MIF - 3. The numbers of OTM carcasses and the numbers of vertebral columns must reconcile. Furthermore, at least one inch from the vertebral arch on either side must be removed to ensure complete removal of DRG. MIB staff are expected to ensure reconciliation of numbers and ensure adequate DRG removal.

Note: Completed MIF - 3 forms will be sent to regional "Administrative Support" staff for filing and in accordance with Federal Legislation, MIF - 3 forms will be retained for a minimum of 10 years.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Note: SRM audits are conducted by MIB and CFIA. The following requirements were in effect at the time this document was written. The CFIA has the authority to change these requirements at any time. The reader is advised to contact a CFIA representative if further clarification, about what constitutes an auditable system, is required.

Requirements for **"SRM Removal and Control Program"** will be met when:

1. A written **"SRM Removal and Control Program"** is on file.

   Note: This program must clearly and precisely detail the following procedures:

   a) method and procedure for age determination;

   b) identification and marking of OTM carcasses;

   c) SRM removal procedures including control measures taken to ensure segregation and minimize cross contamination;

   d) identification and description of SRM tools and equipment;

   e) stunning and dressing procedures that ensure all identified SRMs are removed from the carcass;

   f) handling and disposition of SRMs including the cleaning of SRM containers

   The program must include all relevant SRM control procedures required pursuant to the enhanced feed ban as regulated by the CFIA (including the transportation and harvest of edible meat from a carcass containing SRMs.

2. Appropriate records of the **"SRM Removal and Control Program"** are on file.

   Note: To be considered appropriate SRM records must contain the:

   a) name and address of the person handling the SRM;

   b) date;

   c) combined weight of the SRMs;

   d) number of carcasses, or parts thereof;

   e) name of dye;

   f) CCIA tag numbers;

   g) name and address of the person transporting, confining or destroying the SRMs

   SRM records must be made for each day that SRM's are removed, stained, or received.

   SRM **records must be retained** for at least **10 years.**

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS) (continued)

These records should clearly indicate that inspections have been conducted and that issues, relating to SRM removal, which may lead to cross-contamination of a carcass with SRMs have been addressed with appropriate corrective actions taken to address any non compliant product.

3. On site observations demonstrate that SRM removal and control measures meet or exceed the requirements mandated by federal regulations and specifically that:

   a) Operating procedures identify cattle that are OTM and UTM of age.

      Note: Acceptable methods of aging cattle include dentition (examination of teeth) and the examination of approved birth date records such as those provided by the Canadian Cattle Identification Agency or a “Registered Breed Association”.

   b) SRM removal procedures are sufficient to ensure that edible meat is not contaminated with SRM.

      Note: In SRMs removed from the carcass, including the distal ileum, are handled as SRM and placed in appropriately identified and dedicated SRM containers.

   c) Equipment is properly cleaned and sanitized.

      Note: Proper cleaning and sanitizing procedures must:

      i. Prevent accidental contamination of non-SRM tissues with SRM.

      Ensure that all visible organic material is treated as SRM and is placed in appropriately labeled and/or identified SRM containers.

RELATED SECTIONS OF TIPM

10-A-01 Inedible Material - Handling & Storage of - General
10-A-02 Inedible Material (condemned) - Handling & Storage of
10-A-05 Inedible Material - Removal & Receipt of
10-A-06 Inedible Material - Disposal Methods

SUBJECT: Inedible Material - Removal & Receipt of	10-A-05
REGULATORY REFERENCES: AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18(1)(b)(ii) Meat Facility Standards (MFS) Sections A. 2.5.2, B.2.1.2	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Removal of inedible materials, from a "Licensed Meat Facility" (facility), must be done in a manner that prevents any contact between edible and inedible material.

Note: Generally this requires that inedible materials be shipped from a separate dock than edible materials and in separate containers.

Vehicles used to transport inedible materials must not be used to transport edible product.

Some facilities receive inedible oils, fats, bones, etc. from other licensed facilities. The receipt of these products must be done in a manner that prevents any chance of contact with any edible products.

Note: This means that these materials can only be received into the inedible area(s) of the facility.

OBJECTIVE/OUTCOME

There will be appropriate facilities for the shipping (removal) and receipt (if necessary) of inedible material (condemned or non-condemned).

Note: Suitable shipping and receiving facilities, for inedible materials, will comply with the general construction and facility requirements that are stipulated in TIPM Chapter 2, Section C: Design and Construction and Section D: Waste Handling, Storage and Removal.

These facilities must be located in close proximity to the inedible room, or area, and must not be used to ship or receive edible material.

The frequency of removal will be compatible with the limitations of the storage facilities for inedible and condemned materials.

Note: It is "Common Industry Practice" to remove inedible and condemned meat products every day.

Less frequent removal is acceptable providing the inedible area is refrigerated and there is sufficient room to contain all inedible and condemned material within the inedible area of the facility.

Suitable and dedicated bulk containers (bins or barrels) will be available for the shipment of inedible and condemned materials.

Note: Suitable containers will be constructed of impervious material and kept in a good state of repair.

There will be satisfactory sanitation of the inedible and condemned material storage and shipping areas and equipment.

Note: Inedible containers, shipping docks and storage areas should be cleaned and sanitized immediately after inedible and/or condemned material has been removed from the facility.

Equipment and containers used to ship or receive inedible material should also be cleaned and sanitized whenever unsanitary conditions develop (e.g. a spill).

The following <u>conditions apply</u> to facilities <u>receiving inedible materials</u> from another facility:

1. A separate receiving area must be is located within the inedible section of the facility.

   Note: The receiving area must be designed and constructed in a manner that ensures that the receipt of inedible materials can be accommodated without creating any risk of contamination to edible meat products or to the premises as a whole.

2. The receipt of dead animals requires special permission from the Division Veterinarian (DV).

   Note: Permission, from the DV, is not required to receive animals that died in transit to the facility.

3. Equipment and physical facilities must be adequate to ensure the proper cleaning and sanitizing of containers and transport vehicles.

   Note: Containers must be cleaned and sanitized prior to their storage in the facility.

   Vehicles and containers must be cleaned and sanitized before being allowed to return to another licensed facility.

   The receipt of inedible meat products must not interfere with, or compromise, the sanitary standards in the rest of the facility.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Inedible Material- Removal & Receipt of"** will be met when:

1. The removal and receipt (if applicable) of inedible materials is included in the facility's up-to-date written **"Inedible Material Handling Procedures"**.

   Note: These procedures must stipulate the facilities and equipment that are to be used and the operational controls that need to be in place including cleaning and sanitation requirements.

2. On site observations demonstrate that the written procedures for the removal and receipt of inedible and condemned material are being implemented.

RELATED SECTIONS OF TIPM

02-D-01 Inedible Facilities, Equipment & Containers
02-D-02 Inedible Room or Area
10-A-01 Inedible Material - Handling & Storage of - General
10-A-02 Inedible Material (condemned) - Handling & Storage of
10-A-03 Inedible Material (non-condemned) - Handling & Storage of
10-A-04 SRM Removal & Control Program

SUBJECT: Inedible Material - Disposal Methods	10-A-06
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 55 AR 229/2000 *Destruction and Disposal of Dead Animals Regulation* Sections 1(a)(ii), 2(1), 2(4), 2(6) and 2(7)(a) Meat Facility Standards (MFS) Sections A.2.4.2, 2.5 (1, 2 & 3)	**Initial Release** Sept 1, 2009 **Page 1 of 4**

RATIONALE

Inedible materials originate from a number of sources including but not restricted to:

1. Portions of carcasses that are not considered to be edible.
2. Carcasses or portions thereof that have been condemned on a post-mortem inspection.
3. Carcasses of animals condemned on the ante-mortem (before death) inspection.
4. Carcasses of animals that have died enroute to the “Licensed Meat Facility” (facility) or that have died, in the facility, before slaughter.

All of the above waste materials (condemned or not) will be disposed of in a sanitary manner in order to ensure that there is no spread of disease.

Note: This is particularly important in the case of waste materials that have been condemned because they are affected with a disease condition.

Abattoirs can get rid of these products either through salvage or disposal.

Note: Some of these materials can be salvaged for animal food while others may be salvaged for other purposes.

The **salvage of condemned material** can **only** be done **with permission** of the MIB Inspector.

Materials that are not salvaged must be disposed of in accordance with AR 229/2000.

Note: AR 229/2000 allows livestock producers to dispose of dead animals in any of the following ways:

a) burial;
b) burning;
c) composting;
d) rendering;
e) natural disposal (allowing the dead animal to be scavenged)

Under Section 2(6) of AR 229/200 **facilities are specifically prohibited from using natural disposal** as a method of disposal for inedible offal, or condemned material.

The intent of this document is to provide information on the legal requirements for alternative methods of disposal.

Note: In this document burial, burning and composting are considered to be alternative methods of disposal.

Unless salvaged for other purposes, all inedible offal and/or condemned material will be disposed of in accordance with the provisions of AR 229/2000.

Note: Under the provisions of AR 229/2000 the operator is considered to be in possession, or control, of the animal (carcass and parts) therefore the operator is responsible for properly disposing of inedible and condemned meat products.

Notwithstanding the above statement, in the case of custom slaughter, the facility can require the owner of the animal to take inedible materials, other than Specified Risk Materials (SRMs), back to their farm for disposal. This would require the owner to be present at the time of slaughter.

Meat Inspection Branch (MIB) Inspectors have a duty to ensure that the inedible and condemned materials are being disposed of in a responsible manner.

The abattoir will use one, or a combination, of the following methods of disposal:

1. Rendering
2. Burial
3. Burning
4. Composting

Rendering

Having a commercial rendering company pick up and dispose of inedible and condemned material is the most common method of disposal employed by facilities. It is also the **recommended method of disposal**.

Note: The rendering company must abide by the requirements for shipping of inedible and condemned material as outlined in TIPM document 10-A-05 Inedible Material - Removal & Receipt of

Burial

The most efficient and secure method of disposal, by burial, is to have it done in A Class I or Class II landfill, as defined in AR 192/96 *Waste Control Regulation*.

Note: Individual landfills have the right to accept, or refuse, waste material from an abattoir. To accept this type of waste they must have a full-time operator who agrees to immediately bury the waste.

The owner of a facility can bury waste material providing:

1. The burial takes place on land owned by the owner of the facility.
2. The amount of waste, in any one burial pit, is restricted to 2500 kg, or less.
3. The burial site is at least:
    a) 100 meters from wells or other domestic water intakes, streams, creeks, ponds, springs and high water marks of lakes, and at least 25 meters from the edge of a coulee, major cut or embankment;
    b) 100 meters from any residences;
    c) 100 meters from any livestock facilities, including pastures, that are situated on land owned, or leased, by another person;

d) 300 meters from a primary highway;

e) 100 meters from a secondary highway;

f) 50 meters from any other road allowance

4. The burial pit is covered with a minimum of one meter of compacted soil or a wooden, or metal, lid designed to exclude scavengers.

   Note: If a lid is used then quicklime must be applied in sufficient amounts to control flies and odor.

5. The bottom of the pit is at least one meter above the seasonal high water table.

   Note: All of the preceding requirements for burial and the following section on composting are direct quotes from AR 229/2000.

Composting

Note: Composting is defined as allowing inedible and condemned material to decompose in a manner that leads to the creation of a stable humus-like material.

The owner of a facility can compost waste material providing:

1. The compost site is located on land owned by the owner of the facility.
2. The compost site is at least:

   a) 100 meters from wells or other domestic water intakes, streams, creeks, ponds, springs and high water marks of lakes, and at least 25 meters from the edge of a coulee, major cut or embankment;

   b) 100 meters from any residences;

   c) 100 meters from any livestock facilities, including pastures, that are situated on land owned, or leased, by another person

3. The compost site is designed to exclude scavengers.
4. Each carcass, or part of a carcass, does not exceed 100 kg.
5. The maximum volume waste material must not exceed 25 percent of the total compost pile.
6. The waste material must be covered by at least 15 cm of composting material.
7. The animals, or parts of them, must be covered by at least 15 cm of composting material.

   Note: Disposal by composting can also be done in a Class I compost facility, as defined in AR 192/96 *Waste Control Regulation* and in accordance with the Code of Practice for Compost Facilities. The reader is advised to contact Alberta Environment for additional information about composting requirements.

Burning

A facility can use an incinerator to burn inedible and condemned materials.

Note: An **incinerator used by a facility** would be classified as a commercial incinerator therefore it **must be licensed** by Alberta Environment.

Meeting the licensing requirements will ensure that burning is done in accordance with AR 124/93 *Substance Release Regulation* and the Code of Practice for Small Incinerators.

The reader is advised to contact Alberta Environment for additional information about the requirements for burning.

Facilities that decide to dispose of their own waste (i.e. use any method other than the services of a rendering plant) will develop and implement written "Disposal Procedures".

Note: The written "Disposal Procedures" will include documentation that can be inspected and all SRMs will be disposed of as stipulated in TIPM document 10-A-04 Specified Risk Materials - Handling of.

To be in compliance with the *Health of Animals Regulations* (Canada) abattoirs that decide to use a method of disposal, other than rendering, must have a CFIA permit to dispose of SRMs.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Note: The following requirements only apply to facilities that do their own disposal of inedible and condemned material.

Requirements for the **"Inedible Material- Disposal Methods"** will be met when:

1. Up-to-date, facility specific written **"Disposal of Inedible Material Procedures"** are on file at the facility.
2. Licences and permits are in place as appropriate for the chosen method of disposal.
3. On site inspections reveal that the **"Disposal of Inedible Material Procedures"** are being implemented.

RELATED SECTIONS OF TIPM

02-D-01 Inedible Facilities, Equipment & Containers
02-D-02 Inedible Room or Area
10-A-04 SRM Removal & Control Program
10-A-05 Inedible Material - Removal & Receipt of

SUBJECT: Condemnations by the Facility Operator	10-A-07
REGULATORY REFERENCES AR 229/2000 *Destruction and Disposal of Dead Animals Regulation* Sections 1(b)(ii), 2(1), 2(4), 2(6) and 2(7)(a)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Many opportunities occur, particularly during cutting and boning operations, whereby meat and meat products may become contaminated after inspection has been completed.

Note: A good example of this would be contamination of portions that fall on the floor during processing.

This document is primarily concerned with meat, or meat products, that have become inedible due to something that has happened after they have been approved by a Meat Inspection Branch (MIB) Inspector.

Note: It also applies to products, from another “Licensed Meat Facility”, which was received in an adulterated condition.

Affected products must be handled (re-conditioned, or reworked) in a manner that will effectively remove the contamination without causing cross-contamination of other meat, or meat products.

If the operator of a “Licensed Meat Facility”(facility) doesn’t wish to follow acceptable salvage, or rework, procedures he is obligated to condemn his, or her, own meat product.

Note: A facility operator can’t condemn any meat, or meat products, which have been “Held”, detained, or seized, by a MIB Inspector.

These products will be identified with the use of a “Held” tag, which ensures that the product is under the control of the Inspector. Only a MIB Inspector has the authority to remove the tag and release, or condemn the product.

Meat products that have been condemned by the abattoir operator must be handled, stored and disposed of in the same manner as any other inedible and/or condemned material.

OBJECTIVE/OUTCOME

Written **“Inedible and Re-work Procedures”** will be developed and implemented that are effective in making meat, or meat products, which have become contaminated, safe for human consumption.

Meat products that have fallen on the floor will be:

1. Immediately removed from the floor.
2. Placed where it will not contact other meat, or meat products.
3. Trimmed to remove visible contamination.
4. Washed.

Note: The sequence of immediate removal, trimming and washing should be standard practice for any type of visible contamination.

The MIB Inspector will be consulted whenever the facility operator is not certain whether salvage procedures:

1. Should have been used;
2. May not have been effective in removing the contamination.

Note: In these cases the affected product should be held for the MIB Inspector who will make one of the following decisions:

a) approve the material in question;

b) condemn the material;

c) recommend further salvage procedures if indicated, or

d) hold the material for further testing (e.g. laboratory tests)

Meat, or meat products, condemned by the operator of the facility will not be recorded on official MIB condemnation forms.

Note: An exception to this would be a situation where the MIB Inspector has authorized the abattoir operator to reject poultry carcasses before they are hung on the evisceration line when readily recognizable conditions were seen on the ante-mortem inspection that clearly indicated that the carcasses would not be suitable.

All meat products condemned by the facility operator will be disposed of in an appropriate manner and in accordance with AR229/2000.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Condemnation by the Facility Operator"** will be met when*:*

1. Up-to-date written **"Inedible Handling & Rework Procedures"**, which are specific for the facility, are on file.

   Note: These procedures must have detailed handling instructions for all types of inedible products, including those that are disposed of, and those that may become inedible, or unsuitable, through processing errors.

   Corrective actions required, to make contaminated products safe for human consumption, must be clearly identified in a stepwise fashion.

2. On site observations demonstrate that the **"Inedible Handling & Rework Procedures"** are being properly implemented as required.

RELATED SECTIONS OF TIPM

02-D-01 Inedible Facilities, Equipment & Containers
02-D-02 Inedible Room or Area
10-A-01 Inedible Material - Handling & Storage of - General
10-A-02 Inedible Material (condemned) - Handling & Storage of
10-A-06 Inedible Material - Disposal Methods

SUBJECT: Salvage for Animal Food	10-B-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 15.1 & 18(1)(b)(ii) Meat Facility Standards (MFS) Sections A.2.4.2, 2.5 (1, 2 & 3), C.1.1.3, E.1.1.1	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2011 **Page 1 of 14**

RATIONALE

Approved meat and meat by-products are suitable for use as animal foods.

Note: One significant difference to this general statement is the matter of Specified Risk Materials (SRMs) from beef carcasses. SRMs are considered to be the part of the beef carcass that is most likely to contain the agent that causes Bovine Spongiform Encephalopathy (B.S.E. or "Mad Cow Disease"). **SRMs CANNOT be used** in animal foods.

All approved meat and meat by-products for animal food are to be handled, processed and stored in the same manner as edible product.

Certain condemned meat and meat by-products, with the authorization of the Meat Inspection Branch (MIB) Inspector, can also be used in animal food.

Note: Meat products, for use in animal food, must not be collected until the post-mortem examination of the carcass has been completed. See the attached Appendix "Disposition For Animal Food" Table

All condemned or non-approved meat and meat by-products for animal food must not be taken into any room in which edible product is chilled, processed or stored. If an operator is doing any further processing of condemned materials and certain approved materials (e.g. green tripe, hooves, stomachs), they require separate facilities and equipment used **only** for these purposes.

To ensure the integrity of human food products the salvaging and/or processing of meat products, for animal food, must be carried out in a safe and sanitary manner.

Note: The facilities and methods used, in a "Licensed Meat Facility" (facility) that salvages inedible material for animal food, must be approved by the Area Manager (AM).

OBJECTIVE/OUTCOME

The facility will have appropriate facilities and equipment for the separation, denaturing, chilling, packaging, labeling and storage of animal food products.

Note: To provide as much physical and operational separation as possible, materials salvaged for animal food must be processed in a section of the facility that is only used for that purpose.

These facilities must be approved by the AM.

Written protocols for the handling of animal foods will be in place.

Note: These protocols must detail the area(s) of the facility that will be used, the processes to be followed and sanitary requirements.

Animal food material will only be taken from carcasses after the post-mortem inspection has been completed.

Note: Only materials from animals being processed at the facility can be used for animal food. **Bringing in material**, from any other source, to produce animal food is **not allowed**.

Notwithstanding the preceding statement, packaged animal food products, produced in another provincially, or federally, regulated facility can be received for freezing, storage and shipping in the frozen state providing they are identified for use as animal food, and their handling does not pose any sanitary problems.

SPECIFIED RISK MATERIAL (SRM) CAN'T BE USED FOR ANIMAL FOOD.

Condemned material will not be collected for use in animal food unless authorized by a MIB Inspector.

Note: Authorization to use condemned material is required to ensure that there is no risk to the health of any animal that eats the food.

MIB Inspectors have access to a publication called the "Meat Inspection Manual". This manual, produced by the Regulatory Service Division (RSD), provides guidance on the suitability of condemned materials for use in animal foods.

