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Environmental

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Content: Chapter One General Provisions

Article 1

Establishment Standards for Slaughterhouse (abbreviated as the standards hereafter) herein are drawn up pursuant to the provisions specified in the paragraph 2, Article 30 of the Animal Industry Act.

Article 2

The terms used in the Standards herein are defined as follows:

- Inspector: Veterinary meat inspector who conducts meat inspection in accordance with the paragraph 2, Article 29 of the Animal Industry Act, and meat inspection assistant who is referred to paragraph 2, Article 23 of the Enforcement Rules of Animal Industry Act.
- 2. Offal or giblets: Viscera, skin, feet, head, tail and bits of meat of livestock or poultry from dressing such as evisceration, skinning, removal of feet and head.

Article 3

The environment of slaughterhouse shall meet the following requirements:

- The area within slaughterhouse shall keep clean at all times and equipped with an efficient drainage system. Vacant lot should be covered with reinforced concrete, asphalt or green to reduce the generation of dust.
- 2. The periphery of the slaughterhouse shall be enclosed with fences or walls.

Article 4

The slaughterhouse plant building shall meet the following requirements, except for holding pens and otherwise provided in the Standards:

- The plant buildings shall be built with a structure and materials that are easy to maintain and clean, and able to prevent from direct or indirect contamination of the carcasses and viscera.
- 2. The floors shall be made of waterproof, anti-slippery, loadbearing, and easy-to-clean materials, and are sloped in a way that shall facilitate water drainage and keep the area from

- ponding. Troughs with sufficient width shall be constructed to hold the dripping from hanging carcasses.
- 3. The plant building shall have a complete and efficient drainage system. The drain ditches shall install devices to keep away solid waste.
- 4. The walls and pillars shall have white or light-colored surface; the part within one meter above the ground shall be paved with non-absorptive, impervious and easy-to-clean material with surface which shall be smooth and maintained clean and free of cracks.
- 5. The rooftop or ceiling shall be constructed with the material, which is white or light-colored, easy-to-clean and able to prevent from dust accumulation. It shall also be free of the conditions of mold growth or peel-off on the surface. Floor or ceiling to which carcasses or viscera are directly exposed shall be free of condensation, keep clean and well maintained.
- 6. Lighting devices shall be evenly distributed. Operating tabletops shall have illumination intensity of more than 200 lux, and common areas of operation shall have that of more than 100 lux unless otherwise provided in the Standards.
- 7. The entrance/exit, doors, windows, and other passageways shall be built with sturdy, easy-to-clean and impervious materials.
- 8. The plant buildings shall be well-ventilated and facilitated for steam discharge.
- Devices which keep away vectors shall be installed to prevent the vectors from entering the scalding and skinning area and the operating areas thereafter.

Basic facilities of slaughterhouse shall meet the following requirements:

1.Locker room

Locker room shall be located adjacent to the slaughtering operation area and have sufficient space to provide separate locker for each employee.

2. Washing facilities

Entrance/exit of the slaughterhouse shall be installed with shoe-dipping pond or other facilities having the same function. Hand washing facilities shall be install to include sufficient number of water faucets, liquid soap and hand drying devices. The number of faucets shall not be less than one tenth of the highest number of employees working in the area. Where the number of employees exceeds two hundred, additional faucets shall be installed at no less than one twentieth of the excess portion. The hand washing facilities shall be installed separately for employees working in the slaughter and cutting operation areas, and each individual operating area shall have a set of hand-washing facilities. The washbasin shall be made of easy-to-clean and impervious material. Water faucets, liquid soap and hand

drying devices shall be designed to precludes recontamination.

3. Lavatories:

- a. Lavatories shall be completely segregated from the slaughtering and cutting operation area, and the septic tank shall be at least 15 meters away from the water supply (well).
- b. The toilets shall be of flush-type, made of impervious and easy-to-clean material and kept clean.
- c. Lavatories shall be well-ventilated, have adequate lighting, insect- and rodent-proof devices, and equipped with handwashing and drying facilities including tap water, liquid soap, hot air hand dryer or paper towel.
- d. The sign of "Please wash your hands" shall be posted in the lavatories.
- 4. Inspector office and shower facilities
 Office and shower facilities shall be provided for the
 inspectors in the slaughterhouse. For two or less inspectors,
 the office space shall be at least 10 square meters An
 additional 1.4 square meters shall be provided for each
 additional inspector. Desks, chairs, lockers (40.5 cm in
 length and width, and 155 cm in height in principle), lockable
 file cabinet for storage of documents, air conditioner and
 direct-dialing telephones shall be furnished in the office.
 The shower facilities shall supply adequate cold and hot
 water.
- 5. Cleaning area for poultry or livestock shipping vehicles
 The area shall be situated at an appropriate location and
 equipped with disinfecting equipments.
- 6. Condemned meat and carcasses disposal room
 - a. Condemned meat and carcasses disposal room shall be separated from the slaughter room or processing room, and shoe-dipping pond shall be installed on the floor at the entrances.
 - b. If the rendering equipment or incinerator is installed, it shall have the capability to accommodate at least one whole carcass.
 - c. The waste meat and carcasses shall be disposed by the waste-treatment organizations approved by the environmental protection regulatory authority if the facilities described in the preceding two paragraphs are not installed.
- 7. Special facilities shall be designated for storing chemicals and decayed articles which may be harmful to human health and the safety of meat products.
- 8. Water supply
 - a. Where water used for washing carcasses or viscera, or used for washing tools or machinery that are in contact with carcasses or viscera is not tap water, facilities for purifying or disinfecting water shall be installed, and the quality of treated water shall meet the standards for drinking water. If

