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

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

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