If this manual doesn't directly address a particular situation the MIB Inspector will consult with the DV who will make the final decision on the suitability of any condemned material.

Meat products, collected for use in animal food, will be placed in a designated container and promptly moved to the part of the facility that has been designated for the handling of animal food.

Note: Containers for animal food products must have a unique color and a label identifying that it is used for animal food.

Denaturing will be performed, as required, and in a satisfactory manner.

Note: Denaturing is defined as making a meat product unfit for eating (by humans) through the addition of an un-wholesome substance that will adversely affect the appearance and/or taste of the product.

Generally denaturing will be required if the MIB Inspector is of the opinion that the product may be mistaken for an edible product.

Denaturing of lungs, spleens, udders and un-cleaned intestines is generally not required as these products are not likely to be mistaken for product that would be eaten by humans.

Materials intended for use as animal food are commonly denatured by the addition of charcoal or by mixing the collected material with intestines.

The **distal ileum** (part of the intestine) from beef carcasses **must not be used** because **it is SRM**.

Denaturing, when done, must be done in an inedible room, or area.

After packaging animal food products will be labeled in a manner that will:

1. Ensure proper use of the material.
2. Make it possible to conduct a recall if necessary.

Note: Labels for animal food products will:

a) identify the meat product in descriptive terms with lettering at least 1.9 cms in height;

b) carry a statement “Animal Food” or name the animal species the food is intended for also in lettering at least 1.9 cm high;

c) contain the name, address and number of the facility where the animal food product was produced or the name of the person the product was prepared for;

d) state the net quantity of the meat product;

e) state that the animal food must be kept refrigerated, or frozen, unless it:

i) has been packaged in a hermetically sealed container and treated to achieve commercial sterility; or

ii) is dried to attain a water activity of 0.85 or less; or

iii) has a pH of 4.6 or lower; or

iv) is packaged in salt, or a saturated salt solution; and

v) if fermented, has a pH of 5.3 or less, and a water activity of 0.90 or less at the end of the fermentation process and within the appropriate time as set out in the fermentation recipe or

vi) has been subjected to a method of treatment, approved by the AM, that ensures the stability of the animal food product when it is stored at normal room temperature.

Animal food products will be stored in an appropriate manner.

Note: With the approval of the Area Manager (AM) **animal food products** made **from non condemned materials can be** frozen and **stored in a freezer used to store products intended for human consumption**, providing the animal food:

a) is properly labeled as animal food;

b) is kept segregated from human food products in the freezing and/or storage areas;

c) does not pose a hazard to edible meat products

These types of products can also be shipped from the edible shipping area.

The Director, of the RSD, may require separate locked cages, with a log book and written procedures to track the entry and removal of product from the chilling, freezing, and/or storage area before permission will be granted.

All other animal food products must be stored and shipped in a manner that keeps them apart from meat products that have been approved for human consumption.

Facilities processing and storing animal food products, on their premises, **cannot salvage condemned material** for use in their animal foods.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Salvage for Animal Food"** will be met when:

1. Up-to-date written **"Salvaging for Animal Food Procedures"**, which are specific for the facility, are on file.

   Note: These procedures must:

   a) have detailed instructions relating to all items being salvaged, including aspects of the collection, packaging, labelling and storage of meat by-products

   b) detail the facilities, area and equipment that will be used, and the operational controls that will be in place, including chilling and sanitary requirements.

2. Personnel responsible for harvesting the meat by-products are properly trained.

3. On site observation demonstrates that the written **"Animal Food Salvage/Harvesting Procedures"** have been properly implemented such that by-products are harvested in a hygienic manner.

APPENDIX – DISPOSITION FOR ANIMAL FOOD
RED MEAT

CONDITION	COMMENTS/UTILIZATION
Abscesses 001 Module 6-1-1	Post mortem: beef liver**: single abscess is removed** and liver is used for animal food Post mortem: Carcass: numerous abscesses or associated with systemic effects condemn carcass and use carcass for animal food **after removal of lesions on affected parts**

Actinobacillosis (Wooden Tongue) 401 Module 6-1-6	Il Affected **head** is condemned and also the tongue is condemned and , **are not suitable for animal food**. Carcasses condemned for emaciation or systemic changes are suitable for animal food
Actinomycosis (Lump Jaw) 403 Module 6-1-131	Affected **head** is condemned and also the tongue is condemned and are **not suitable for animal food**.Condemned **head and** carcass **with widespread lesions is not suitable** for animal food . Carcasses condemned for emaciation are suitable for animal food.
Adhesions - 511 Peritonitis 571 Module 6-1-177	In acute peritonitis, condemned material is **suitable** for animal food **following removal of the lesions providing there is no evidence of septicemia.** Condemned **material from carcasses with a septicemia is not suitable for animal food.** Material condemned for adhesions is suitable for animal food.
Adhesions - 511 Pleuritis 577 Module 6-1-180	Material from carcasses condemned for acute pleuritis is **suitable** for animal food **following removal of the lesions** providing there is no evidence of septicemia. Condemned **material from a carcass with septicemia is not suitable for animal food**. Material condemned for adhesions is suitable for animal food.
Anemia 910 Module 6-1-10	Condemned materials are suitable for animal food provided the anemia is not accompanied by septicemia.
Arthritis 512 Module 6-1-12	Condemned materials are **suitable for animal food following removal of affected joints** providing there are no indications of a concurrent septicemia.
Ascaris suum (Milk Spots - Pig Round Worm)790 Module 6-1-167	Condemned livers are suitable for animal food because the lesions are only scars.
Ascities 320 Module 6-1-16	Condemned materials are suitable for animal food.
Atrophic Rhinitis 455	Condemned **heads are not suitable for animal food** primarily because of the

Module 6-1-192	association between cats and atrophic rhinitis. With systemic effects **where the lungs are abscessed, condemn the carcass and use for animal food after removal of affected parts.**
Atrophy 210 Module 6-1-20	Condemned material is suitable for animal food.
Black Leg 410 Module 6-1-22	Condemned **material is not suitable for animal food**.
Bone Infection (Osteomyelitis) 150 Module 6-1-166	Condemned material is **suitable** for animal food **following removal of affected bones and lymph nodes.**
Bovine Squamous Cell Carcinoma (Cancer Eye) 620 Module 6-1-227	Condemned material, **other than heads with abscessed or necrotic lesions,** is suitable for animal food.
Bovine Virus Disease (BVD)/ Erosions 094 Module 6-1-79	Condemned material is suitable for animal food.
Bruising 051 Module 6-1-24	Condemned material is suitable for animal food.
Bursitis (Hygroma) 080/081 Module 6-1-26	Condemned material is suitable for animal food.
Calcification 710 Module 6-1-29	Condemned material is suitable for animal food.
Calculi (stones) 355 Module 6-1-210	Affected tissues are suitable for animal food.
Cannibalism 007 Module 6-1-212	Condemned material is **suitable** for animal food **following removal of abscesses**.
Caseous Lymphadenitis (CLA) 420 Module 6-1-31	Condemned material is **suitable** for animal food **following the removal of the abscessed lymph nodes.**
Cellulitis 800 Module 6-1-35	Condemned material is **not suitable for animal food**.
Cirrhosis 521 Module 6-1-37	Condemned livers are suitable for animal food.
Coccidiosis 720 Module 6-1-39	Condemned material is suitable for animal food.

Congestion 523 Module 6-1-42	Condemned material is suitable for animal food.
Congestive Heart Failure (Ascities - 320 & Edema - 340) Module 6-1-16	Condemned materials are suitable for animal food.
Cryptorchid (Ridgeling) 060 Module 6 – 1 - 195	Condemned material is suitable for animal food.
Cysticercosis: **C.bovis is a federally reportable disease.** 735 Module 6-1-44	**Materials condemned for C. bovis, ovis, pisiformis, or tenuicollis are not suitable for animal food.**
Cysts 092 Module 6 -1-54	Condemned materials are suitable for animal food.
Dermatitis 810 Module 6-1-56	In general **most materials**, condemned for various conditions in this section **are not suitable for animal food**.
Diamond Skin Disease (Erysipelas) 435 Module 6-1-61	Condemned material is **not suitable for animal food**.
Edema 340 Module 6-1-16	Condemned materials are suitable for animal food.
Emaciation (Serous Atrophy of Fat) 220 Module 6-1-64	Condemned materials are suitable for animal food.
Emphysema 082 Module 6-1-69	Condemned materials are suitable for animal food.
Endocarditis 572 Module 6-1-72	Condemned material is **not suitable for animal food.**
Enteritis 530 Module 6-1-75	**Condemned material is not suitable for animal food.**
Eosinophilic Myositis 551 Module 6-1-78	**Condemned material is not suitable for animal food.**
Erosions 094 Module 6-1-79	Condemned materials are suitable for animal food.
Erythemia 523 Module 6-1-42	Condemned materials are suitable for animal food.
Erythropoietic Porphyria (Osteohemachromatosis) 130 Module 6-1-162	Condemned materials are suitable for animal food.

Exostosis 120 Module 6-1-82	Condemned materials are suitable for animal food.
Fatty Infiltration 230 Module 6-1-83	Condemned materials are suitable for animal food.
Fibrosis 968 Module 6-1-88	Condemned materials are suitable for animal food.
Fistula 002 Module 6-1-89	Condemned material is **not suitable for animal food.**
Foot Rot (Pododermatitis) 861 Module 6-1-91	Condemned materials are suitable for animal food.
Foreign Body 850 Module 6-1-92	Condemned materials are suitable for animal food.
Foot and Mouth Module 6-1-79	Condemned material is **not suitable for animal food. All material must go to rendering or burial.**
Frostbite 049 Module 6-1-95	Condemned materials are suitable for animal food.
Gangrene 260 Module 6-1-97	Condemned material is **not suitable for animal food.**
Gastritis 535 Module 6-1-99	Condemned material is **not suitable for animal food.**
Goiter (Hypertrophy) 830 Module 6-1-116	Condemned materials are suitable for animal food.
Granuloma 623 Module 6-1-101	Condemned materials are suitable for animal food.
Granulomatous Lymphadenitis 495 Module 6-1-101	**Affected lymph nodes are not suitable for animal food** but other condemned materials are suitable.
Hardware Disease (Traumatic Reticulitis Complex) 855 Module 6-1-104	Condemned material is **suitable** for animal food **following removal of the lesions** unless there are signs of septicemia. **If there is evidence of septicemia condemned material is not suitable** for animal food.
Hemangioma 625	Condemned materials are suitable for

Module 6-1-230	animal food.
Hematoma and Hemorrhage (Major) 053 – Hematoma for clotted blood 576 – Hemorrhage/Major for large accumulations of unclotted blood Module 6-1-107	Condemned materials are suitable for animal food.
Hemorrhage (Petechial and Ecchymotic) 575 – Hemorrhage (Petechial) for pinpoint or petechial, hemorrhages 574 – Hemorrhage/Splash (Ecchymosis) for larger ecchymotic hemorrhages Module 6 -1 - 109	Condemned materials are suitable for animal food.
Hernias 095 Module 6 -1 -198	Condemned material is **suitable** for animal food, **following removal of any peritonitis lesions**, providing emaciation is the primary reason for condemnation.
Hydatid Cysts 089 Module 6-1-112	Condemned material is **not suitable for animal food.**
Hydronephrosis 563 Module 6 -1- 114	Condemned material is **not suitable for animal food.**
Hyperkeratosis 810 (Dermatitis) Module 6-1-57	In general **most materials**, condemned for various conditions in this section **are not suitable for animal food**.
Hypertrophy 830 Module 6-1-116	Condemned materials are suitable for animal food.
Icterus (Jaundice) 920 Module 6-1-123	**Providing there is no indication of septicemia** condemned material is suitable for animal food.
Injection Site Lesions 065 (Antibiotic Residue) 265 (Injection Site) Module 6-1-120	Condemned materials are suitable for animal food.
Intestinal Emphysema (Pigs) 082 Module 6-1-69	Condemned materials are suitable for animal food.
Jaundice (Icterus) 920 Module 6-1-123	**Providing there is no indication of septicemia** condemned material is suitable for animal food.
Johne's Disease 440 Module 6-1-125	Johne's infection is localized in the intestines and mesenteric lymph nodes. A carcass condemned for emaciation is due to Johne's infection is suitable for animal food
Joint III (Navel Infection/Omphalophlebitis) 445 Module 6-1-148	Providing there is no septicemia **condemned carcasses are suitable** for animal food **following removal of the lesions**.

	Carcasses affected with septicemia are not suitable for animal food.
Kidney Cysts 092 Module 6 -1-54	Condemned materials are suitable for animal food.
Liver Flukes 760 Module 6-1-127	Condemned **livers are not suitable for animal food**. Condemned **carcasses are suitable** for animal food **following removal of the liver**.
Lump Jaw (Actinomycosis) 403 Module 6-1-131	Condemned **livers are not suitable for animal food**. Condemned **carcasses are suitable** for animal food **following removal of the liver**.
Lung Worms Module 6-1-173	Lung worms have no effect on the suitability of the carcass. **Lungs containing worms are condemned and are not suitable for animal food.**
Lymphadenitis 546 Module 6-1-134	Condemned material is **not suitable for animal food.**
Lymphosarcoma 635 Module 6-1-232	Condemned materials are suitable for animal food.
Mange (Dermatitis) 810 Module 6-1-56	In general **most materials**, condemned for various conditions in this section **are not suitable for animal food**.
Mastitis 547 Module 6-1-137	Condemned **udders are not suitable for animal food.** **Condemned carcasses are suitable** for animal food following removal of the udder and **providing there is no evidence of septicemia**.
Melanoma 645 Module 6-1-236	Condemned materials are suitable for animal food
Melanosis 071 Module 6-1-140	Condemned materials are suitable for animal food.
Mesotheliomas 660 Module 6-1-242	Condemned materials are suitable for animal food.
Metritis 548 Module 6-1-143	Providing there is no evidence of a septicemia condemned material is **suitable for animal food following removal of the uterus.**

Myositis 550 Module 6-1-146	Condemned material is **not suitable for animal food.**
Navel Infection (Omphalophlebitis) 445 Module 6-1-148	Providing there is no septicemia **condemned carcasses are suitable** for animal food **following removal of the lesions**. **Carcasses affected with septicemia are not suitable for animal food.**
Nephritis 560 Module 6-1-151	Condemned kidneys are **not suitable for animal food.** Other condemned material is **suitable** for animal food **following removal of the kidneys**.
Neurofibroma 660 Module 6-1-241	Condemned materials are suitable for animal food.
Neurological Disorders Module 6-1-153	Condemned material is **not suitable for animal food.**
Nodular Worms 790 Module 6-1-171	Nodular worms cause nodular lesions in intestines in cattle and sheep and have no effect on the carcass. **Affected intestines are condemned and are not suitable for animal food.**
Ochranosis 071 Module 6-1-142	Condemned materials are suitable for animal food.
Orchitis 570 Module 6-1-161	Carcasses condemned for emaciation are **suitable** for animal food **following removal of the testicles.**
Osteohemachromatosis (Pink Tooth) 130 Module 6-1-162	Condemned materials are suitable for animal food.
Osteomalacia 141 Module 6-1-164	Condemned materials are suitable for animal food.
Osteomyelitis 150 Module 6-1-166	Condemned material is **suitable** for animal food **following removal of affected bones and lymph nodes.**
Parasitic Conditions (Miscellaneous) 790 Module 6-1-167	Commonly due to the presence of ascarid larvae migration in the livers of hogs (milk spots). Livers with more than 3 spots are condemned and are suitable for animal food. Carcasses condemned for emaciation or jaundice are suitable for animal food.
Pericarditis 571 Module 6-1-175	Condemned material is **not suitable for animal food.**

Peritonitis 573 Module 6-1-177	In acute peritonitis, condemned material is **suitable** for animal food **following removal of the lesions providing there is no evidence of septicemia.**
	Condemned **material from carcasses with a septicemia is not suitable for animal food.**
	Material condemned for adhesions is suitable for animal food.
Pityriasis Rosea 810 Module 6-1-58	Condemned material is **not suitable for animal food.**
Pleuritis 577 Module 6-1-180	Material from carcasses condemned for acute pleuritis is **suitable** for animal food **following removal of the lesions** providing there is no evidence of septicemia. Condemned **material from a carcass with septicemia is not suitable for animal food**. Material condemned for adhesions is suitable for animal food.
Pneumonia 579 Module 6-1-182	Providing there is no evidence of septicemia condemned carcass is **suitable** for animal food **following removal of the lungs**. **Carcasses with a septicemia are not suitable for animal food.**
Pork Tapeworm (Cysticercus cellulosae) 735 Module 6-1-44	Federal CFIA guidelines have a zero tolerance for C. cellulosae. **A single cyst is considered sufficient to condemn a carcass. Carcass and offal is not suitable for animal food.**
Pyelonephritis 566 Module 6-1-189	Condemned material is **suitable** for animal food **following removal of the kidneys** providing there is no evidence of a septicemia. Condemned **material from animals with a**

	septicemia is not suitable for animal food.
Ridgeling (Retained Testicle/Cryptorchid) 060/064 Module 6-1-195	Carcass condemned for sexual odor is suitable for animal food.
Rhinitis (Atrophic Rhinitis) 455 Module 6-1-193	Condemned **heads are not suitable for animal food** primarily because of the association between cats and atrophic rhinitis in hogs. With systemic effects where the lungs are abscessed, condemn the carcass and use for animal food after removal of affected parts.
Rickets 141 Module 6-1-195	Rickets is a degenerative disease caused by nutritional deficiency or imbalance. Portions may be condemned for bruising or fractures and the carcass if condemned for emaciation is suitable for animal food
Ringworm 891 Module 6-1-197	Affected hide is condemned and is not suitable for animal food
Sarcocystosis 770 Module 6-1-201	Condemned material is **not suitable for animal food.**
Sawdust Liver 520 Module 6-1-203	Condemned materials are suitable for animal food.
Septicemia 930 Module 6-1-207	Condemned material is **not suitable for animal food.**
Serous Atrophy of Fat (Emaciation) 220 Module 6-1-64	Condemned materials are suitable for animal food
Steatitis (Yellow Fat Disease) 102 (Not Otherwise Specified) Module 6-1-209	Condemned materials are suitable for animal food.
Stones (Calculi) 091 Module 6-1-212	Affected tissues are suitable for animal food.
Tail Biting (Cannibalism) 007 Module 6-1-215	Condemned material is **suitable** for animal food **following removal of abscesses.** **Lungs with embolic abscesses are not suitable for animal food.**
Telangiectasis 200 Module 6-1-217	Condemned Material is suitable for animal food.

Toxemia 960 Module 6-1-219	Condemned Material is suitable for animal food.
Trichinosis 101 Module 6-1-222	Condemned material is **not suitable for animal food.**
Tuberculosis (TB) 490 Module 6-1-226	Condemned material is **not suitable for animal food.**
Tumor-Cancer Eye (Bovine Squamous Cell Carcinoma) 620 Module 6-1-229	Condemned material, **other than heads with abscesses or necrotic lesions**, is suitable for animal food.
Tumor-Hemangioma 625 Module 6-1-231	Condemned materials are suitable for animal food.
Tumor-Lymphosarcoma 635 Module 6-1-235	Condemned materials are suitable for animal food.
Tumor-Melanoma 645 Module 6-1-238	Condemned materials are suitable for animal food.
Tumors-Miscellaneous 660 Module 6-1-243	Condemned materials are suitable for animal food.
Uremia 350 Module 6-1-245	Condemned materials are suitable for animal food.
Waterbelly (Urolithiasis) 355 Module 6-1-248	Condemned materials are suitable for animal food.
White Muscle Disease 211 Module 6-1-249	Condemned materials are suitable for animal food.
Xanthosis 079 Module 6-1-251	Condemned materials are suitable for animal food.