- the underground water is used, the source of the underground water shall be at a distance of at least 15 meters away from the septic tank and waste pile-up site. The water reservoir of slaughterhouse shall be an enclosed structure situated at least 3 meters away from waste area or septic tank.
- b. Sufficient supply of hot water at temperature above 83 °C for disinfection shall be provided by the slaughterhouse. Thermometer shall be install at hot water supply areas, and istinct label shall be posted near hot water pipes and outlets.
- c. Water reservoir (tower or tank) shall be constructed by using non-toxic materials which shall neither be able to contaminate water, and shall have device to protect it from contamination.
- d. The pipes for drinking and non-drinking water shall be installed separately and marked clearly.
- 9. Employee dormitory, dining hall and rest area of a slaughterhouse shall be separated from the slaughter area.
- 10. Vehicle disinfecting facilities shall be set up at the entrance/exit area.

Post-mortem inspection facilities shall meet the following requirements:

- 1. Post-mortem inspection station shall be set up at an appropriate location in the slaughter room. The station shall be at least 150 cm in length for each inspector, and shall has sufficient width and height to allow the inspector to work efficiently.
- 2. The illumination intensity on the surface of carcass and viscera under inspection shall be above 500 lux, and the light source shall not distort the color of the inspected object.
- 3. The electric-powered carcass conveyors and viscera conveyors shall be operating synchronously to enable the inspector to conduct inspection of the carcass and the corresponding viscera. A control device shall be made available near the inspection station for the inspector to stop the moving of the carcass and viscera simultaneously when deemed necessary. For the slaughterhouse which is not equipped with electric-powered conveyor, the viscera may be placed on designated stainless containers for inspection, and each container shall be loaded with the viscera from one animal only.
- 4. Viscera tray and carcass hanging equipment for retained viscera and carcass shall be set up near the inspection station. Unless there is an automatic system for processing condemned carcasses and viscera, waterproof containers which can store condemned carcass and viscera shall be installed in the inspection station,, and shall have mark of word "CONDEMNED".
- 5. The inspection station shall have washing facilities including

- soap and paper towel for inspector, hot water at temperature above 83 °C to disinfect inspection tools, carcass counter and recording device with its placement facility. The facility shall be placed at a location easily accessed by the inspector.
- 6. Non-distorting mirror of 150 cm by 150 cm shall be installed at the inspection station for inspectors to check the back and sides of the carcasses.
- 7. The rate of poultry carcass and viscera passing through the veterinary meat inspector shall be adjusted to under 35 heads per inspector per minute, unless approved by the central regulatory authority.

Electric-stunner, captive bolt, carbon dioxide stunning equipment or other humane stunning equipment which can cause livestock or poultry to lose consciousness rapidly before bleeding shall be equipped in slaughterhouses.

Chapter Two Livestock Slaughterhouse

Article 8

Facilities required for livestock slaughterhouse

1. Holding pens

The space of holding pens shall have a capacity sufficient to accommodate all livestock to be slaughtered per day, which is calculated on the basis of at least 0.5 square meters per hog or sheep, and 2.5 square meters per cattle. The floor of the holding pen shall be paved with impervious materials and have good drainage. The structure of the holding pens shall be sturdy and well ventilated with a shed on top. Water spray or drinking water equipment for livestock shall be installed in pens. Adequate water supply and faucets for washing shall also be provided. Adequate space and facilities shall be made available for ante-mortem inspection. The illumination intensity for ante-mortem inspection shall be above 100 lux at 90 cm above the floor.

2. Isolating pens

Isolating pens shall be easily distinguished from holding pens in order to accommodate suspicious livestock, and equipped with livestock restrainer. The isolating pens shall be set up and equipped in accordance with the standards identical to those of holding pens. The illumination intensity for ante-mortem inspection shall be above 200 lux at 90 cm above the floor.