RELATED SECTIONS OF TIPM

03-H-02 Recall Procedures

10-A-01 Inedible Material - Handling & Storage of - General

10-A-02 Inedible Material (condemned) - Handling & Storage of

10-A-03 Inedible Material (non-condemned) - Handling & Storage of

10-A-04 SRM Removal & Control Program

SUBJECT: Salvage for Miscellaneous Purposes	10-B-02
REGULATORY REFERENCE AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 18(1)(ii) & 54(4)	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2011 **Page 1 of 12**

RATIONALE

Besides being useful for animal food meat, internal organs and tissues from healthy (non-diseased) carcasses and in some instances from condemned carcasses, can be used, or are needed, for other legitimate purpose some of which include:

1. Education
2. Research
3. Pharmaceutical (drug) manufacturing
4. Bait

Note: An example of where it would be beneficial to release condemned organs, or tissues, would be for research into the condition that caused the condemnation.

Only non-condemned material should be released for routine school biology classes and for pharmaceutical purposes.

The operator of a "Licensed Meat Facility" (abattoir) is not required to seek permission to release non-condemned tissues and organs, from healthy livestock for the above purposes but the facilities used to collect, package and ship these materials need to be approved by the Area Manager (AM).

Note: The AM has to be assured that the salvaging and/or processing of meat products for other purposes is carried out in a safe and sanitary manner and that there is not chance of contaminating edible product.

Permission of the AM is also required for the release of any condemned material.

Note: Once the AM has approved the facilities and procedures for these activities the MIB Inspector will make decisions, on a case by case basis, as to which condemned material can be released.

To ensure the integrity of human food products the salvaging and/or processing of meat products, for miscellaneous purposes, must be carried out in a safe and sanitary manner.

Note: The facilities and methods used, in an abattoir that salvages inedible material for miscellaneous purposes, must be approved by the AM.

OBJECTIVE/OUTCOME

Written procedures will be developed and implemented for each type of inedible material that is going to be collected for miscellaneous purposes.

Note: The **salvage of Specified Risk Material** (SRM), from beef carcasses, is **NOT ALLOWED** under any circumstances.

Facilities, equipment, and procedures for the collecting handling and storage of the salvaged inedible material will be approved by the AM.

Note: The AM will not give approval if there is any chance that the activity will compromise the integrity of edible product.

Condemned material will not be released for any purpose without the permission of the AM and/or resident MIB Inspector.

Note: The MIB Inspector will not approve the release of any condemned material that may be hazardous to humans, or animals, that may come into contact with it.

Information is available, for MIB Inspectors, in the attached Appendix "Disposition for Animal Food" which provides direction as to which condemned meat products are suitable for use in animal food.

MIB Inspectors can also consult with the DV if there is any uncertainty about the suitability of whether any particular product can be used for this purpose.

It is unlikely that products condemned due to the presence of any chemical, or drug, residues would be considered suitable for use as bait.

Condemned material should not be released to schools for use in normal biology classes. In these cases only non-condemned inedible material should be released.

Salvaged material will be kept separate from all edible meat products.

Note: Materials intended for pharmaceutical (drug manufacturing) purposes can be stored with edible meat products provided there is a written program, approved by the AM, which addresses the issues of labeling, segregation, monitoring of procedures, log books for documentation, recall procedures, etc.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for the **"Salvage for Miscellaneous Purposes"** will be met when:

1. Written procedures, which are specific to the facility, are on file.

   Note: These procedures must outline the steps to be taken and the facilities and equipment to be used for salvaging inedible materials for miscellaneous purposes.

2. On site observations demonstrate that the collection, processing and shipping of inedible material, for miscellaneous purposes, does not compromise the safety of any edible meat products.

APPENDIX– DISPOSITION FOR ANIMAL FOOD
RED MEAT

CONDITION	COMMENTS/UTILIZATION
Abscesses 001 Module 6-1-1	Post mortem: beef liver**: single abscess is removed** and liver is used for animal food Post mortem: Carcass: numerous abscesses or associated with systemic

	effects condemn carcass and use carcass for animal food **after removal of lesions on affected parts**
Actinobacillosis (Wooden Tongue) 401 Module 6-1-6	Affected **head** is condemned and also the tongue is condemned, and **are not suitable for animal food**. Carcasses condemned for emaciation or systemic changes are suitable for animal food
Actinomycosis (Lump Jaw) 403 Module 6-1-131	Affected **head** is condemned and also the tongue is condemned and are **not suitable for animal food**.Condemned **head and** carcass **with widespread lesions is not suitable** for animal food. Carcasses condemned for emaciation are suitable for animal food.
Adhesions - 511 Peritonitis 571 Module 6-1-177	In acute peritonitis, condemned material is **suitable** for animal food **following removal of the lesions providing there is no evidence of septicemia.** Condemned **material from carcasses with a septicemia is not suitable for animal food.** Material condemned for adhesions is suitable for animal food.
Adhesions - 511 Pleuritis 577 Module 6-1-180	Material from carcasses condemned for acute pleuritis is **suitable** for animal food **following removal of the lesions** providing there is no evidence of septicemia. Condemned **material from a carcass with septicemia is not suitable for animal food**. Material condemned for adhesions is suitable for animal food.
Anemia 910 Module 6-1-10	Condemned materials are suitable for animal food provided the anemia is not accompanied by septicemia.
Arthritis 512 Module 6-1-12	Condemned materials are **suitable for animal food following removal of affected joints** providing there are no indications of a concurrent septicemia.
Ascaris suum (Milk Spots - Pig Round Worm) 790 Module 6-1-167	Condemned livers are suitable for animal food because the lesions are only scars.

Ascities 320 Module 6-1-16	Condemned materials are suitable for animal food.
Atrophic Rhinitis 455 Module 6-1-192	Condemned **heads are not suitable for animal food** primarily because of the association between cats and atrophic rhinitis. With systemic effects **where the lungs are abscessed, condemn the carcass and use for animal food after removal of affected parts.**
Atrophy 210 Module 6-1-20	Condemned material is suitable for animal food.
Black Leg 410 Module 6-1-22	Condemned **material is not suitable for animal food**.
Bone Infection (Osteomyelitis) 150 Module 6-1-166	Condemned material is **suitable** for animal food **following removal of affected bones and lymph nodes.**
Bovine Squamous Cell Carcinoma (Cancer Eye) 620 Module 6-1-227	Condemned material, **other than heads with abscessed or necrotic lesions,** is suitable for animal food.
Bovine Virus Disease (BVD)/ Erosions 094 Module 6-1-79	Condemned material is suitable for animal food.
Bruising 051 Module 6-1-24	Condemned material is suitable for animal food.
Bursitis (Hygroma) 080/081 Module 6-1-26	Condemned material is suitable for animal food.
Calcification 710 Module 6-1-29	Condemned material is suitable for animal food.
Calculi (stones) 355 Module 6-1-210	Affected tissues are suitable for animal food.
Cannibalism 007 Module 6-1-212	Condemned material is **suitable** for animal food **following removal of abscesses**.
Caseous Lymphadenitis (CLA) 420 Module 6-1-31	Condemned material is **suitable** for animal food **following the removal of the abscessed lymph nodes.**
Cellulitis 800 Module 6-1-35	Condemned material is **not suitable for animal food**.
Cirrhosis 521	Condemned livers are suitable for animal

Module 6-1-37	food.
Coccidiosis 720 Module 6-1-39	Condemned material is suitable for animal food.
Congestion 523 Module 6-1-42	Condemned material is suitable for animal food.
Congestive Heart Failure (Ascities - 320 & Edema - 340) Module 6-1-16	Condemned materials are suitable for animal food.
Cryptorchid (Ridgeling) 060 Module 6 – 1 - 195	Condemned material is suitable for animal food.
Cysticercosis: **C.bovis is a federally reportable disease.** 735 Module 6-1-44	**Materials condemned for C. bovis, ovis, pisiformis, or tenuicollis are not suitable for animal food.**
Cysts 092 Module 6 -1-54	Condemned materials are suitable for animal food.
Dermatitis 810 Module 6-1-56	In general **most materials**, condemned for various conditions in this section **are not suitable for animal food**.
Diamond Skin Disease (Erysipelas) 435 Module 6-1-61	Condemned material is **not suitable for animal food**.
Edema 340 Module 6-1-16	Condemned materials are suitable for animal food.
Emaciation (Serous Atrophy of Fat) 220 Module 6-1-64	Condemned materials are suitable for animal food.
Emphysema 082 Module 6-1-69	Condemned materials are suitable for animal food.
Endocarditis 572 Module 6-1-72	Condemned material is **not suitable for animal food.**
Enteritis 530 Module 6-1-75	**Condemned material is not suitable for animal food.**
Eosinophilic Myositis 551 Module 6-1-78	**Condemned material is not suitable for animal food.**
Erosions 094 Module 6-1-79	Condemned materials are suitable for animal food.
Erythemia 523	Condemned materials are suitable for animal food.

Module 6-1-42	
Erythropoietic Porphyria (Osteohemachromatosis) 130 Module 6-1-162	Condemned materials are suitable for animal food.
Exostosis 120 Module 6-1-82	Condemned materials are suitable for animal food.
Fatty Infiltration 230 Module 6-1-83	Condemned materials are suitable for animal food.
Fibrosis 968 Module 6-1-88	Condemned materials are suitable for animal food.
Fistula 002 Module 6-1-89	Condemned material is **not suitable for animal food.**
Foot Rot (Pododermatitis) 861 Module 6-1-91	Condemned materials are suitable for animal food.
Foreign Body 850 Module 6-1-92	Condemned materials are suitable for animal food.
Foot and Mouth Module 6-1-79	Condemned material is **not suitable for animal food. All material must go to rendering or burial.**
Frostbite 049 Module 6-1-95	Condemned materials are suitable for animal food.
Gangrene 260 Module 6-1-97	Condemned material is **not suitable for animal food.**
Gastritis 535 Module 6-1-99	Condemned material is **not suitable for animal food.**
Goiter (Hypertrophy) 830 Module 6-1-116	Condemned materials are suitable for animal food.
Granuloma 623 Module 6-1-101	Condemned materials are suitable for animal food.
Granulomatous Lymphadenitis 495 Module 6-1-101	**Affected lymph nodes are not suitable for animal food** but other condemned materials are suitable.
Hardware Disease (Traumatic Reticulitis Complex) 855 Module 6-1-104	Condemned material is **suitable** for animal food **following removal of the lesions** unless there are signs of septicemia. **If there is evidence of septicemia condemned material is not suitable** for

	animal food.
Hemangioma 625 Module 6-1-230	Condemned materials are suitable for animal food.
Hematoma and Hemorrhage (Major) 053 – Hematoma for clotted blood 576 – Hemorrhage/Major for large accumulations of unclotted blood Module 6-1-107	Condemned materials are suitable for animal food.
Hemorrhage (Petechial and Ecchymotic) 575 – Hemorrhage (Petechial) for pinpoint or petechial, hemorrhages 574 – Hemorrhage/Splash (Ecchymosis) for larger ecchymotic hemorrhages Module 6 -1 - 109	Condemned materials are suitable for animal food.
Hernias 095 Module 6 -1 -198	Condemned material is **suitable** for animal food, **following removal of any peritonitis lesions**, providing emaciation is the primary reason for condemnation.
Hydatid Cysts 089 Module 6-1-112	Condemned material is **not suitable for animal food.**
Hydronephrosis 563 Module 6 -1- 114	Condemned material is **not suitable for animal food.**
Hyperkeratosis 810 (Dermatitis) Module 6-1-57	In general **most materials**, condemned for various conditions in this section **are not suitable for animal food**.
Hypertrophy 830 Module 6-1-116	Condemned materials are suitable for animal food.
Icterus (Jaundice) 920 Module 6-1-123	**Providing there is no indication of septicemia** condemned material is suitable for animal food.
Injection Site Lesions 065 (Antibiotic Residue) 265 (Injection Site) Module 6-1-120	Condemned materials are suitable for animal food.
Intestinal Emphysema (Pigs) 082 Module 6-1-69	Condemned materials are suitable for animal food.
Jaundice (Icterus) 920 Module 6-1-123	**Providing there is no indication of septicemia** condemned material is suitable for animal food.
Johne's Disease 440 Module 6-1-125	Johne's infection is localized in the intestines and mesenteric lymph nodes. A carcass condemned for emaciation is due to Johne's infection is suitable for animal food
Joint III (Navel	Providing there is no septicemia

Infection/Omphalophlebitis) 445 Module 6-1-148	**condemned carcasses are suitable** for animal food **following removal of the lesions**. **Carcasses affected with septicemia are not suitable for animal food.**
Kidney Cysts 092 Module 6 -1-54	Condemned materials are suitable for animal food.
Liver Flukes 760 Module 6-1-127	Condemned **livers are not suitable for animal food**. Condemned **carcasses are suitable** for animal food **following removal of the liver**.
Lump Jaw (Actinomycosis) 403 Module 6-1-131	Condemned **livers are not suitable for animal food**. Condemned **carcasses are suitable** for animal food **following removal of the liver**.
Lung Worms Module 6-1-173	Lung worms have no effect on the suitability of the carcass. **Lungs containing worms are condemned and are not suitable for animal food.**
Lymphadenitis 546 Module 6-1-134	Condemned material is **not suitable for animal food.**
Lymphosarcoma 635 Module 6-1-232	Condemned materials are suitable for animal food
Mange (Dermatitis) 810 Module 6-1-56	In general **most materials**, condemned for various conditions in this section **are not suitable for animal food**.
Mastitis 547 Module 6-1-137	Condemned **udders are not suitable for animal food.** **Condemned carcasses are suitable** for animal food following removal of the udder and **providing there is no evidence of septicemia**.
Melanoma 645 Module 6-1-236	Condemned materials are suitable for animal food.
Melanosis 071 Module 6-1-140	Condemned materials are suitable for animal food.
Mesotheliomas 660 Module 6-1-242	Condemned materials are suitable for animal food.
Metritis 548	Providing there is no evidence of a septicemia condemned material is **suitable**

Module 6-1-143	**for animal food following removal of the uterus.**
Myositis 550 Module 6-1-146	Condemned material is **not suitable for animal food.**
Navel Infection (Omphalophlebitis) 445 Module 6-1-148	Providing there is no septicemia **condemned carcasses are suitable** for animal food **following removal of the lesions**. **Carcasses affected with septicemia are not suitable for animal food.**
Nephritis 560 Module 6-1-151	Condemned kidneys are **not suitable for animal food.** Other condemned material is **suitable** for animal food **following removal of the kidneys**.
Neurofibroma 660 Module 6-1-241	Condemned materials are suitable for animal food.
Neurological Disorders Module 6-1-153	Condemned material is **not suitable for animal food.**
Nodular Worms 790 Module 6-1-171	Nodular worms cause nodular lesions in intestines in cattle and sheep and have no effect on the carcass. **Affected intestines are condemned and are not suitable for animal food.**
Ochranosis 071 Module 6-1-142	Condemned materials are suitable for animal food.
Orchitis 570 Module 6-1-161	Carcasses condemned for emaciation are **suitable** for animal food **following removal of the testicles.**
Osteohemachromatosis (Pink Tooth) 130 Module 6-1-162	Condemned materials are suitable for animal food.
Osteomalacia 141 Module 6-1-164	Condemned materials are suitable for animal food.
Osteomyelitis 150 Module 6-1-166	Condemned material is **suitable** for animal food **following removal of affected bones and lymph nodes.**
Parasitic Conditions (Miscellaneous) 790 Module 6-1-167	Commonly due to the presence of ascarid larvae migration in the livers of hogs (milk spots). Livers with more than 3 spots are condemned and are suitable for animal food. Carcasses condemned for emaciation or jaundice are suitable for animal food.
Pericarditis	Condemned material is **not suitable for**

571 Module 6-1-175	**animal food.**
Peritonitis 573 Module 6-1-177	In acute peritonitis, condemned material is **suitable** for animal food **following removal of the lesions providing there is no evidence of septicemia.**
	Condemned **material from carcasses with a septicemia is not suitable for animal food.**
	Material condemned for adhesions is suitable for animal food.
Pityriasis Rosea 810 Module 6-1-58	Condemned material is **not suitable for animal food.**
Pleuritis 577 Module 6-1-180	Material from carcasses condemned for acute pleuritis is **suitable** for animal food **following removal of the lesions** providing there is no evidence of septicemia. Condemned **material from a carcass with septicemia is not suitable for animal food**. Material condemned for adhesions is suitable for animal food.
Pneumonia 579 Module 6-1-182	Providing there is no evidence of septicemia condemned carcass is **suitable** for animal food **following removal of the lungs**. **Carcasses with a septicemia are not suitable for animal food.**
Pork Tapeworm (Cysticercus cellulosae) 735 Module 6-1-44	Federal CFIA guidelines have a zero tolerance for C. cellulosae. **A single cyst is considered sufficient to condemn a carcass. Carcass and offal is not suitable for animal food.**
Pyelonephritis 566 Module 6-1-189	Condemned material is **suitable** for animal food **following removal of the kidneys** providing there is no evidence of a septicemia. Condemned **material from animals with a septicemia is not suitable** for animal food.
Ridgeling (Retained Testicle/Cryptorchid)	Carcass condemned for sexual odor is

060/064 Module 6-1-195	suitable for animal food.
Rhinitis (Atrophic Rhinitis) 455 Module 6-1-193	Condemned **heads are not suitable for animal food** primarily because of the association between cats and atrophic rhinitis in hogs. With systemic effects where the lungs are abscessed, condemn the carcass and use for animal food after removal of affected parts.
Rickets 141 Module 6-1-195	Rickets is a degenerative disease caused by nutritional deficiency or imbalance. Portions may be condemned for bruising or fractures and the carcass if condemned for emaciation is suitable for animal food
Ringworm 891 Module 6-1-197	Affected hide is condemned and is not suitable for animal food
Sarcocystosis 770 Module 6-1-201	Condemned material is **not suitable for animal food.**
Sawdust Liver 520 Module 6-1-203	Condemned materials are suitable for animal food.
Septicemia 930 Module 6-1-207	Condemned material is **not suitable for animal food.**
Serous Atrophy of Fat (Emaciation) 220 Module 6-1-64	Condemned materials are suitable for animal food
Steatitis (Yellow Fat Disease) 102 (Not Otherwise Specified) Module 6-1-209	Condemned materials are suitable for animal food.
Stones (Calculi) 091 Module 6-1-212	Affected tissues are suitable for animal food.
Tail Biting (Cannibalism) 007 Module 6-1-215	Condemned material is **suitable** for animal food **following removal of abscesses.** **Lungs with embolic abscesses are not suitable for animal food.**
Telangiectasis 200 Module 6-1-217	Condemned Material is suitable for animal food.
Toxemia 960 Module 6-1-219	Condemned Material is suitable for animal food.

Trichinosis 101 Module 6-1-222	Condemned material is **not suitable for animal food.**
Tuberculosis (TB) 490 Module 6-1-226	Condemned material is **not suitable for animal food.**
Tumor-Cancer Eye (Bovine Squamous Cell Carcinoma) 620 Module 6-1-229	Condemned material, **other than heads with abscesses or necrotic lesions**, is suitable for animal food.
Tumor-Hemangioma 625 Module 6-1-231	Condemned materials are suitable for animal food.
Tumor-Lymphosarcoma 635 Module 6-1-235	Condemned materials are suitable for animal food.
Tumor-Melanoma 645 Module 6-1-238	Condemned materials are suitable for animal food.
Tumors-Miscellaneous 660 Module 6-1-243	Condemned materials are suitable for animal food.
Uremia 350 Module 6-1-245	Condemned materials are suitable for animal food.
Waterbelly (Urolithiasis) 355 Module 6-1-248	Condemned materials are suitable for animal food.
White Muscle Disease 211 Module 6-1-249	Condemned materials are suitable for animal food.
Xanthosis 079 Module 6-1-251	Condemned materials are suitable for animal food.

RELATED SECTIONS OF TIPM

03-H-02 Recall Procedures

10-A-01 Inedible Material - Handling & Storage of - General

10-A-02 Inedible Material (condemned) - Handling and Storage of

10-A-03 Inedible Material (non-condemned) - Handling and Storage of

10-A-04 SRM Removal & Control Program

SUBJECT: Inspection Legend - Use of	11-A-01
REGULATORY REFERENCES: AR 42/2003 Meat Inspection Regulation (Consolidated to 112/2009) Sections 15.1, 53, 69 (1) & (2), 70, 71 & 72 Meat Facility Standard (MFS) Section F.1.2.1, 3.1	**Initial Release** Sept 1, 2009 **Revised on** Sept 1, 2010 **Page 1 of 4**

RATIONALE

The **"Alberta Approved" Inspection Legend** (IL) is used to formally and legally identify meat that has been inspected, at a "Licensed Meat Facility" (abattoir) and approved for sale within the Province.

Note: The IL may be applied directly to the meat product or it may be placed on the packaging.

Direct application is usually done with a stamp.

When the carcass is too small for a stamp (e.g. poultry and rabbits) a tag, with the IL printed on it can be used in place of a stamp.

Legends on the packaging, or package labels, may be pre-printed or they may be applied with a stamp.

All stamps, labels, tags, containers, etc. which contain the IL must be handled in a manner that ensures there is no fraudulent use of the IL.

Note: The integrity of the IL is a crucial component of the "Alberta Meat Inspection Program" which has the goal of ensuring a continuous supply of disease-free, clean and wholesome meat for human consumption.

Every possible effort must be made to prevent the intentional, or inadvertent, use of the IL.

To maintain the integrity of the IL only certain individuals can be authorized to apply it.

OBJECTIVE/OUTCOME

The IL will have a **unique abattoir number**, and the IL is in one of the following forms:

Note: This applies to both IL stamps and printed legends. If option 2 is used, the plant number must also be placed on the product to supplement the IL.

Only forms of the IL that have been approved by the Director of the Regulatory Services Division (RSD) will be used.

Note: In accordance with section 72(a) of AR 42/2003 it is also illegal to use any

stamp, tag, label, or mark that is similar to the IL.

The IL will only be applied by authorized individuals.

Note: All MIB Inspectors are authorized to apply the IL.

The MIB Inspector may allow certain abattoir personnel to stamp carcasses, with the IL, providing they are under the direct supervision of the MIB Inspector. Direct Supervision is required to ensure that the IL is applied properly and only to carcasses that have passed the post-mortem inspection.

The abattoir operator can apply to the Director of the RSD, to have custody and control of the IL.

The **IL** will **only** be **applied to meat that has been approved,** by an MIB Inspector.

Note: Meat can only be approved following completion of an ante-mortem (before death) and a post-mortem (after death) inspection.

The IL will be properly applied.

Note: Proper application means that the legend will be:

a) legible;

b) applied directly to the edible meat product (ie. Carcass stamp) OR a tag attached to the product, OR a tag or other label attached to the immediate container in which the product is placed, OR a label that is applied to or forms part of the immediate container, excluding the bottom.

The size of the inspection legend should be such that no transverse measurement through the centre of the legend will be,

(a) less than 10 millimetres, if the legend is placed on a package label

(b) less than 25 millimetres, if the legend is stamped directly on a meat product (ie. Carcass stamp).

Only ink that is safe for human consumption will be used to apply an IL directly to a carcass.

Custody of the Inspection Legend

In accordance with section 70(2) of AR 42/2003 an operator authorized under 69(1)(c) may have custody & control of the IL providing they are willing to assume responsibility for appropriate use and security. Applications must be made, in writing, to the Director of the RSD.

Note: The RSD has developed a form called the MIF - 36 “Application for Custody and Control of the Meat Inspection Legend” for this application.

The specific types of tags, labels, boxes, stamps, etc. that the operator wishes to exercise custody over, must be clearly specified on the MIF - 36.

In addition the operator will clearly specify, in writing, exactly how the integrity of the IL will be maintained.

When the **operator** of the abattoir is **not authorized** to have custody and control of the IL all stamps, labels, tags and containers bearing the IL will be secured when the MIB

Inspector is not at the abattoir.

Note: Unless the abattoir operator has been given authorization for custody, the MIB Inspector will, before leaving the abattoir, ensure that all stamps, tags and containers bearing the IL are secured in a lockable:

a) cupboard,

b) cabinet, or

c) room under the direct control of an inspector

MIB Inspectors are duty bound to immediately report, to their "Area Manager" (AM) or "Regional Supervisor" (RS), any deviation from "Normal", which might indicate possible fraudulent use of the IL (e.g. an unlocked stamp cabinet, damaged cabinet, etc.).

Where the **operator <u>has</u>** been granted **<u>authority</u>** for the custody and control of the IL appropriate documentation will be available at all times.

Note: A signed copy of the MIF - 36 is appropriate documentation providing the agreed upon **<u>control methods</u>** are **<u>attached</u>**. A copy must be on file in the offices of the:

a) Abattoir

b) MIB Regional Office

c) Director

Operators that have been granted custody of the IL will ensure that they abide by the approved control measures that are attached to the MIF - 36.

Note: If the operator fails to abide by the agreed upon control measures they face the possibility of an interruption and/or loss of inspection service and having all ILs being put under direct control and custody of the MIB Inspector.

MIB Inspectors are responsible for ensuring that the conditions specified on the signed MIF - 36 are met at all times. They also have to report any discrepancies to their AM and/or RS.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Inspection Legend- Use Of"** will be met when:

1. All ILs are under the direct control and custody of a MIB Inspector or, where authorization for custody and control has been granted to the operator of the abattoir, appropriate written control procedures are on file.

   Note: These written procedures must be attached to a completed MIF – 36. The MIB inspector is responsible to ensure that proper measures are adopted to control official items. Specific controls to certain items are described below. A designated employee must sign for a stamp when it is taken out or returned. A daily inventory of labels bearing the IL is conducted by the inspection staff on an on-going basis. A check of the inventory is made by the RS during a supervisory visit. It is sufficient to reconcile the total numbered ordered with the total labels bearing the IL stamps issued to the facility with those remaining in the care and control of the MIB. Any discrepancy must be immediately investigated.

2. On site observations reveal that ILs are:
    a) applied only to approved meat products;
    b) placed in the proper locations on the carcass;

        Note: Directive MI - 14 “Inspection Legends - Application of” has been developed by the RSD. All MIB Inspectors will have a copy of this Directive.

    c) secured when not being used by an authorized individual;
3. The abattoir has on file, a current documented list of all products the facility produces, including labeling instructions.

        Note: This list must clearly indicate when an IL is required and where the IL must be located (e.g. on the product, on the packaging material, on the label, etc.

RELATED SECTIONS OF TIPM

11-C-01 Label Information for Pre-packaged Retail Products

SUBJECT: Packaging Materials	11-B-01
REGULATORY REFERENCES *Food and Drug Regulations* (Canada) (C.R.C., c. 870) Division 23	**Initial Release** Sept 1, 2009
	Page 1 of 3

RATIONALE

Proper packaging is a critical stem in ensuring that meat and meat products remain safe and wholesome.

Materials used must not be a potential source of contamination.

Only packaging materials approved by the Canadian Food Inspection Agency (CFIA) should be used.

Unapproved packaging materials may contain toxic (poisonous) ingredients that could migrate into the meat, or meat product.

Note: Migration of toxic ingredients is most likely to occur when there is wetting of the packaging material leading to its deterioration.

Micro-organisms (bacteria, molds, fungi, etc.) and toxins on the outside of the packaging can migrate into the meat, or meat product, if the integrity of the packaging material is lost due to wetting.

Note: When pieces of meat, or exposed meat products, are placed in un-waxed cardboard containers, liners must be used and when waxed cartons are used, every effort must be made to prevent contact between meat products and the external surfaces of the container.

Appropriate packaging materials will protect meat and meat products from:

1. Contamination by micro-organisms
2. Dirt
3. Physical damage
4. Chemical contamination

Note: The packaging material must effectively perform the above functions without becoming a source of contamination in itself.

Appropriate packaging materials must not impart odors, flavors or color to the meat or meat products.

In addition to protecting meat, or meat products, packaging materials must not be designed in a manner that will give a false impression about the quality of the meat, or meat products.

OBJECTIVE/OUTCOME

Only materials that have been approved, by the CIFA, will be used for containers and other types of packaging.

Note: The CFIA publishes a document called the “Reference Listing of Accepted Construction Materials, Packaging Materials and Non-Food Chemical Products”.

This document can be accessed on the internet at:

http://www.inspection.gc.ca/english/fssa/reference/refere.shtml

All containers will be:

1. Durable.
2. Free of contaminants.
3. Suitable for packaging meat products, or inedible materials, as required.
4. Capable of protecting meat and meat products from contamination.

Containers, or packaging materials, will not impart any undesirable substance to the meat product, either chemically, or physically.

"**Prepackaged Meat Products**"

Note: These types of products are intended for sale directly to the customer.

"Prepackaged Meat Products can be packaged in:

1. Opaque bags, casings, or wrappings of any color.
2. Tinted transparent, or semi-transparent, bags, wrappings, or films, under the following conditions:
   a) a declaration stating that the container is colored is on the label;
      Note: The label must be in close proximity to the product, or if it is on a container the declaration must be printed repeatedly. An example of a declaration would be "Beef Sausage in Colored Casing".
   b) lettering for the declaration will be at least one-half the size of the lettering for the product name;
   c) a cross section of the meat is visible through a clear colorless film;
   d) wrappings for articles such as sliced bacon, or fresh (uncooked) meat products don't have any red lines, or designs;
      Note: This is to ensure that the packaging doesn't give a false impression about the leanness of the product.
   e) Packaging for bacon slices (belly or side) will have a clear area that is large enough to expose at least 66% (2/3) of the bacon strip length as well as the complete width of the bacon strip.

Examples of retail containers, or protective materials, include but are not limited to:

1. Casings (natural and artificial)
2. Cartons
3. Glass jars
4. Bags, or pouches

   Note: A bag can be opened or sealed and may be used as a primary or secondary piece of packaging. A pouch is normally sealed and used as a primary package. Pouches usually contain some sort of seasoning, paste, or sauce.

5. Cans
6. Wraps including netting

    Note: Netting must have a significantly contrasting color from the product it is covering.

    All wraps must be of a suitable color and design which means that wraps will not create a false impression about the type of product to which they have been applied.

"Non-Prepackaged Meat Products"

Note: This category, of meat products, refers to those that are not intended to be sold directly to the consumer in their original container because they require slicing, or cutting, before they can be offered for sale. They would include meat products sold to deli outlets, hotels and restaurants.

Such products are not required to have special markings, or declarations, nor do they have to reveal a clear cross section of the meat product.

Note: Examples of non-retail containers, or protective materials, include, but are not limited to:

a) Combo bins
b) Bags, including stockinettes
c) Cartons
d) Cans

All labeling materials (e.g. tags) will be durable and suitable for their intended purpose.

Any ink that may contact meat, or meat products, must be safe for human consumption.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Packaging Materials"** will be met when:

1. All packaging materials are suitable for use on meat products.

    Note: Only food packaging materials that have been approved by the CFIA are considered to be suitable.

2. The documented list of all products produced in the facility includes packaging materials and methods.

    Note: This is a specific requirement of section 9-1(b) of the MFS.

3. On site observations demonstrate that all meat and meat products are packaged properly and according to the facility's documented list.

RELATED SECTIONS OF TIPM

11-C-01 Label Information for Pre-packaged Retail Products

SUBJECT: Label Information for Pre-packaged Retail Products	11-C-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections 3.1, F.1.2.1	**Initial Release** Sept 1, 2009 **Revision Date** Sept 1, 2011 **Page 1 of 3**

RATIONALE

Consumers have the right to know:

1. What the product they are buying contains.
2. Where it came from.
3. That the product is safe for human consumption.

   Note: The "Alberta Approved" Inspection Legend (IL) must be a part of the labeling.

   This legend provides evidence that the meat, or meat product, was produced and prepared in accordance with the law.

4. How it should be stored.

   Note: Storage instructions must be sufficient to ensure that the safety of the product is not compromised.

5. Whether it is ready to eat (RTE).
6. What needs to be done to make it edible if it is not RTE.
7. That they can trust what is on the label.

To meet the above requirements all label information needs to be truthful and clearly understandable.

Note: Steps have to be taken to ensure that the product isn't misrepresented through:

a) improper, or untruthful, labeling;

b) use of packaging that gives a false appearance of the product;

c) altered, or falsified, inspection legends

Federal and provincial "**Food Safety Legislation**" is **intended to**:

1. Protect the consumer from unsafe food, or fraudulent practices.
2. Promote fairness in trade and food manufacturing practices.

Information on the label, of meat products, should conform to all applicable provincial and federal laws relating to the truthfulness of the content and style of printing.

Appropriate labeling is critical for:

1. Providing assurance that the product has been properly inspected.

   Note: As previously stated the inspection legend provides this assurance.

2. Appropriate product storage.

   Note: Storage instructions provide guidelines for both retail operators and the consumer to ensure that the safety of the product is not compromised.

3. Ensuring that the product is used properly.

   Note: The label should serve to inform the consumer that the product is either ready to eat or it requires other processes, or treatments, (e.g. cooking) before it is RTE.

4. Facilitating the recall of defective product.

   Note: The complete name and address of the "Licensed Meat Facility" (facility) that produced the product along with the lot, or batch numbers, are critical pieces of label information for a successful recall in case of a food safety issue.

OBJECTIVE/OUTCOME

"Prepackaged Meat Products" will bear, or will be accompanied by, sufficient information to provide the receiver of the product with a clear understanding of how to handle, display, store, prepare and use the product safely and correctly.

Note: "Prepackaged" means that the product is contained in the package that it will normally be in when it is sold to a consumer, or end user.

Meat products (e.g. deli meats) that are served by a clerk and **packaged at the time of sale** do not require a label because they **are not considered to be "Prepackaged** Foods".

Label information will be presented in one of the following ways:

1. On a tag affixed directly to the product itself.
2. On a tag, or other label, attached to the immediate container that the product is in.
3. On a label applied to an object that forms part of the immediate container.

Note: "Immediate container" **usually** refers to the food grade packaging material that physically contacts the meat product unit.

In accordance with the *Consumer Packaging and Labeling Act* (Canada), and the *Food and Drug Act* (Canada) and associated regulations all tags, or labels, on meat, or meat products, will have the following mandatory information:

1. Identity of the product.

   Note: Products should be identified by their common name, or in terms that accurately describe the product.

2. Net quantity of product.

   Note: This requirement does not apply to meat products that are pre-packaged at a random weight.

3. Name and address of the meat plant where the product was produced, or labeled, with the words "Prepared for" followed by the name and address of the person, or facility, for whom the product was produced, or labeled.

4. The inspection legend.
5. A listing of product ingredients.

   Note: Product ingredients must be listed as a percentage of the product, or in descending order of their proportion in the product.

6. A listing of the **components of** the product **ingredients**.

   Note: Components of the product ingredients must be listed, on the label, immediately after each ingredient. This is done to clearly indicate that they are components of that particular ingredient.

7. Storage instructions.

   Note: Products that meet the proper "Shelf Stable" requirements do not require storage instructions because they are safe to consume and will not spoil at room temperature.

8. Durable life of the product.

   Note: This requirement applies if the durable life of the product is 90 days, or less. The durable life is expressed with the words "Best Before" followed by the appropriate date.

   Meat products packaged at the time of sale, which have a durable life of 90 days, or less, may be labeled as above, including storage instructions, or a packaging date and accompanying durable life information, on the label, or on a poster next to the meat product.

9. The wording "May Contain Kidneys" (as required).

   Note: This wording is required on the label of meat products that were derived from young chickens, or ducks.

For more information on labeling requirements the reader is referred to the 2003 "Federal Guide to Food Labeling and Advertising".

Note: This document can be accessed at:

http://www.inspection.gc.ca/english/fssa/labeti/guide/toce.shtml

RELATED SECTIONS OF TIPM

11-B-01 Packaging Materials
11-C-04 Ingredient Listing & Allergen Information
11-C-05 Nutritional Facts

SUBJECT: Label Information for Custom Order Products	11-C-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 6(1), 15.1 & 77 Meat Facility Standards (MFS) Sections F.1.2 (1 & 2)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

For the purpose of this document a "Custom Order" is defined as a situation where the "Licensed Meat Facility" (facility) processes an animal, or carcass, for the individual that owns the animal, or carcass, and who advises the facility that it is intended for their own use, or for their "household".

Note: Section 6(1)(a) of AR 42/2003 *Meat Inspection Regulation* defines "household" as the producer, the producers spouse, children, siblings and parents as well as current employees that live in or on property that belongs to the producer.

"Custom Order" animals that are brought into an abattoir, for slaughter, must be inspected.

Carcasses that originate from **on-farm slaughter**, either by the owner, or a mobile butcher, **don't have to be inspected**. Uninspected carcasses must be for "household" use as defined by AR 42/2003.

Note: To ensure that meat products, from uninspected carcasses, are not offered for retail sale the carcasses must be stamped "UNINSPECTED" and when processing has been completed each edible part of the carcass, or the container, will be labeled "UNINSPECTED - NOT FOR SALE".

The owner of a "Custom Order" animal, or carcass, is knowledgeable about the origins of that animal, or carcass, thus doesn't require the same amount of detailed label information that another person would require.

Note: If the person that placed the custom order intends to sell any of the meat, or meat products, to the public, at another location, full mandatory label information is required, including ingredient and nutritional information.

The **end distributor** is **ultimately responsible** for ensuring that the meats, or meat products, are properly labeled including identity of the location where the final packaging was done.

The preceding notes only apply to inspected meat products. **Uninspected meat**, or meat products, **can't be sold** or given to a third party other than to members of the owner's "household" as defined in AR 42/2003.

OBJECTIVE/OUTCOME

All “Custom Order” meat products will be labeled with the following minimum information:

1. Date of processing.

   Note: The actual date of processing or a production code can be used. The date of processing is mandatory in case it is necessary to recall the product. For recall purposes the facility must have a record of the quantity of product processed.

2. Contents of the package (e.g. type of cut).

3. Identification of the facility.

“Custom Order” meat products derived from an **uninspected carcass** will be **labeled** “**UNINSPECTED - NOT FOR SALE**”.

When requested the facility will provide the owner with a list of any ingredients that were used in the preparation of the final meat product.

RELATED SECTIONS OF TIPM

03-H-03 Batch & Distribution Records

SUBJECT: Label Information for Bulk Shipping Containers	11-C-03
REGULATORY REFERENCES: AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Sections F.1.1.1, F.1.2 (1 & 2)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

The end user, of a meat product, from a commercial, industrial, or institutional, source has the same right to pertinent information as an end user that purchases a meat product from a retail source.

All labels, including those on bulk containers must comply with all applicable provincial and federal laws relating to the truthfulness of the content and style of printing.

Note: "Food Safety Legislation", both provincial and federal, is intended to:

a) protect the consumer from unsafe food, or fraudulent practices;
b) promote fairness in trade and food manufacturing practice;
c) ensure that meat and meat products can be recalled if necessary

A "Licensed Meat Facility" (facility) is allowed to use bulk containers for meat products that are intended for commercial, industrial, or institutional, use providing:

1. The containers, or cases, are not intended for sale to the final consumer.

   Note: The term **"Bulk Container"** includes both the outer and inner **packages** providing they are **not for sale** to end **consumers**.

   Meat products intended for a delicatessen are an example of a product intended for commercial use. Meats used in a restaurant would also fall into this category.

   Bulk shipping containers can also be used **for products** that are going to be **repackaged** by a distributor before they are sold (e.g. many birds in one bag being split into many bags with various end weights). In these cases, '**the distributor is responsible** for the **labeling of the finished product** including an accurate recording of the final net quantity.

2. The label, or tag, on each bulk container contains sufficient information to ensure that the final user has access to the following information:

   a) contents of the container;
   b) where it came from;
   c) assurance that the product is safe for consumption;

      Note: The inspection legend provides this assurance.

   d) how the product should be stored;

      Note: Storage instructions must be sufficient to ensure that the safety of the product is not compromised.

   e) whether the product is ready to eat (RTE) or not;
   f) what must be done to make the product edible (if applicable);
   g) assurance that they can trust what is on the label

The labels, or tags, on bulk containers must have sufficient information to allow for an effective recall in the event of a food safety issue.

Note: Essential recall information includes:

a) complete name and address of the facility that produced the product;

b) lot, or batch, number

For complete information on all labeling requirements the reader is referred to the 2003 "Federal Guide to Food Labeling and Advertising.