3. Slaughter room

- a. The space of the slaughter room shall be adequate for slaughter operation. Slaughtering equipment shall be arranged in the order of the operating procedures.
- b. Hog, sheep and cattle shall be slaughtered separately to prevent cross contamination.
- c. Blood collecting device shall be available while bleeding.
- d. Process after skinning and scalding shall be carried out in buildings that comply with the provisions specified herein in Article 4.
- 4. Emergency slaughter room

- a. Emergency slaughter room shall be separated from regular slaughter operation area;
- b. Carcass hanging facilities shall be equipped;
- c. Viscera inspection facilities shall be set up;
- d. The illumination intensity shall be above 500 lux in the inspection area;
- e. Hand washing and sterilization device shall be equipped.
- 5. Offal processing area
 - a. The processing area shall be located inside a building with adequate illumination and elevated processing tables.
 - b. Viscera shall be processed in a separate room from other offal.

6.Chilling room

- a. The carcasses shall be hung in the chilling room in the way that six or less pig carcasses (in case of cattle carcass, three or less) can be hung for every two meters of overhead rails.
- b. The chilling facilities shall be able to bring down the core temperature of the carcass down to 0 \sim 5 °C within 18 hours after slaughter.
- c. The walls shall be constructed with light-colored and impervious materials, the floors shall have good drainage facilities, and the temperature in the chilling room shall be able to evenly distributed and maintained at $0 \sim 5$ °C.
- 7. Carcass holding area (required when chilling room is not set up)
 - Overhead rails and forced air blower shall be equipped.
- 8. Cleaning and disinfecting room for utensil and container
 - a. Facilities for washing carcass hooks and meat vessels shall be separately installed.
 - b. Facilities for rinsing and heat disinfection shall be installed.
- 9. Storage room for retained carcasses and viscera

The storage room shall maintain the temperature at or below 5°C, and be lockable. The key to the storage room shall be under custody of the veterinary meat inspector. The storage room may be provided as a chamber of the chilling room or in a corner of the chilling room encircled by wire meshes.

- Cutting and packing room (exempt for operations that do not include carcass cutting and packing; applicable to afterchilling cutting operation)
 - a. The room shall be set up adjacent to the chilling room and freezing room, but separated from the slaughter room.
 - b. The cutting and packing operation of carcasses and viscera shall be effectively separated.
 - c. The temperature shall be maintained at or below 15°C, and air conditioner or air conditioning system shall be installed.
 - d. Worktables and conveying equipment shall be properly installed. The illumination intensity for the worktables shall be above 200 lux.
 - e. Hot and cold water-sinks shall be set up at appropriate locations along the production line.

- 11. Hot boning room (exempt for operations that do not include carcass cutting and packing; applicable to cutting operation without chilling)
 - a. The room shall be separated from the slaughter operation.
 - b. Worktables and conveying equipment shall be properly installed. The illumination intensity for the worktables shall be above 200 lux.
 - c. Temperature of the room shall be at or below 15°C and humidity at or under 85%. Forced air blower shall be equipped in the room.
 - d. Hot and cold water-sinks shall be set up at appropriate locations along the production line.
- 12. Freezing facilities (exempt for operations without frozen products):

Freezing facilities shall be able to reach the temperature to -40°C or below, and an automatic temperature recording device shall be equipped.

13. Cold storage and frozen storage facilities (exempt for operation without cold and frozen products)

Cold storage facilities shall be able to keep the core temperature of products at 4°C to -2°C when in full storage, and the frozen storage facilities shall be able to keep that of products at -18°C or below. Both facilities shall be equipped with an automatic temperature recording device.

14. Thawing room (exempt for operations not including thawing)

Thawing room shall be adjacent to freezing room, unpacking operation area and cutting and packing room, but separated from the cutting and packing room, or set up in an area in the cold storage room. The stored products in the thawing room shall be at a distance of at least 5 cm from the walls and floors, and no absorbent pallets may be used.

15. Unpacking area (exempt if the operations not including unpacking)

Unpacking area shall be adjacent to thawing room, cutting and packing room, and freezing room, but separated from cutting and packing room. Facility for collecting cartons, plastic bags and baskets shall be set up.

Article 9

Equipment required for livestock slaughterhouse

1. Carcass hanging equipment:

The distance between two hung carcasses shall be at least 35 cm. The distance between the lowest end of the carcass and the ground shall be at least 60 cm; however, it may be reduced to 30 cm or more if there is a device to prevent the contamination of carcasses from splash. The carcass hanging system shall be kept at an appropriate distance from the walls, cement posts, air conditioners and other equipment or facilities that may contaminate the carcasses.