Note: This publication can be accessed at:

http://www.inspection.gc.ca/english/fssa/labeti/guide/toce.shtml

OBJECTIVE/OUTCOME

Bulk shipping containers will have a tag, or label, affixed to it that provides the following information:

1. Identity of the product.
   Note: The common name, or terms that are descriptive of the product, should be used.
2. Net quantity of the product.
3. Name and address of the facility where the product was produced.
   Note: An alternative is to use the wording "Prepared for" followed by the name and address of the person, or company, that the product was produced, or labeled for.
4. The inspection legend.
5. Product ingredients.
   Note: Ingredients must be listed in descending order of their proportion, in the product, or as a percentage of the product (if applicable).
6. Components of the ingredients of the product.
   Note: Ingredient components must be listed on the label, or tag:
   a) immediately after the ingredient of which they are components;
   b) in a manner that indicates they are components of that ingredient;
   c) in descending order of their proportion in the ingredient (if applicable)
7. Storage instructions.
8. Product durability.
   Note: This requirement applies if the durable life of the product is 90 days or less. The durable life is expressed with the words "Best Before" followed by the appropriate date.
9. A statement "May Contain Kidneys" (if applicable).
   Note: This statement is required for bulk containers that have unlabelled carcass, or portions of carcasses, of young chickens, or ducks.

There will be sufficient information, on the bulk container, to distinguish different lots from each other.

Note: This information is needed to facilitate recalls.

RELATED SECTIONS OF TIPM

11-A-01 Meat Inspection Legend - Use of
11-B-01 Packaging Materials
11-C-04 Ingredient Listing & Allergen Information
11-C-05 Nutritional Facts

SUBJECT: Ingredient Listing & Allergen Information	11-C-04
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 15.1 Meat Facility Standards (MFS) Section F.1.2.1	**Initial Release** Sept 1, 2009 **Revision Date** Sept 1, 2011 **Page 1 of 3**

RATIONALE

A variety of meat products contain ingredients that are capable of causing adverse reactions in hypersensitive (allergic) individuals.

Note: The severity of these reactions can vary from minor to life threatening.

Incidents of allergic and sensitivity reactions are being reported more frequently.

Note: Problems have been reported with both domestic and imported foods.

Most adverse food reactions are caused by the following foods and their derivatives:

1. Peanuts
2. Tree nuts

   Note: Examples of tree nuts include but are not limited to: almonds, Brazil nuts, cashews, hazelnuts, macadamia nuts, pecans, pine nuts, pistachios and walnuts.
3. Sesame seeds
4. Milk
5. Eggs
6. Fish
7. Crustaceans

   Note: Examples of crustaceans include but are not limited to: crab, shrimp, crayfish and lobster.
8. Shellfish

   Note: Examples of shellfish include but are not limited to: clams, mussels, oysters and scallops.
9. Soy
10. Wheat
11. Sulphites
12. Mustard seed

Failure to identify any of these ingredients, or their derivatives, may have serious and occasionally fatal results.

Note: The components of ingredients such as spice mixtures, seasoning and flavoring agents are the most likely source of the above types of allergens for meat products.

The *Food and Drug Regulations* (FDR) (Canada) require the listing of ingredients capable of causing adverse, or allergic, reactions in sensitive individuals.

Note: The practice of using the statement "MAY CONTAIN" allergenic substances does not absolve the operator from implementing a written allergen control program.

OBJECTIVE/OUTCOME

All ingredients in "pre-packaged" meat products will be listed on the label.

Note: The term "pre-packaged" means the product is in the package it is normally in when it is ordinarily sold to, used, or purchased by a person.

Water and Smoke are considered to be ingredients and therefore must be declared on the label.

Meat products served by a clerk (e.g. deli meats) are not considered to be "pre-packaged". **These products are packaged at the time of sale** thus **they are exempt from labeling requirements but, a listing of ingredients**, including a listing of allergens and allergen sources, **must be available** to customers upon request.

The listing of ingredients, in "prepackaged meat products", will be done in compliance with the requirements of the *Food and Drug Regulations* (FDR) (Canada).

Note: Section B.01.008 of the Canadian FDR identifies what items need to be listed and how the listing needs to be done. For example ingredients must be listed in descending order of proportion by weight. The components of ingredients, when required to be listed, must be listed immediately below the ingredient that they are a component of.

Section B.01.009 of the FDR provides a listing of items that do not need to be on the label.

Section B of the Canadian FDR can be accessed at the following website:

http://www.hc-sc.gc.ca/fn-an/alt_formats/hpfb-dgpsa/pdf/legislation/e_b-text-1.pdf

All food allergen and gluten sources and added sulphites (in amounts of 10 parts per million, or more) will be declared on the label.

Note: These ingredients must be listed in common, or easily understood, terms. For example "milk" should be used in place of "casein".

Section B.01.010 of the Canadian FDR has a table listing all acceptable common names for various ingredients.

The following items, when present as components of an ingredient, in a meat product, will be listed as ingredients:

1. Salt
2. Glutamic acid or its salts
3. Hydrolyzed plant protein
4. Aspartame

5. Potassium chloride
6. Peanut oil
    a) hydrogenated
    b) partially hydrogenated or
    c) modified
7. Any ingredient or component that performs a function in, or has any effect on, that meat product.

REQUIREMENTS FOR AN AUDITABLE SYSTEM

Requirements for **"Ingredient Listing & Allergen Information"** will be met when:

1. All pre-packaged product labels accurately list ingredients.

    Note: All common food allergen and gluten sources will be identified.

2. A written up-to-date **"Allergen Control Program"** will be on file at the facility.

    Note: This program will include a:

    a) master list that clearly identifies all ingredients, processing aids and packaging materials that are allergenic, or contain allergens;
    b) list of secondary ingredients such as spices, flavorings, additives, release agents, colorings, etc.;
    c) master list that clearly identifies all finished products that contain allergens;
    d) requirement for ingredient suppliers to have an effective allergen control program

    "Up-to-date" means the program will be modified, as required, whenever new allergens are identified.

3. A written **"Allergen Control Program"** have been established and implemented.

    Note: This program must ensure that items containing allergens are segregated, clearly labeled and handled during transportation, receiving, storage and packaging in a manner that minimizes the chance of contamination of other ingredients, packaging materials, or finished products.

For more information on requirements for ingredient listings and allergen information the reader is referred to Chapter 2 of the Federal "2003 Guide to Food Labeling and "Advertising" at: **http://www.inspection.gc.ca/english/fssa/labeti/guide/toce.shtml**

RELATED SECTIONS OF TIPM

03-G-12 Allergen Control Program
11-C-01 Label Information for Pre-packaged Retail Products

SUBJECT: Nutritional Facts	11-C-05
REGULATORY REFERENCES *Food and Drug Regulations* (Canada) (C.R.C., c. 870) Schedule L	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Nutritional information is important in:

1. The dietary management of chronic diseases of public health significance;
2. Helping consumers make healthy food choices

Note: Healthy choices may reduce the risk of developing a chronic disease.

Canadian nutrition labeling regulations were intended to provide a system for conveying information about the nutrient content of food in a **standardized format**.

Note: Using a standard format allows consumers to compare foods at the point of purchase. Clear, uniform information provides support for consumers that want to make informed choices with a goal of healthy eating.

It is impossible to list all of the nutritional fact labeling for all meat and meat products. For specific information the reader is referred to the Federal "2003 Guide to Food Labeling and Advertising" at: **http://www.inspection.gc.ca/english/fssa/labeti/guide/toce.shtml**

Note: The "Guide to Food Labeling and Advertising" is published by the Canadian Food Inspection Agency. Nutritional Labeling information can be found in chapters 5, 6, 7 & 8. The respective titles of these chapters are:

a) Nutrition Labeling
b) The Elements within the Nutrition Facts Table
c) Nutrient Content Claims
d) Diet-Related Health Claims

OBJECTIVE/OUTCOME

All non-exempt "pre-packaged" meat products will have the following nutritional fact information:

1. Core list of Calories and 13 nutrients.

Note: Nutrients include but are not limited to:

a) fats;
b) carbohydrates;
c) protein;
d) fiber;
e) vitamins;
f) minerals

2. Nutrient information based on a specified amount of food as sold.
3. Actual amount of the nutrient in the stated serving size of the food is listed.
4. % Daily value (%DV).

    Note: The %DV indicates the percentage of total recommended amount of each nutrient in one serving of the product that is labeled.

Nutritional labels may be provided, on a voluntary basis, for pre-packaged products that are exempt from labeling requirements.

Note: If this is done the information on the label must meet all of the requirements for nutritional fact labeling.

Nutritional fact labeling is mandatory for MOST multi-ingredient pre-packaged meat products.

All "Nutrition Facts Tables" will adhere to strict sizes, fonts, and general layout specifications, depending on the size of the package.

All nutritional fact information will be derived from current recipes that are on file at the facility.

Note: "Nutrition Facts Tables" must be bilingual, unless sold locally.

EXEMPTIONS

The following meats and meat products are exempt from having nutrition facts label information:

1. Raw, single ingredient meat, meat by-product, poultry meat, and poultry meat by-products.

    Note: Pre-packaged ground meat, ground meat by-product, ground poultry meat and ground poultry meat by-products must always have a "Nutrition Facts Table" on their labels.

2. Meat and meat products served by a clerk (e.g. deli meats).

REQUIREMENTS FOR AN AUDITABLE SYSTEM

Requirements for **"Nutritional Facts Labeling"** will be met when on site observations demonstrate that labels on all non-exempt "pre-packaged" meat products sold, or shipped, from the "Licensed Meat Facility" have accurate nutritional facts.

RELATED SECTIONS OF TIPM

11-C-01 Label Information for Pre-packaged Retail Products

SUBJECT: Labels Not Required	11-C-06
REGULATORY REFERENCES *Food and Drug Regulations* (Canada) (C.R.C., c. 870) Schedule L *Consumer Packaging and Labeling Regulations* (Canada) (C.R.C., c.417) Section 5	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

It would be unreasonable to require the labeling of meat products being sent, from one "Licensed Meat Facility" (facility) to another, for further processing providing a system is in place which ensures appropriate information is available for labeling of the final retail packages.

Note: Examples of products shipped for further processing, at another facility includes the shipping of poultry carcasses for cutting and the shipping of red meat products for curing, smoking, etc.

The facility that completes the processing is responsible for the final labeling.

The final purchaser (consumer) still requires assurance that the meat is safe for human consumption and that the label information is correct.

Two basic needs have to be met when meat products are shipped from one facility to another. The receiving facility must have assurance that:

1. The meat products received have passed inspection.

   Note: Red meat carcasses should have the inspection legend applied to them but the shipment of untagged poultry, to another facility, is allowed.

2. Sufficient information is available for that facility to be able to comply with final labeling requirements for "Pre-packaged Retail Products".

   Note: The above needs can be met with the use of "official" seals and accompanying documentation.

OBJECTIVE/OUTCOME

Unlabeled meat **products going to another facility** will be handled as follows:

1. The shipment will be made in a bulk container, or transport vehicle, that has been **sealed** by, or under the authority of, a duly appointed meat inspector.

   Note: Duly appointed meat inspectors are individuals that have been appointed by the Meat Inspection Branch (MIB) of Alberta Agriculture and Rural Development or the Canadian Food Inspection Agency (CFIA).

2. Documentation, signed by the operator of the facility making the shipment, will accompany the shipment stating that the meat product has been approved for human consumption. In the case of prepared meat products a listing of ingredients must also accompany the shipment.

   Note: Accompanying documentation must be as complete as possible. It should indicate the number of containers that were shipped.

3. The seal will only be broken, at the receiving facility, by, or under the authority of, a duly appointed inspector.

For complete information on the requirements for the Shipment and receipt of unmarked/unstamped meat products the reader is referred to Chapter 8-2 of the CFIA "*Meat Hygiene Manual of Procedures*".

This manual can be accessed at:

http://www.inspection.gc.ca/english/anima/meavia/mmopmmhv/chap8/8.1-11e.shtml#a8-1

RELATED SECTIONS OF TIPM

11-C-01 Label Information for Pre-packaged Retail Products

11-C-04 Ingredient Listing & Allergen Information

SUBJECT: Heating Requirements	12-A-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 16(6) AR 62/2003 *Occupational Health and Safety Regulation* Section 12	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Personnel, in a "Licensed Meat Facility" (facility) will not work effectively if they are required to work in temperature extremes for prolonged periods.

Note: Extreme temperatures are defined as those that fall outside of the range of the body's ability to maintain a normal internal temperature, either hot or cold.

Personnel working close to stoves, or other cooking equipment, may be exposed to excessive heat while those working in refrigerated areas are often exposed to excessive cold.

Facility personnel working in loading, or shipping, areas may also be exposed to excessive cold through open doors.

The heating and/or ventilation systems should be designed to maintain comfortable temperatures and humidity levels.

Note: Discomfort tends to impair an individual's concentration and accuracy. This can lead to safety hazards both for facility personnel and the product.

Heat stress (heat stroke) will occur with prolonged exposure to extremely warm conditions. The ability of the body to get rid of excess heat is limited.

Note: There are no specific regulations, under the Occupational Health and Safety Act, that set temperature limits, however the American Conference of Governmental Industrial Hygienists suggest a maximum of 30^0 C for continuous light work.

Working, for prolonged periods, in extremely cold temperatures can cause cold stress.

Note: Again there are no specific regulations under the Occupational Health and Safety Act, for cold conditions an argument could be made that section 12 of AR 62/2003 requires the provision of suitable equipment to provide protection from the cold. It is commonly accepted wisdom that facility personnel working in areas that are not normally heated, or where perishable goods are processed, or stored, should be provided with suitable protective clothing.

OBJECTIVE/OUTCOME

Enclosed work spaces will be maintained at suitable temperatures for the work being performed.

Note: It is generally recommended that the heating and ventilation systems be capable of producing and maintaining temperatures between 18 and 30^0 C with the following exceptions:

a) areas that are generally accepted as being unheated, e.g. outside animal holding facilities;

b) where doors are frequently opened and for long enough periods of time, to make it impossible maintain temperatures in the recommended range;

c) refrigerated areas where perishable goods are stored and/or processed;

d) areas where radiant heating, from other areas, is sufficient to maintain a comfortable temperature range;

e) during the first hour of a main operating shift where heat generated during processing provides a substantial portion of the building's heat

There will be provision for easy exit from the inside of climate controlled spaces such as coolers and freezers.

RELATED SECTIONS OF TIPM

02-G-01 Processing Rooms - Temperature Requirements

02-K-02 Lunch & Locker Rooms

02-L-02 Inspector's Change Areas, Showers & Toilets

SUBJECT: Ventilation Requirements	12-A-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 16(6) *Occupational Health and Safety Code* 2006 Part 26 Meat Facility Standards (MFS) Section A.2.3.1	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Circulation of fresh, clean air in the indoor workplace is essential for the creation of a healthy working environment.

Note: There will be varying levels of substances, in the air, throughout a "Licensed Meat Facility" (facility), which can cause discomfort for personnel working in the facility. Examples include steam, odors, animal dander, feather dust, etc.

Some of these materials, e.g. feather dust and animal dander can be hazardous for personnel with medical conditions such as asthma.

The presence of stale air may also be hazardous particularly where operations require an indoor open flame source. Without adequate ventilation carbon monoxide could rise to poisonous levels.

General, or passive, ventilation may remove sufficient amounts of hot, or humid, air but mechanical ventilation (e.g. exhaust fans) is required to effectively remove airborne contaminants.

Note: Replacement air should be free from contamination and should not blow directly onto facility personnel working in the area.

Respiratory protection (e.g. face masks) should be provided whenever ventilation does not effectively remove particulate matter from the air.

OBJECTIVE/OUTCOME

Ventilation will be sufficient to provide a healthy work environment, for facility personnel, in all parts of the facility.

Note: Either natural, or mechanical ventilation, or a combination of both, may be used as long as the end result is a healthy environment.

Appropriate amounts of replacement air will be provided to replace exhausted air.

Note: It is particularly important that sufficient incoming air be available to satisfy the combustion needs for any open flames.

Replacement air will be free of contaminants such as dust, fumes, smoke, gas, etc. and will enter in a manner that does not:

a) disturb settled dust;

b) interfere with the exhaust system;

c) cause undue drafts

Exhaust air will be discharged in a manner that prevents the return of any contaminants into the work area.

Note: This is generally accomplished by ensuring that the intake vents are located a sufficient distance away from the exhaust vents.

Open flames will be vented to the outside.

Note: This will ensure that there is no build-up of carbon monoxide in the workplace.

Respiratory protective equipment (e.g. face masks) will be provided as necessary.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Ventilation Requirements"** will be met when:

1. On site observation demonstrates that:
    a) ventilation is appropriate in volume, direction of flow, location, screening, and filtering as necessary;
    b) airflow is directed from cleaner to dirtier areas

        Note: This is particularly important in ready to eat areas.
2. Airflow direction is monitored and recorded.

    Note: Monitoring can be recorded in the "Internal Premises Inspection Record".
3. An effective written **"Maintenance Procedure/Schedule"** for components of the ventilation system is on file.
4. Maintenance and cleaning records demonstrate that all components of the ventilation system are maintained, cleaned and sanitized regularly in accordance with the **"Maintenance Procedure/Schedule"**.

    Note: Maintenance and cleaning activities may be recorded in any of the following documents:

    a) **"Master Sanitation Schedule"**
    b) **"Internal Premises Inspection Records"**
    c) **"Maintenance Schedules, or Records"**

RELATED SECTIONS OF TIPM

02-H-01 Windows
02-H-02 Air Intakes
02-H-03 Vents, Filters & Ducts
02-H-04 Air Flow - General

SUBJECT: WHMIS Program for Chemicals	12-A-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 16(6) *Occupational Health and Safety Code* 2006 Parts 4 & 29 Meat Facility Standards (MFS) Sections B.2.2 (1, 2, 3 & 4)	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

In the performance of their duties Meat Inspection Branch (MIB) Inspectors have to use potentially hazardous chemicals from time to time.

Note: Examples include marking inks, denaturants and de-characterizing agents.

The "Licensed Meat Facility" (abattoir) is responsible for providing lockers, or cabinets, for the storage of these materials.

The MIB is responsible for ensuring that the products are properly labeled and for ensuring that the MIB Inspector has information on the proper handling of these materials.

Note: The MIB uses **"Workplace Hazardous Materials Information System"** (WHMIS) for dealing with hazardous chemicals.

WHMIS is a comprehensive system for providing information on the safe use of hazardous materials in Canadian workplaces. Information is provided by means of product labels, material safety data sheets (MSDS) and worker education.

MIB Inspectors are knowledgeable about WHMIS and have had training, in the hazards associated with and the recommended methods of use, for the chemicals that they are responsible for.

Note: The improper use of some chemicals could be directly hazardous to the MIB Inspector or to the safety of meat products.

Abattoirs are also required to utilize and store hazardous materials such as, chemicals used for cleaning and sanitizing, pest control products, acids, etc.

Note: Under the Occupational Health and Safety Act abattoirs are legally required to use WHMIS.

OBJECTIVE/OUTCOME

A WHMIS program will be in place for all non-food chemicals being used in the plant.

Note: In accordance with WHMIS all non-food chemicals must be:

a) stored separately in their original containers bearing their original labels,

b) or with appropriate WHMIS labels;

c) stored in a manner that ensures there will be no chance of contaminating carcasses, parts of carcasses, meat products and ingredients;

d) used in accordance with the manufacturer's directions, by a person trained in their use, and in a manner that prevents contamination of carcasses, parts of carcasses, meat products and ingredients

Current MSDS information will be available for all applicable chemicals.

Appropriately located separate lockers and/or cabinets will be provided for the use of MIB Inspectors for storing their inspection related chemicals.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Note: Auditors from the MIB will not specifically request WHMIS documents however the MFS and TIPM documents have been based on WHMIS principles.

Requirements for the **"WHMIS Program for Chemicals"** will be met when:

1. An up-to-date, **"Sanitation Chemicals and Equipment List"**, which is specific for the abattoir, is on file.

   Note: This list must include documentation that verifies that all of the chemicals used in the **"Sanitation Program"** have been approved for use in a food processing facility.

2. All chemicals for sanitation, maintenance and pest control are stored in their original containers or in containers that have labels correctly identifying the contents and prescribed dilutions.

3. All non-food chemicals are stored in a separate room, or area, from meat, meat products, ingredients, or packaging materials.

   Note: If this is not possible non-food chemicals can be stored in the same area as long as they are in closed containers and physically separated from any edible products.

RELATED SECTIONS OF TIPM

02-F-04 Non-food Chemicals - Storage of
03-C-02 Approved Chemicals & Chemical Listing
03-C-09 Pesticide Use & Listing

SUBJECT: First Aid	12-A-04
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 16(6) *Occupational Health and Safety Code* 2006 Part 11	**Initial Release** Sept 1, 2009 **Page 1 of 1**

RATIONALE

By its very nature the meat industry is a hazardous occupation. Unfortunately there is substantial risk and a number of work related accidents and injuries can and do occur in a "Licensed Meat Facility" (facility).

Due to the hazardous nature of the work it is essential for a facility to have a properly:

1. Equipped and maintained first aid kit.
2. Trained first aid attendant on site during operational hours.

Note: Without properly equipped first aid kits and training for first aid providers, treatment of injured workers may be unsuccessful, or even damaging.

OBJECTIVE/OUTCOME

A properly equipped first aid kit will be available, at the facility, at all times.

Note: The first aid kit must be readily accessible to facility personnel and all personnel should be aware of where the kit is kept.

First aid kits will be inspected and replenished, as required, following use and at least once every three months.

Designated facility personnel will be available to provide first aid at all times while the facility is in operation.

Note: Designated personnel must hold a current "First Aid Certificate". These individuals should be given regular opportunities to update their first aid skills through attendance at recognized first aid training sessions.

RELATED SECTIONS OF TIPM

None

SUBJECT: Fire Safety	12-A-05
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 16(6) *Occupational Health and Safety Code* 2006 Part 7	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Fire is an every present danger in any commercial building. A "Licensed Meat Facility" (facility) is not exempt from this hazard.

All facility personnel must be aware of what is expected of them in case of fire.

The most important safety feature, related to fire, is to have a comprehensive evacuation plan.

Note: Personnel must know the best escape routes from every area of the facility that they are required to work in. They should also know where to congregate after evacuating the building. Large facilities should have periodic fire drills.

All fire exits must be operable and kept free of obstructions in case they are needed for an emergency evacuation.

Note: This includes keeping all passages clear as well. Blocked exits have been responsible for many needless fire deaths in the past. All facility personnel must be able to leave the building quickly and safely when required.

Fire extinguishers are an important component of fire safety. In the early stages of a fire they can be critical in preventing loss of life, injury and significant property damage.

Time is critical when dealing with the early stages of a fire therefore there should be an appropriate number of extinguishers that are conveniently located and readily accessible.

Note: Extinguishers should be:

a) located near exits;
b) located in areas where there are hazards associated with the use of flammable liquids;
c) mounted approximately 5 feet off of the floor;
d) visible and readily accessible

Extinguishers are of no value if they can't be located, or reached, in an emergency.

The correct class, or type, of extinguisher must be available.

Note: Different types of fires require different types of extinguishers. An assessment should be made about the most likely types of fire expected in any given area and appropriate extinguishers should be placed in these areas.

Appropriate personnel should be trained in the proper use of each type of fire extinguisher.

Note: Fire extinguishers are only a first line of defense and operators must be aware of their limitations so that they are not placed in a dangerous situation by trying to fight a fire that is beyond being controlled by simple means.

Fire extinguishers also need to be checked and serviced frequently to ensure that they are functional.

OBJECTIVE/OUTCOME

A fire safety plan will be developed and implemented.

Note: This plan must include:

a) written emergency procedures;

b) evacuation routes;

c) outside gathering locations;

d) schematic drawings showing the type and location of emergency fire equipment;

e) training in how to operate emergency fire equipment;

f) emergency contact numbers;

g) name of designated facility personnel responsible for liaison with the fire department, police and other emergency personnel

Emergency fire procedures will be posted and clearly visible.

Note: It is critical for all facility personnel to be knowledgeable about the fire safety plan and the location of fire exits.

In larger facilities regular fire drills should be part of the fire safety plan.

Emergency telephone numbers will be posted near the telephone.

All fire exits will be clearly marked and access to them will remain unobstructed at all times.

Note: This means that there should be absolutely no accumulation of equipment, supplies, refuse, etc. in hallways and other access routes.

There will be a sufficient number of properly mounted fire extinguishers, in appropriate and accessible locations throughout the facility.

Note: Extinguishers must have adequate capacity and capabilities for the size of the facility and the types of hazards that are likely to be encountered.

An appropriate number of facility personnel will be trained in the proper operation of fire extinguishers.

All fire extinguishers will be inspected at least once a month.

Note: Facility personnel responsible for the inspections must have sufficient training to ensure that they know how to conduct a proper inspection.

This individual must be able to recognize when an extinguisher requires servicing.

Authority and responsibility should be delegated to allow this individual to take whatever corrective actions are required.

RELATED SECTIONS OF TIPM

12-B-02 Propane - Safe Use of

SUBJECT: Electrical Safety	12-B-01
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 16(6) Alberta Electrical Utility Code	**Initial Release** Sept 1, 2009 **Page 1 of 1**

RATIONALE

A wide variety of electrical fixtures and equipment are used in a "Licensed Meat Facility" (abattoir).

Poorly maintained electrical equipment can be extremely hazardous.

Note: The damp work conditions present in an abattoir greatly increases the risk of severe electrical shocks, burns and even death.

Electrical fixtures and equipment must be maintained in a satisfactory state of repair.

Note: Any shock, no matter how mild, must be reported so that the source can be determined and corrected.

OBJECTIVE/OUTCOME

Electrical equipment and wiring, in the abattoir, will be designed in accordance with the Alberta Electrical Utility Code.

Note: Compliance with this code will minimize the chance of electrical related injuries to MIB Inspectors and abattoir personnel.

All electrical switches and controls will be readily accessible.

Note: This is particularly important in case of emergency.

Water resistant (sealed) fixtures will be used where conditions dictate.

Note: A "line stop switch" is an example of where conditions would warrant the use of a sealed fixture.

Portable electric tools used in wet locations will be protected by a "Ground Fault Circuit Interrupter" (GFCI).

Note: GFCIs monitor the flow of electricity through the outlet's circuit. If there is any variation in the current, the GFCI will automatically cut off the flow of electricity, preventing injury. They can be installed at the electrical outlet used for the equipment, or in the electrical panel.

All electrical equipment, cords & wiring will be properly maintained at all times.

Note: Checking the integrity of all electrical equipment should be a component of the abattoir's routine maintenance procedures.

Abattoir personnel will be advised to report any shocks and appropriate action will be taken.

Note: Whenever an electrical shock is reported the equipment must be taken out of service immediately and not put back into service until the source of the shock has been determined and corrected.

RELATED SECTIONS OF TIPM

None

SUBJECT: Propane - Safe Use of	12-B-02
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 16(6) *Occupational Health and Safety Code 2006* Part 10	**Initial Release** Sept 1, 2009 **Page 1 of 1**

RATIONALE

There are numerous safety issues relating to the use of flammable substances in and around a "Licensed Meat Facility" (facility).

Note: Examples of flammable substances that might be used include, but are not limited to propane, kerosene, diesel fuel, fuel oil, gasoline, etc.

Propane is the most common flammable substance used in a facility therefore **this document** is **primarily concerned with the proper use of propane**.

Propane can be safe and convenient providing it is piped into the facility and the system is checked regularly for leaks.

Propane tanks cannot be located inside the facility.

Note: Inside tanks greatly increase the chance of injury to MIB Inspectors and facility personnel. Faulty valves, accidental damage to the tanks and leaks while attaching the tanks to equipment are explosion hazards.

Portable tanks for fuel burning devices such as heaters, or generators, cannot be used in the facility, or any other areas where MIB inspectors may have to work.

Note: All heating and burning devices must be properly installed according to regulatory and manufacturer specifications.

The storage of flammable liquids inside of the facility is not allowed.

OBJECTIVE/OUTCOME

All propane cylinders will be located outside of the facility.

Note: This applies to portable propane tanks as well. Propane for all equipment, including portable units that may be designed to have a small portable propane tank, must be piped in.

Propane tanks must be at least 3 meters (10 feet) away from any:

1. Opening into the facility.
2. Source of ignition.

Note: This is a horizontal measurement.

Propane lines will be installed and located so that they are protected from accidental damage.

Note: Lines must be checked, routinely, for any leaks.

No portable fuel burning devices (e.g. kerosene heaters) should be used in the facility.

Flammable liquid fuels should not be stored on the premises.

RELATED SECTIONS OF TIPM

12-A-05 Fire Safety

SUBJECT: Floors - Safety of	12-B-03
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 16(6) *Occupational Health and Safety Code 2006* Part 9 - Section 121(2) & Part 10	**Initial Release** Sept 1, 2009 **Page 1 of 1**

RATIONALE

The nature of work being conducted, in a “Licensed Meat Facility” (facility), can result in very hazardous floor conditions.

Note: Not only does the work quickly lead to untidy conditions the material worked with (blood, fat & body tissues) is inherently slippery.

It is important to routinely remove debris from the floor in all processing areas.

Note: Floors need to be cleaned frequently. Slippery material cannot be allowed to accumulate. Large amounts of material, on the floors, will clog boot treads, which will greatly increase the possibility of slipping or falling.

Slippery conditions are also exaggerated by the presence of excessive ice, water and other extraneous materials.

Note: The presence of ice on the floors of coolers, or freezers, must be avoided.

The presence of trip hazards from hoses, extension cords and garbage greatly increase the chances for injury.

Note: Meat Inspection Branch (MIB) Inspectors and facility personnel must be able to concentrate on their jobs rather than on their footing. The only way to do this is to ensure that all traffic areas are kept free of any extraneous materials and trip hazards, or obstructions, such as hoses and extension cords.

Good overall floor conditions must be maintained through good housekeeping practices.

OBJECTIVE/OUTCOME

Floors, throughout the facility, will be constructed of non-slip materials.

Note: This will ensure adequate traction providing other hazards are eliminated.

Suitable sized drains will be present where required and the slope of the floor will be sufficient to prevent the buildup of excessive amounts of water, blood, fat, or other slippery materials.

Floors will be maintained in a clean and tidy condition at all times.

Note: This includes eliminating tripping hazards such as extension cords, hoses, missing floor tiles, loose drain covers, etc. and the frequent routine removal of slippery materials.

Equipment, supplies, and other required materials will be located where they don’t cause any potential tripping hazards.

Ice will not be allowed to build-up on the floors of coolers, or freezers.

RELATED SECTIONS OF TIPM

02-C-06 Construction - Floors & Walls

02-J-01 Drains

02-L-03 Inspection Station Requirements - Red Meat Animals

02-L-04 Inspection Station Requirements - Poultry

SUBJECT: Overhead Equipment - Safety of	12-B-04
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 16(6) *Occupational Health and Safety Code 2006* Part 6	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

The use of overhead equipment, in a "Licensed Meat Facility" (facility) is inherently risky. Severe injury may occur from falling objects.

Note: When the falling object is large, or heavy enough, the wearing of safety hats is not a guarantee against serious head injury.

Safe operation of overhead equipment can be ensured by:

1. Ensuring that the equipment is capable of safely lifting, or supporting, the maximum required load.

   Note: Lifting devices must be inspected, by a "competent individual", to determine its ability to handle the maximum load as rated, before being used for the first time.

   A "competent individual" is defined as a person that has sufficient knowledge and training to be fully competent in matters of inspection and equipment maintenance. This person must understand the requirements of the Alberta Occupational Health and Safety Code and have knowledge of the potential, or actual, dangers involved in the operation of overhead equipment.

2. Incorporating safety devices into the design of the equipment.

   Note: Examples of safety devices include chain hook safety clips and stops on rail switches. Continuity of the rails is also an important safety feature.

3. Providing training for facility personnel that will be operating the equipment.

   Note: Safe operation includes not exceeding the maximum rated load capacity of the equipment. Overloading can have serious catastrophic consequences. Load ratings should be clearly marked on the equipment.

4. Maintaining the equipment.

   Note: All overhead equipment should be inspected regularly and necessary repairs must be made without delay. Rollers must be properly lubricated to allow for easy movement of carcasses. The condition of hooks and chains must be constantly monitored. These components must be repaired, or replaced, as required.

   Attention should also be paid to mounting brackets and hardware, beams and other supports. Deterioration of these elements could lead to failure even when the hoist is lifting loads that are within its rated capacity.

OBJECTIVE/OUTCOME

All roof and overhead support structures used for fixed, or mobile, lifting devices (e.g. hoists) will be capable of supporting all loads to which they may be subjected.

Lifting devices will:

1. Be equipped with suitable ropes, chains, slings and other fittings.
2. Be plainly marked with sufficient information to enable the operator to determine the maximum rated load that the device is capable of lifting under any operating condition.
3. Have a cab, screen, canopy guard or other adequate protection for the operator where the operator may be exposed to the hazard of falling material.
4. Have controls that automatically return to their neutral position when released.

Note: The above requirement applies to pneumatic, or hydraulic, hoists.

Only properly trained personnel will be allowed to operate lifting equipment.

Note: Untrained individuals may be allowed to operate the equipment under the direct supervision of a trained individual.

Loads will not be allowed to pass over top of anyone.

All overhead equipment and lifting devices will be routinely inspected, serviced and repaired.

Note: An inspection must be conducted before the equipment is used for the first time, and as often as necessary thereafter to ensure that lift capabilities are maintained.

The frequency of inspections must meet the frequency stipulated by the manufacturer. At an absolute minimum there should be a thorough inspection at least once a year.

The inspection must include all fixed and mobile overhead equipment including extension hooks, rollers, rails, hoists and switches.

The person conducting these inspections must be competent.

Inspection records must be kept of file. These records must be signed by the person conducting the inspection.

Inspection records will be on file.

Note: These records must demonstrate that appropriate repairs and maintenance activities have been performed.

RELATED SECTIONS OF TIPM

02-O-01 Rails & Supporting Structures

SUBJECT: Safe Handling of Livestock	12-B-05
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 18(1)(h) & 18(2)	**Initial Release** Sept 1, 2009 **Page 1 of 1**

RATIONALE

The "Licensed Meat Facility" (abattoir) is responsible for ensuring a safe working environment for Meat Inspection Branch (MIB) Inspectors during the ante-mortem (before death) inspection of livestock and during any ritual (religious) slaughter that may take place in the abattoir.

In relation to the ante-mortem inspection the abattoir must:

1. Designate appropriate personnel to assist with the inspection.

   Note: To ensure the safety of the MIB Inspector the individual(s) assigned to assist must be knowledgeable about safe livestock handling procedures.

2. Ensure that appropriate livestock handling equipment is available and maintained in a manner that facilitates the safe handling of all classes of livestock coming into the facility.

   Note: The livestock facilities must provide sufficient space for the safe movement of animals. Pens must be readily accessible. Gates must function smoothly. Equipment must be available to isolate and/or restrain animals as required.

In relation to any ritual (religious) slaughter the abattoir must ensure:

1. Appropriate restraint equipment is in place.
2. The person conducting the ritual slaughter has the skill to conduct it in a safe manner.

OBJECTIVE/OUTCOME

Appropriate facilities and restraint equipment will be available for the safe handling of livestock.

Note: The facilities and equipment must be suitable for all species that are handled at the abattoir.

Abattoir personnel, trained and/or knowledgeable in the safe handling of animals, will be assigned to assist the MIB Inspector during the ante-mortem inspection.

Note: This individual will move and handle animals in a safe manner and as directed by the MIB Inspector.

Livestock handling and restraint equipment will be properly maintained and repaired as required.

Ritual slaughters will be conducted in a manner that is safe for the MIB Inspector and all facility personnel.

Note: This means that there will be suitable restraint equipment and the person conducting the slaughter is competent.

RELATED SECTIONS OF TIPM

05-B-02 Delivery & Prompt Unloading

06-A-03 Purpose & Conduct of AM Inspections - Red Meat Animals

SUBJECT: Mechanical Hazards	12-B-06
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 16(6) *Occupational Health and Safety Code* 2006 Part 25	**Initial Release** Sept 1, 2009 **Page 1 of 2**

RATIONALE

Many pieces of mechanical equipment used in a "Licensed Meat Facility" (abattoir) have their own individual safety hazards.

Ensuring the safety of abattoir personnel and MIB Inspectors requires the implementation of measures that will keep hazards to a minimum.

Examples of safety measures include:

1. Installation of guards, shields, or barriers to protect workers from moving parts.
2. Preventative maintenance of equipment.

   Note: Items such as rail switches and door latches are examples of items that need to be maintained to ensure safety.

3. Use of personal safety equipment, e.g. hard hats, eye shields, masks, coveralls, etc.

   Note: Personal safety equipment must be properly maintained. For example frayed coveralls increase the chance of an individual getting trapped by moving equipment. Worn boot treads increase the chance of slips, or falls.

4. Limiting the power of certain pieces of equipment.

   Note: The use of compressed air is an example of where the power or intensity could be limited to ensure safety. When compressed air is used for cleaning, or other applications the nozzle pressure should be less than 207 kilopascals (30 pounds) per square inch. A "quiet" nozzle (i.e. one with low noise emission) should be selected to prevent hearing loss.

OBJECTIVE/OUTCOME

All hazardous exposed moving parts will be equipped with an appropriate guard, or other device, that prevents access to the moving part.

Note: This only applies to moving parts that a MIB Inspector, or abattoir personnel, may come into contact with. Shields may also be required to protect abattoir personnel and MIB Inspectors from injury from moving meat products.

Guards must be in place below any conveyors that move product over top of any workers.

Portions of conveyors, or other moving machinery, not visible from the control station will be equipped with automatic start-up warning devices.

Note: This applies where starting the equipment places anyone in danger.

All guards and other protective devices, on equipment, will be properly maintained.

Personal safety devices will be available for abattoir personnel that require them.

Note: The MIB is responsible for providing the protective equipment required by MIB Inspectors.

The power of pneumatic, or hydraulic, devices will be limited to the intensity required for satisfactory performance.

RELATED SECTIONS OF TIPM

03-B-04 Preventative Maintenance Procedures - Records of

SUBJECT: Securing of Equipment & Materials	12-B-07
REGULATORY REFERENCES: AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Section 16(6) *Occupational Health and Safety Code 2006* Part 12, Section 189	**Initial Release** Sept 1, 2009 **Page 1 of 1**

RATIONALE

Serious injury can occur if personnel, or Meat Inspection Branch (MIB) Inspectors, working in a "Licensed Meat Facility" (abattoir) are hit by falling, or moving, heavy pieces of equipment, or materials.

Note: The wearing of personal protective devices doesn't ensure protection from injury in all instances.

Non mobile equipment and materials in storage must be fixed in place to ensure against tipping or falling.

The movement of portable equipment, or material, can also pose a risk of injury unless all loads are fully secured.

OBJECTIVE/OUTCOME

All equipment and materials in storage will be secured in a manner that minimizes any chance of injury to abattoir personnel or MIB Inspectors.

Note: Section 189 of the OH&S code states that all reasonable steps must be taken to ensure that equipment, or material, is contained, restrained, or protected to eliminate potential danger.

Examples of reasonable steps include but are not limited to:

a) fixing equipment in place to prevent tipping;

b) securing loads to ensure that equipment, or materials, cannot tip or fall during transportation within the abattoir;

c) cylindrical objects will be secured from tipping when stored in an upright position and when stored horizontally they will not be stacked and wedges will be in place to prevent them from rolling;

d) placement of two parallel planks between succeeding vertical rows of barrels, drums or kegs;

e) keeping valve protection caps on compressed gas cylinders while in storage

Racks used to store equipment, or materials will be designed, constructed and maintained in a manner that ensures they can support the load placed on them.

Note: Storage racks must also be placed on firm foundations.

RELATED SECTIONS OF TIPM

None

SUBJECT: Safe Use of Firearms	12-B-08
REGULATORY REFERENCES AR 42/2003 *Meat Inspection Regulation* (Consolidated to 112/2009) Sections 22 & 22.1(2)(iv) AR 62/2003 *Occupational Health and Safety Regulation* Sections 1(h), 13(1), 13(2), 13(3), 14(1), 14(2), 15(11), 15(2), 15(4) & 15(5)	**Initial Release** Sept 1, 2009 **Page 1 of 4**

RATIONALE

The operator of a "Licensed Meat Facility" (abattoir) is allowed to use a rifle to stun an animal.

Note: The use of a rifle, as an acceptable method of stunning is allowed under Section 22.1(2)(iv) of AR 42/2003.

Use of a firearm, in a closed space, is a very hazardous activity.

Note: Although the use of a rifle is permitted, it is recommended that consideration should be given to using captive bolt technology. This would eliminate the inherent risk of using a firearm.

The safety of all abattoir personnel, MIB Inspectors and anyone else that may be in the vicinity is of utmost importance.

Abattoir personnel doing the shooting must be properly trained.

Note: The ability and physical condition of the individual rendering an animal unconscious is of critical importance in ensuring that all of the requirements for humane slaughter, under Section 22.1(2) of AR 42/2003, are met.

In addition to section 22.1 of AR 42/2003, various sections of the Alberta Occupational Heath and Safety Act (OHSA) and AR 62/2003 relate to the use of firearms. The following sections apply:

OHSA

Sections 1(b) - Definition of a "contractor" and 2(5) - Obligations of employers, workers, etc. are relevant.

It has been suggested that, in a legal proceeding, section 2(5) would place the onus, on a MIB Inspector, to ensure that the employer (abattoir operator) is following proper procedures in order to be in compliance with the OHS Act.

AR 62/2003

The following sections of AR 62/2003 are relevant to the use of firearms:

- 13(1), (2) & (3) - "General Protection of Workers"
- 14(1) & (2) - "Duties of Workers"
- 15(1) & (2) - "Safety Training"

In addition to provincial legislation there are also a number of pieces of federal legislation that relate to the use of a firearm.

Note: The following pieces of federal legislation are directly relevant:

a) Criminal Code of Canada (R.S., 1985, C. C-46)

b) Firearms Act (1995, c.39)

c) *Firearms Licenses Regulations* (SOR/98-199)

d) *Storage, Display, Transportation and Handling of Firearms by Individuals Regulations* (SOR/98-209).

Criminal Code (R.S., 1985, C. C-46)

The following sections of the Canadian Criminal Code apply to the use of firearms by abattoir operators:

- 86 (1) - Careless use of firearms
- 86 (2) - Contravention of storage regulations
- 91 - Unauthorized possession of a firearm

Firearms Act (1995, c.39)

The following sections of the federal Firearms Act apply to the use of firearms by abattoir operators:

- 6(1) - Eligibility of an individual to hold a license
- 7(1) - Safety courses
- 9(1) - Eligibility of a business to hold a license
- 9(3) - Licensing of employees
- 13 - Registration certificate

Firearms Licenses Regulation (SOR/98-199)

This regulation deals with “Possession Licenses for Firearms” (for individuals licensed prior to 1991) and “Possession and Acquisition Licenses for Firearms”.

Storage, Display, Transportation and Handling of Firearms by Individuals Regulation (SOR/98-209)

The following sections are directly applicable:

- 5(1) - Storage of non-restricted firearms
- 15 - Handling of firearms

The purpose of this TIPM document is to provide guidance to abattoir operators so that they can fulfill their responsibilities in ensuring the safety of everyone when a firearm is used to stun an animal.

Note: In addition to ensuring the safety of humans, firearms must be used in a proper manner to ensure that the animal is stunned humanely.

This document will also cover the responsibilities of the MIB Inspector in regard to the use of firearms.

OBJECTIVE/OUTCOME

The Abattoir operator will comply with all applicable federal, provincial and municipal legislation pertaining to the acquisition, possession, storage and use of firearms (rifles) including appropriate documentation.

Note: **The reader is referred to the appendix**, attached to this document, **for specific details** on applicable pieces of provincial and federal legislation.

Required documentation includes the following:

a) Firearms Registration Certificate

b) Business Possession Certificate or

c) Either a Possession License for Firearms or a Possession and Acquisition License for Firearms.

Abattoir personnel that have been assigned the responsibility of shooting animals must have appropriate training in accordance with the Firearms Act (Canada) and AR 62/2003.

Note: The Regulatory Services Division (RSD) has **recommended** that MIB Inspectors also take a "Safe Firearms Handling Course".

SEMI-AUTOMATIC RIFLES ARE PROHIBITED from use in "Provincially Licensed Abattoirs".

Note: Because of the inherent dangers associated with these weapons their use would contravene section 2(1) of the OHS Act which deals with the health and safety of workers (see Appendix for more detail).

An approved method of warning MIB Inspectors and other abattoir personnel will be given whenever a rifle is going to be used.

Note: A warning allows the MIB Inspector, and any other abattoir personnel, that wishes to do so, to leave when the shooting is done right on the kill floor.

It is highly recommended that the MIB Inspector and abattoir personnel, other than the shooter, leave the shooting area when an animal is being stunned.

MIB Inspectors are advised to wear appropriate personal noise protection equipment. This is also recommended for other personnel that stay in the area.

Signs with firearm safety instructions and diagrams showing the optimal stunning area for each species will be posted, in a conspicuous manner, near the knocking box.

Note: The MIB will provide appropriate signs for this purpose.

MIB Inspectors will continuously monitor and document the safe use of firearms.

REQUIREMENTS FOR AN AUDITABLE SYSTEM (MFS)

Requirements for **"Safe Use of Firearms"** will be met when*:*

1. An appropriate up-to-date written **"Gun Control Program"** has been developed and is on file.

   Note: An appropriate gun control program includes, but is not restricted to, the following:

a) a listing of all firearms kept on premises and their uses;

b) requirements for firearm:

i. storage

ii. cleaning

iii. servicing

iv. registration

v. licensing;

c) monitoring to ensure appropriate use, storage, cleaning and maintenance of firearms;

d) appropriate training of abattoir personnel

2. Records of "Firearms Safety Training" are on file.

Note: These records should demonstrate that abattoir personnel responsible for the use of firearms have received appropriate training which includes:

a) completion of training prior to use of firearms;

b) re-training at appropriate intervals, or as required

3. Firearms documentation is up-to-date.

Note: Appropriate firearms documentation includes, as a minimum:

a) Firearm Registration Certificate

b) Business Possession Certificate or a

c) Possession License for Firearms or a

d) Possession and Acquisition License for Firearms

4. On site observations demonstrate that **"Gun Control Program"** is being fully implemented.

Note: The program should include:

a) the presence of firearms safety signs including diagrams of the optimal stunning area, for each species, posted, in a conspicuous manner, near the knocking box;

b) abattoir personnel responsible for their use are knowledgeable about firearm safety;

c) appropriate warnings are given when a firearm is going to be used

RELATED SECTIONS OF TIPM

None

Federal and Provincial Legislation Pertaining to the Use of Firearms In Provincially Licensed Abattoirs

Note: This appendix contains all of the sections, from various pieces of federal and provincial legislation, with the exception of the Alberta Meat Inspection Act and Regulation that pertain to the use of firearms in a "Provincially Licensed Abattoir".

OCCUPATIONAL HEALTH AND SAFETY (OHS) ACT

1(b) "contractor" means a person, partnership or group of persons who, through a contract, an agreement or ownership, directs the activities of one or more employers involved in work at a work site;

2**(1)** Every employer shall ensure, as far as it is reasonably practicable for the employer to do so,

(a) the health and safety of

(i) workers engaged in the work of that employer, and

(ii) those workers not engaged in the work of that employer but present at the work site at which that work is being carried out, and

(b) that the workers engaged in the work of that employer are aware of their responsibilities and duties under this Act, the regulations and the adopted code.

2(5) Every contractor who directs the activities of an employer involved in work at a work site shall ensure, as far as it is reasonably practicable to do so, that the employer complies with this Act, the regulations and the adopted code in respect of that work site.

AR 62/2003 *OCCUPATIONAL HEALTH AND SAFETY REGULATION*

Definitions

1(h) "direct supervision" means under the supervision of a competent worker who is

personally and visually supervising the other worker, and able to communicate readily and clearly with the other worker

General Protection of Workers

13(1) If work is to be done that may endanger a worker, the employer must ensure that the work is done

(a) by a worker who is competent to do the work, or

(b) by a worker who is working under the direct supervision of a worker who is competent to do the work.

AR 62/2003 *OCCUPATIONAL HEALTH AND SAFETY REGULATION* (cont.)

13(2) An employer who develops or implements a procedure or other measure respecting the work at a work site must ensure that all workers who are affected by the procedure or measure are familiar with it before the work is begun.

13(3) An employer must ensure that workers who may be required to use safety equipment or protective equipment are competent in the application, care, use, maintenance and limitations of that equipment.

Duties of workers

14(1) A worker who is not competent to perform work that may endanger the worker or others must not perform the work except under the direct supervision of a worker who is competent to perform the work.

14(2) A worker must immediately report to the employer equipment that

(a) is in a condition that will compromise the health or safety of workers using or transporting it,

(b) will not perform the function for which it is intended or was designed,

(c) is not strong enough for its purpose, or

(d) has an obvious defect.

Safety training

15(1) An employer must ensure that a worker is trained in the safe operation of the equipment the worker is required to operate.

15(2) An employer must ensure that the training referred to in subsection (1) includes the following:

(a) selection of the appropriate equipment;

(b) limitations of the equipment;

(c) operator's pre use inspection;

(d) use of the equipment;

(e) operator skills required by the manufacturer's specifications for the equipment;

(f) basic mechanical and maintenance requirements of the equipment;

(g) loading and unloading the equipment if doing so is a job requirement;

(h) hazards specific to the operation of the equipment at the work site.

15(4) A worker must participate in the training provided by an employer.

15(5) A worker must apply the training referred to in subsections (1) and (3).

TIPM Glossary

A

Abomasum

The abomasum is the fourth compartment of a ruminant stomach. Ruminants include cattle, sheep, bison, elk, deer, etc.

Abattoir

A premises or facility, including a multi-location abattoir,

1. Where animals are slaughtered, or
2. Where animals are slaughtered and any of the following meat processing activities are conducted:
    a) cutting
    b) wrapping
    c) freezing
    d) curing
    e) smoking
    f) ageing

Acronym

An acronym is a word made with the first letters of a series words. Acronyms are used as an abbreviation. For example MIB is the acronym for the Meat Inspection Branch.

Adhesion

Adhesions are accumulations of scar tissue which usually develop following recovery from an infectious process. Adhesions are most commonly encountered, by meat inspectors, in the thoracic (chest) and abdominal cavities.

Aesthetic

Having a wholesome, or desirable appearance

Allergen

An allergen is any substance that initiates, or causes, an allergic reaction in sensitized individuals. An allergic reaction may be mild or life threatening. Symptoms consist of variable combinations of a runny nose, watery or itchy eyes, wheezing, shock and death.

Allergic

Pertaining to, or affected with an allergy

Allergy

An allergy is a state of increased (hyper) sensitivity to items which causes an individual to be abnormally sensitive to agents which normally don't have any affect on others.

Ante-mortem

Ante-mortem means before death. In meat inspection the term AM is used as the acronym for ante-mortem.

Animal Food

Any meat product that has been identified for use as food for animals is defined as animal food. Portions of the carcass that are not generally considered to be suitable for human consumption and some condemned materials are commonly designated as animal food.

Ante-mortem Inspection

Any procedure, or test conducted by an inspector on a live animal. The purpose of the ante-mortem inspection is to determine whether the animal is suitable for slaughter.

Anticoagulant

An anticoagulant is a chemical that will prevent the clotting of blood.

Anus

The anus is the opening of the digestive tract through which manure passes.

ARD

The term ARD stands for Alberta Agriculture and Rural Development.

Atria - Atrium

These two terms refer to the two upper chambers of the part. The left and right atria are located immediately above the left and right ventricles (lower chambers). Blood from the lungs enters the left atrium while blood from the rest of the body enters the heart through the right atrium.

Audit

In the case of a meat facility, an audit is a planned, independent and documented assessment designed to determine whether food safety requirements are being met in the facility.

Auditor

An auditor is an individual appointed by the Director of the RSD to conduct audit functions with respect to the MFS and any applicable meat inspection legislation.

B

Bacteria

Bacteria are single celled microscopic (micro) organisms. Technically they are classified as plants. There are many different types of bacteria some of which cause disease in humans and animals. Some cause spoilage of meat products. Others cause fermentation.

Bacteriological

Bacteriological means of, or pertaining to, bacteria

Biological Hazard

Generally a biological hazard refers to any hazard caused by micro-organisms, or toxins (poisons) caused by micro-organisms leading to sickness from eating contaminated food including meat products.

Bilateral

Bilateral means pertaining to two sides

Boning

Boning is a meat processing term which refers to the removal of bone from meat products. Technically it is more correct to refer to this process as de-boning.

Brisket

The brisket is defined as lower portion of the breast, particularly the anterior (front) portion, of an animal.

C

Calibrate

Calibration refers to the process of adjusting a measuring instrument to ensure that measurements are accurate

Carbohydrates

Carbohydrates are chemical compounds containing specific ratios of the elements carbon, hydrogen and oxygen. Examples of carbohydrates include sugars, starches and cellulose. Many carbohydrates are structural components of plants.

Carcass

The term carcass refers to the body of a dead animal

Casing

A casing is a thin skin-like material used to contain a meat product (e.g. wieners, sausages, etc.). Some casings are made from animal tissues (connective tissue from the intestines) while others are made out of synthetic materials.

CFIA

CFIA is the acronym for the Canadian Food Inspection Agency

Chemical

In the meat industry a chemical refers to any agent that is produced by or used in a chemical process. Common chemicals used in meat facilities include most cleaning and sanitizing agents.

Chemical Hazard

In the meat industry chemical hazards refer to any chemical that may be toxic (poisonous) for humans and which may cause immediate or long term negative effects when eaten or breathed in.

Cleaning

Cleaning refers to the removal of soil, food residue, dirt, grease and other objectionable material.

CNS

CNS is the acronym for the “Central Nervous System”. The primary components of the CNS are the brain and spinal cord.

Codex Alimentarius

The term Codex Alimentarius is Latin for "food code" or "food book". It is a collection of internationally recognized standards, codes of practice, guidelines and other recommendations relating to foods, food production and food safety.

Coliforms

Coliform is a general term for bacteria present in the manure of animals.

Common Industry Practice

The term “Common Industry Practice” refers to procedures that should be considered to be the standard, or norm, in all meat facilities.

Communicable Disease

The term “Communicable Disease” is a disease that spreads directly from human to human, animal to animal, or animal to human. All communicable diseases are cause by living micro-organisms.

Condemn

In meat inspection condemn means to identify meat, or meat products, which are considered to be unsuitable for human consumption. Condemned materials must be handled and disposed of in a manner that avoids contamination of other meat products.

Consumer

A consumer is a person who purchases or acquires an edible meat product for consumption by that person or their immediate family.

Contagious

Contagious means communicable to other individuals (e.g. a disease). It also means tending to spread from one individual to another.

Contaminated/Contamination

Contamination means:

1. in respect of an animal, carcass, part of a carcass, meat product, ingredient, etc
    a) containing, or having been exposed to
        i. a substance not permitted, or in an amount in excess of limits prescribed under the *Canadian Environmental Protection Act*, 1999, the *Food and Drugs Act*, or the *Pest Control Products Act*, or
        ii. an ingredient, a food additive or any source of ionizing radiation not permitted by, or in excess of limits prescribed under the *Food and Drugs Act.*
    b) containing or having on it any decomposed matter, foreign matter or visible extraneous material, or
    c) containing or having been exposed to a hazard, or
2. in respect of water, packaging material, any other substance or thing or a condition of a premises, facility or conveyance containing or having been exposed to a hazard; or
3. in respect of an edible meat product, to make unfit for its intended use

Convulsion

A convulsion is a contortion of the body caused by violent and/or uncontrollable muscle contractions. Convulsions usually indicate an abnormality in the CNS.

Corrosion Resistant Material

Corrosion resistant materials are resistant to deterioration due to the action of water, air or acid.

Critical Control Point (CCP)

A CCP is a step at which control can be applied to eliminate a hazard or at least reduce the hazard to an acceptable level. A CCP is also referred to as a Manufacturing Control Point (MCP).

Critical Limit

A critical limit is a maximum, or minimum, value to which a biological, chemical or physical parameter must be controlled, at a CCP/MCP to prevent, eliminate, or reduce to an acceptable level the occurrence of a food safety hazard.

Cross Contamination

Cross contamination refers to a situation where disease, or food spoilage, causing micro-organisms are transferred from one food surface to another, carried by utensils, hands, towels, or other food products.

Cured

In reference to an edible meat product curing means the addition of salt, sodium nitrite, potassium nitrite, sodium nitrate, or potassium nitrate, or any combination thereof is added during the preparation of the product.

D

Dehydration

Dehydration refers to the loss, or removal of water.

Denature

Denaturing means treating an inedible meat product in a manner that gives it an appearance or character whereby it cannot be mistaken for an edible meat product. Only approved agents can be used for denaturing

Director

The Director is any ARD employee designated, by the ARD Minister, as a Director for the purpose of the *Meat Inspection Act*. When this manual was developed the Director of the Regulatory Services Division (RSD) was appointed to this position.

Disease (Infectious)

An infectious disease is any abnormality, or sickness caused by a living micro-organism.

Dress

To dress, in the case of food animals other than pigs, birds or goats, means to:

a) remove the skin, head and developed mammary glands and the feet at the carpal (knee) and tarsal (hock) joints

b) eviscerate and

c) except in the case of a sheep, calf or domestic rabbit, to split the carcass

Pigs and goats can be dressed as above or the hide can be left on. When the hide is left on the hair and toe nails must be removed.

The head can also be left on a dressed pig carcass.

Dressing of birds involves the removal of feathers and hair, head, feet (at the tarsal joint) the uropygial gland and eviscerate.

Dressing

Dressing is the progressive separation of a carcass into edible and inedible parts.

DV

DV is the acronym for the Division Veterinarian. The Division Veterinarian is an employee of the RSD.

E

Edible

Anything that is suitable for human consumption is edible

Endocarditis

Endocarditis is the term for inflammation of the inner lining of the chambers of the heart.

Environmental Contaminants

Hazardous substances, in the environment are referred to as environmental contaminant.

Equilibration

Equilibration means to balance equally.

Euthanize

In abattoirs the term euthanize refers to the humane killing of an animal for purposes other than slaughtering it for the production of edible products.

Evisceration

Evisceration is the process of removing the internal organs. All internal organs must be removed from poultry. In red meat animals all internal organs are removed with the possible exception of the kidneys which may be left in the carcass.

F

Facility

In the TIPM this term refers to all elements in the building and its surroundings (e.g. the outside property; roadways; drainage; building design and construction; product flow; sanitary facilities; and quality and supply of water, ice and steam).

Fibrin

Fibrin is an insoluble filament that is formed during the clotting of blood.

Flock Health Declaration

This is a form that has been developed by the RSD in order to ensure that appropriate information is collected pertaining to the health of poultry flocks destined for slaughter.

Food

The term food includes any article (including water and ice) manufactured, sold or represented for use as food or drink for human beings and any ingredient that may be mixed with food for any purpose.

Food Animal

A food animal is any animal (including birds) that is slaughtered and processed into a meat product for human consumption.

Food Contact Surface

A food contact surface is any surface with which carcasses, parts of carcasses, meat products, ingredients, or packaging commonly comes into contact with in a licensed meat facility.

Foreign Material

Foreign material is any substance, or object that doesn't belong in an edible meat product and which may cause injury, or illness, if eaten.

Freeze-Dried

Freeze-drying refers to freezing then dehydrating at a low temperature and in a high vacuum.

Fungi

This is a general term used to refer to microorganisms such as molds.

G

Good Manufacturing Practice

"Good Manufacturing Practices" (GMPs) are the activities and procedures used to ensure that personnel, the manufacturing environment and other factors that are not directly related to food, are monitored and controlled to create conditions that are favorable for the production of safe food.

H

HACCP

HACCP is the acronym for "Hazard Analysis and Critical Control Point". HACCP is a science-based system that prevents, eliminates or reduces to an acceptable level, hazards that are significant for food safety.

HACCP Plan

A "HACCP Plan" is a plan that is prepared in accordance with the HACCP principles of Codex Alimentarius for a process or product and that specifies, in respect of the process or product, all the hazards, critical control points, critical limits, monitory procedures, deviation procedures, verification procedures and records.

HACCP System

A “HACCP System” is a system which includes prerequisite programs and HACCP plans. The HACCP system is a science-based and systematic strategy that identifies specific hazards and measures for their control to help ensure food safety through control points or critical control points.

Harvesting

In the TIPM the term harvesting refers to the collection or gathering of parts of an animal for a specific purpose.

Hazard

The term hazard, from the perspective of the production of edible meat and meat products, refers to any biological, chemical, or physical agent or factor, or a condition of the meat or the environment in which meat products are produced, processed, handled or stored that may directly or indirectly cause a meat product to be unsafe for human consumption.

Held

The term “Held” refers to any product or other thing identified as being under the official control of the Meat Inspection Branch (MIB) of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

Hygienic or Hygiene

These terms refer to processes of personal cleanliness or sanitation.

I

Immune Response

The immune response is the response made within the body in response to an invading foreign substance or living agent (e.g. bacteria or virus). Antibodies are produced which are specific against the invading agent.

Incision

Incision means cutting into.

Inedible

This term means unsuitable for human consumption.

Infectious

Infectious means capable of causing an infection. This term is applied to micro-organisms that can invade the body and cause disease.

Infection

Infection refers to the condition of being infected.

Infestation

Infestation means to overrun. This term is used in reference to the invasion of meat facilities by living agents such as insects and rodents.

Inflammation

Inflammation literally means to set on fire. Inflammation is a protective response of the body that is triggered by infections or injuries. The classical signs of inflammation are redness, swelling, heat, pain and loss of function.

Ingesta

The word ingesta is a collective term that refers to the contents of the stomach and intestines.

Ingredient

An ingredient is anything that is combined with one or more individual units of food to form an integral unit of food.

Inspection

In the TIPM the word inspection refers to all official activities conducted by a MIB Inspector.

Inspector

The Meat Inspection Branch (MIB) Inspector is any individual that has been appointed, designated or otherwise recognized by the MIB to perform official meat inspection on behalf of, or under the supervision of the MIB

Inter-digital

This term means between the toes.

-itis

“itis” is a suffix (word ending) which means inflammation.

L

Larvae

The term larvae is the plural form of larva. Larvas are independent developmental stages of various organisms including insects and many parasitic worms, etc.

Licensed Meat Facility

In the TIPM the term “Licensed Meat Facility” refers to:

a) abattoirs,

b) meat facilities operated by a person with a mobile butcher license;

c) other meat processing facilities that may come under the jurisdiction of the Regulatory Services Division (RSD) of Alberta Agriculture and Food (AAF) in the future

License Number

The license number is the number assigned to a meat facility by the RSD.

Lot Number

A lot number is a distinctive combination of letters, numbers, or both, which are applied to each batch of meat product. Lot numbers are applied to each container.

Lymph

Lymph is a transparent, slightly yellow, water fluid derived from tissue fluids, which is contained with in the vessels and nodes of the lymphatic system.

Lymphatic System

The lymphatic system is a one way drainage system that serves to return a substantial portion of fluids back to the general circulation. The system consists of a series of thin walled vessels which pass through a variable number of lymph nodes which serve to filter the fluid as it passes through the system.

Lymph Node

Lymph nodes are recognizable body structured that serve to filter lymph fluid as it returns from the tissues to the general circulation. Because of their filtering activity the nodes are examined during meat inspection procedures and an indirect way of determining where there is any inflammation and/or infection in the structures that are being drained. If the lymph node is normal the inspector can have a reasonable degree of certainty that the portion of the carcass being drained by that node is safe for human consumption.

M

Mandible

Mandible is the technical term for the jawbone.

Manual or Manually

Manual means doing a task by hand.

Master Sanitation Schedule

The “Master Sanitation Schedule” is a schedule of sanitation activities, or procedures, which must take place on a scheduled (planned) frequency. In general, scheduled activities are those that don’t take place on a daily, or after production, basis (e.g. sanitation of freezers, storage coolers, dry storage areas, overhead structures, water storage tanks, shipping areas, etc.).

Meat

Meat is the flesh of any animal, or any product containing animal flesh, that is intended for human consumption in its primary or processed form.

Meat Facility

A “Meat Facility” is any facility, or operation, that converts carcasses, primal cuts of meat, or both, into edible products which are saleable to the public.

Meat Facility Standards (MFS)

The “Meat Facility Standards” comprise a food safety program standard that includes prerequisite program criteria (e.g. sanitation, pest control, recall, etc.) and process control criteria (e.g. manufacturing controls).

Meat Hygiene

This term includes all conditions and measures required to ensure the safety and suitability of meat at all stages of production, processing and storage.

Meat Inspection Legend

The "Meat Inspection Legend" is a trade-mark of the Meat Inspection Branch (MIB). The legend indicates, when it is applied, that official controls have been carried out in accordance with the standard.

Meat Product

Meat products, in respect of a food animal include:

a) the carcass

b) the blood or a product, or by-product of a carcass, or

c) a product containing blood or a product, or by-product of a carcass

MIB

MIB is the acronym for the Meat Inspection Branch which is part of the Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development (ARD).

Microbiological

Microbiological means of, or pertaining to, micro-organisms

Micro-organism

Micro-organisms are microscopic living agents. The term micro-organism includes all viruses and bacteria and some types of fungi and parasites.

Microscopic

Microscopic means too small to be seen with the naked eye.

Minister

The "Minister" referred to in "Meat Inspection Legislation" is the person determined, under section 16 of the *Government Organization Act* as the Minister responsible for the *Meat Inspection Act.*

Mobile Butcher

A mobile butcher is an individual that is licensed to slaughter and owner's animal, on the owner's premises, or assists an owner in slaughtering the owner's animal on the owner's premises. The meat from these animals can only be used by the owner or his/her immediate family as defined in the legislation.

Mock Recall

A "Mock Recall" is a process designed to assess the effectiveness of a company's recall program and the readiness of the recall team. A mock recall involves all steps of the recall program except that no product is actually recalled. Mock recall exercises can help identify gaps, or potential problems, in traceability.

Mold

Mold is the growth of tiny plants (fungi) on surfaces which produce a furry coating on carcasses or surfaces within a meat facility. Mold is associated with decay.

Monitoring

Monitoring is the act of conducting a planned sequence of observations, or measurements, of control parameters to assess whether a "Critical Control Point" (CCP) or specific part of the Meat Facility Standards program is under control.

N

Nasal

Nasal means of, or pertaining to, the nose.

Neoplasm

The term neoplasm literally means a new growth. It is a general term used for tumors or cancerous growths.

Nitrates

A nitrate is a salt or ester of nitric acid or any compound containing the NO_3 radical.

Nitrites

A nitrite is a salt of nitrous acid.

O

Omasum

The omasum is the third compartment of a ruminant stomach. Ruminants include cattle, sheep, bison, elk, deer, etc.

Operational Controls or Operational Separation

These terms refer to the separation of processing activities, by means other than physical separation. This is done in order to ensure that incompatible activities don't cause contamination of meat, or meat products. Common methods are to separate activities in time or following sanitation or the use of some other procedure.

Oral

Oral means of, or pertaining to, the mouth.

Organic

The term "Organic" refers to class of chemical compounds which formerly comprised, or were derived from living organisms.

Organoleptic Inspection

The term "Organoleptic Inspection" refers to the procedures followed by a MIB inspector to ensure that all parts of a carcass are suitable for human consumption.

P

Packaging

Packaging refers to the activity of placing meat products in a container.

Packaging Material

This term refers to the materials used for packaging meat and meat products including containers and bulk containers.

Palatable

Palatable means agreeable to the sense of taste.

Paralysis

Paralysis refers to the loss of the ability to make voluntary, or conscious, muscular movements. A paralyzed animal will not be able to move properly. Paralysis can be partial or complete.

Parasite

A parasite is an animal, or plant, that lives on, or in another animal or plant. Animals have many parasitic diseases some of which are directly transmissible to humans (e.g. tapeworms, Trichinella spiralis).

Pathogenic

This term means capable of causing disease (e.g. pathogenic bacteria).

Peritoneum

The peritoneum is the serous membrane that lines the inner wall of the abdominal cavity and the external surfaces of the abdominal organs.

Personal Hygiene

“Personal Hygiene” refers to the combination of an individual’s practices and style that relates to cleanliness (e.g. healthy habits that include bathing, wearing clean clothing and most importantly, washing hands frequently before handling edibles to contribute to the safe production of meat and meat products.

Personnel

The term personnel refers to the employees of the licensed meat facility.

Pest

A pest is any living animal, or insect, other than a food animal or a service animal.

Pesticide

A pesticide is a substance that is used to prevent, destroy, or repel, any insect, nematode (worm), rodent, predatory animal, parasite, bacteria, fungus, weed or other form of plant or animal life. Rodenticides and herbicides are common specific types of pesticides.

pH

The pH is a measurement of the degree of acidity or alkalinity of a substance. The pH scale is as logarithmic scale that runs from 0-14. 7 is neutral. Values above seven indicate a basic substance while readings below 7 indicate increasing levels of acidity. Because the scale is logarithmic each value is 10 times more intense than the preceding value. For example a pH of 5 is 10 times more acidic than a pH of 6 while a pH of 4 is 100 times as acidic as a pH of 6.

Physical

Physical means denoting, or pertaining to, the properties of matter and energy other than those peculiar to living matter.

Physical Hazard

A physical hazard is any foreign material that could cause injury, or illness, if eaten.

Physical Separation

“Physical Separation” means the separation of processing activities by a physical means (e.g. a wall) to ensure that incompatible processing activities don’t cause contamination of meat or meat products.

Pizzle

Pizzle is the slaughter house term for the penis of any male animal.

Pleura

The pleura is the serous membrane that lines the inner wall of the thoracic (chest) cavity and the external surfaces of the thoracic organs.

Post-mortem Inspection

Post-mortem literally means after death. The term “Post-mortem Inspection” refers to the examinations conducted by a meat inspector to determine whether an animal is safe for human consumption.

Potable

Potable means fit, or suitable, for drinking.

Poultry

Poultry is a collective term for domestic fowl including but not limited to chickens, turkeys, guinea fowls, ducks and geese.

Ppm

Ppm is the acronym for parts per million

Premises

Premises are the lands, surrounding areas, buildings and facilities of a licensed meat facility.

Prepuce

Prepuce is an anatomical term that refers to the skin and associated structures surrounding the opening for the penis in the male.

Prerequisite Programs

Prerequisite programs are the activities and procedures used to ensure that personnel, the manufacturing environment and other factors that are not directly related to meat, or meat products, are monitored and controlled to create conditions that are favorable for the production of safe meat and meat products.

Preventative Maintenance Program

A “Preventative Maintenance Program” is a documented program that outlines the maintenance activities, or procedures, that must take place on a scheduled (planned) frequency for various pieces of processing equipment (e.g. smokehouses, water filters, saws, slaughter equipment, etc.).

Prion

A prion is an abnormally shaped molecule of protein which is found in the brain of animals affected with a group of diseases called “Transmissible Spongiopathies” (e.g. mad cow disease). It is believed that prions are the cause of these diseases although it is possible that they may be a result.

Procedure

For the purpose of the TIPM a procedure is a document that clearly describes how various actions, or tasks, are to be performed.

Processing

Processing means to prepare meat, or meat products for human consumption. It includes any activity performed to prepare a carcass, part of a carcass, or a meat product for use as food and includes adding an anti-coagulant to blood, ageing, basting, boning, breaking, canning, coating, commutation, cooling, cooking, curing, dehydrating, emulsifying, fabricating, fermenting, freezing, heating, marinating, massaging, pasteurizing, pickling, refrigerating, rinsing, rubbing, salting, slicing, smoking, thawing, tenderizing, thermal processing, washing and processing previously processed products.

Processing Area

A “Processing Area” is any area where activities listed in the above definition of processing are performed.

Process Controls

“Process Controls” are measures that have been put in place to ensure that prescribed tolerances, or limits, are maintained at various processing steps in order to ensure the safe production of meat and meat products.

Psi

Psi is the acronym for pounds per square inch.

Q

Quality Assurance

The term “Quality Assurance” applies to all of the planned and systematic activities that are needed to provide confidence that a product will meet all quality requirements.

Quality Assurance System

A “Quality Assurance System” is the organizational structure, procedures, processes and resources needed to provide “Quality Assurance.

R

Recall

Recall refers to a system through which products that may be hazardous to consumers are efficiently and effectively removed from the marketplace.

Recipe

In respect to meat products recipes are written formulations which identify:

a) all ingredients, including components of the ingredients

b) the proportions of all ingredients and their components

c) the method of manufacture

d) the results of any tests that are required

Record

A record is document, either physical or in an electron medium, which clearly shows evidence of activities performed, data recorded and results achieved.

Reference Listing of Accepted Construction Materials, Pakaging Materials and Non-Food Chemical Products

This is a list, published by the CFIA (Canadian Food Inspection Agency) which lists materials and non-food chemicals that are suitable for use in a licensed meat facility.

Refrigerate

To refrigerate means to lower the temperature of a meat product to, and maintain it at a temperature of $4^{o}C$, or less but doesn't include freezing.

Relative Humidity

Relative humidity is the ratio (percentage) of water vapor in the air to the amount required to saturate the air at the same temperature.

Retail

Retail means the handling and/or processing meat, or meat products, at the point of sale, or delivery, to the final customer.

Reticulum

The reticulum is the second compartment of a ruminant stomach. Ruminants include cattle, sheep, bison, elk, deer, etc.

Retro

Retro is a prefix (word beginning) which means behind.

Rework

Rework means to include a partially or fully processed meat product into a newere batch, lot or production date of product.

Risk

Risk is a measurement, or estimation, of the probability of an adverse health effect and the severity of that effect from a given hazard.

RS

RS is the acronym for Regional Supervisor. The RS is appointed by the Regulatory Services Division (RSD) to supervise meat inspection service in designated regions throughout the Province of Alberta.

RSD

The term RSD stands for the Regulatory Services Division of Alberta Agriculture and Rural Development.

RTE

RTE is the acronym for “Ready to Eat”. RTE meat products have been subjected to a process sufficient to inactivate the vegetative forms of pathogenic micro-organisms, or their toxins and control the spores of pathogenic bacteria so that the product doesn’t require further preparation before consumption other than thawing, or exposing the product to sufficient heat to warm it without cooking it.

Rumen

The rumen is the first compartment of a ruminant stomach. Ruminants include cattle, sheep, bison, elk, deer, etc.

S

Safe

In reference to meat, or meat products, safe means the product will not cause harm to the consumer providing it has been prepared and eaten as intended.

Sanitation

Sanitation means applying cleaning and sanitizing agents to the facility, or equipment, in order to destroy pathogens and other micro-organisms

Sanitation Program

A “Sanitation Program” is a written program that will ensure that the buildings, equipment, utensils, transport containers and all other physical facilities in the establishment are properly sanitized as necessary.

Scalding

Scalding means exposing materials to very hot, or boiling, water. Poultry and hog carcasses are scalded to facilitate the removal of feathers and hair respectively.

Segregate

To segregate means to place, or position, a product so that it is separated from other products.

Slaughter

Slaughter means to kill a food animal with the express purpose of processing it for human consumption.

SPCA

SPCA is the acronym for the “Society for the Prevention of Cruelty to Animals”.

Specification

A specification is a detailed description of prescribed criteria for a particular item

Specified Risk Materials

“Specified Risk Materials” (SRMs) are parts of cattle carcasses that are believed to carry the agent that causes “Bovine Spongiform Encephalopathy” (B.S.E. or “Mad Cow Disease”). The consumption of these parts of the carcass is deemed to be hazardous to humans and animals thus they must be removed from the carcass and handled in a manner which ensures that they are not used for human or animal consumption.

Sphincter

Sphincter is an anatomical term for a circular band of voluntary, or involuntary, muscle, that surrounds a opening into the body or a tubular organ.

Split

Split means to divide a carcass lengthwise along its midline.

Standard Operating Procedure for Sanitation

A "Standard Operating Procedure" (SOP) for sanitation is a document that clearly describes how specific pieces of equipment or parts of the facility must be cleaned and sanitized. SOPs are necessary to ensure that cleaning and sanitizing is done to required levels before they are used in the processing of meat, or meat products.

Suitable for Human Consumption

Being "Suitable for Human Consumption" means that meat, or meat products:

a) have been produced under hygienic conditions and in accordance with the Meat Facilities Standard and the TIPM

b) are safe and appropriate for their intended use

c) meets the parameters established by the Meat Inspection Branch (MIB) of Alberta Agriculture and Rural Development (ARD) in respect of specified diseases and/or defects

Symmetrical

Symmetrical means being in symmetry which in turn means correspondence in size, form and arrangement of parts on opposite sides of a plane line or other point of reference. Parts of the body on the left and right side (e.g. legs) should be symmetrical. Meat inspectors will compare one limb to the corresponding limb to determine whether an abnormality is present or not.

T

Technical Interpretation Policy Manual (TIPM)

This is a manual, created by Regulatory Services Division (RSD) of Alberta Agriculture and Rural Development which is intended to explain specific technical details and requirements of meat inspection legislation and the "Meat Facility Standards" (MFS).

Toxic

Toxic means pertaining to, or affected by a toxin (poison)

Toxicity

Toxicity means having a toxic or poisonous quality.

Traceability

Traceability is the ability to follow the location of products, and all ingredients, their associated history, use and attributes backwards and forwards throughout the supply chain from the farm of origin to the final consumer.

Transport Container

A “Transport Container” is any conveyance used to move (transport) meat, or meat products, from one location to another.

U

Udder

The udder is the milk producing (mammary) gland of any female red meat animal.

Up-to-date

The term “up-to-date” means:

a) extending to the present time

b) including the latest facts or

c) in accordance with the latest or newest standard, ideas, or style

Uro-genital

This is an anatomical term which includes both the urinary and reproductive systems of an animal.

V

Validation

Validation means obtaining scientific confirmation, or proof that elements, of the meat product safety system, are complete and effective in controlling biological, chemical and physical hazards. Validation may include, but is not restricted to, ingredient sampling, end product sampling, challenge studies, heat distribution measurements, process validation studies, statistical analysis, etc.

Vegetative

Vegetative literally means growing like a vegetable or plant. In the case of certain bacteria the vegetative refers to the stage when the organism is undergoing active reproduction as opposed to the spore stage when the organism is inactive and not reproducing.

Venting

Venting is the process of opening the abdominal cavity of poultry by making a cut around the cloaca. The cloaca is the common opening for the digestive, reproductive and urinary system in poultry. Venting is the first step in eviscerating a poultry carcass.

Verification

Verification is an auditing term which refers to real time “check the checker” activities to ensure that monitoring, deviation corrective action and record keeping activities are properly performed and when applicable, done in accordance with written programs and procedures.

Virus

Viruses are disease causing micro-organisms that are too small to be seen with the ordinary light microscope. Unlike other micro-organisms, such as bacteria, which can reproduce in the environment, viruses have to enter to living animal cells in order to reproduce.

Viscera

Viscera is a collective term for all of the soft internal organs of the body including but not restricted to the brain, lungs, heart, stomach, intestines, etc.

W

Water Activity (A_w)

A_w is the ratio of the water vapor pressure of a meat product ot eh vapor pressure of pure water at the same temperature and pressure.

Water Treatment

“Water Treatment” refers to the system (e.g. filtration, exposure to ultra-violet light, addition of chemicals, etc.) used on a facility’s water system for the purpose of making the water potable or improving its overall biological and/or chemical quality.

Weasand

Weasand is an ancient term for the trachea, or windpipe. In meat packing plant terms it has also become the term for the esophagus.

WHMIS

WHMIS is the acronym for Worksite Hazardous Material Information System which is Canada's national hazard communication standard. The key elements of the system are cautionary labeling of containers of WHMIS "controlled products", the provision of material safety data sheets (MSDSs) and worker education and training programs.

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