2. The equipment of livestock slaughterhouse shall be constructed in such a way that it is easy-to-clean, easy-to-disinfect and able to prevent contamination. The parts of the equipment that are in direct or indirect

contact with the carcasses or viscera shall be made of impervious and non-corrosive materials, such as stainless steel (knives may be made of carbon steel), anode-treated aluminum, or non-toxic plastics. Use of lead, iron, copper, toxic chemical materials, or paint coating is not allowed.

3. Machinery and equipment fixed to the ground shall be mounted in complete contact with the walls or ground. Where such contact can not be obtained, the machinery anchor or equipment shall be mounted at least 30 cm above the ground or away from the walls to prevent filth build-up and facilitate cleaning and disinfection.

Chapter Three Poultry Slaughterhouse Article 10

Facilities required for poultry slaughterhouse

- 1. Holding facilities
 - a. The holding facilities shall have a roof, sturdily constructed and well ventilated. Adequate space shall be provided for ante-mortem inspection. The illumination intensity shall be above 100 lux.
 - b. The floors and passageways shall be constructed of concrete and have slop (in reverse direction to the slaughterhouse) to facilitate drainage outward. Adequate water faucets shall be installed for cleaning, and appropriate space shall be allowed for truck move or U-turn.
 - c. Where giant fans are installed for holding cages, it shall be avoided to let the air blow toward the slaughterhouse.
 - d. When water pond is used for holding waterfowls, roof is not required, however, clean, running water shall be provided.
- 2. Slaughter room
 - a. The slaughter room shall have adequate working space.

 The slaughtering machinery and equipment shall be arranged in the order of operating procedure.
 - b. Blood collecting facilities shall be provided in the bleeding area.
 - c. Waxing of ducks (waterfowl) shall be carried out in a working room at fixed site, which shall be equipped with an air extractor, and the exhaust air and smoke shall not spread to other areas inside the building of the slaughterhouse.
 - d. Feathers and other wastes shall be kept in designated containers or collecting facilities.
- 3. Giblets processing room

A separated room from the slaughter operation area shall be set up for the processing of giblets. The room shall be evenly illuminated and elevated processing table installed.

- 4. Chilling facilities
 - a. Chilling facilities shall be able to bring down the core temperature of the carcass to 7°C or below within 4 hours after slaughter.
 - b. Overflow facilities shall be installed if chilling tank is used.
- 5. Disinfecting area for utensil and container
 - a. The disinfecting area shall be separated from slaughter

- operation area.
- b. Facilities for rinsing and heat disinfection shall be installed.
- c. Facilities for washing cages, carcass containers or viscera vessels shall be separately installed.
- 6. Cutting and packing room: Refer to item 10, paragraph 1 of Article 8.
- 7. Freezing facilities: Refer to item 12, paragraph 1 of Article 8.
- 8. Cold storage facilities: Refer to item 13, paragraph 1 of Article 8.
- 9. Thawing room: Refer to item 14, paragraph 1 of Article 8.
- 10. Unpacking operation area: Refer to item 15, paragraph 1 of Article 8.

Equipment required for poultry slaughterhouse

- 1. Overhead rail system, hoist, covered chutes, or other delivery system shall be used for conveying carcasses, and the carcass shall be at least 60 cm above the ground.
- 2. The following facilities are required for viscera cleaning (exempt if an automatic cleaning system is used):
 - a. Washing counter.
 - b. Viscera conveying equipment.
- 3. Machinery, containers, utensils and movable equipment
 - a. Equipment that are in direct contact with meat products must be constructed in such a way that it is easy-to-clean, easy-to-disinfect and able to prevent contamination, and situated at where it is easy to wash and disinfect.
 - b. Machinery and equipment to be fixed to the ground shall be mounted in complete contact with the walls or ground, or at least 30 cm above the ground or away from the walls.
 - c. The parts of the equipment shall be made of impervious and non-corrosive materials, such as stainless steel (knives may be made of carbon steel), anode-treated aluminum, or non-toxic plastics. Use of lead, iron, copper, toxic chemical materials, or paint coating is not allowed.
 - d. Poultry cages:
 - (1) The cages shall be made of non-corrosive material.
 - (2) The cage structure shall be designed for easy cleaning and disinfection.
 - e. Suspected poultry container, condemned poultry container, or inedible meat container shall be as follows:
 - (1) It is waterproof.
 - (2) It shall have lid and distinct marking.
 - (3) Its shall be easy to clean and disinfect, and able to shield off filth and foul odor.
 - f. Automatic cleaning and disinfection equipment for shackles shall be installed if automatic shackle system is used.
 - g. De-feathering machine: It shall be constructed to be able to prevent the escape of feathers and to provide water spray.
 - h. Vent remover, chest opener and evisceration machine shall

have the function of automatic cleaning and disinfection.

Chapter Four Supplemental Provisions
Article 12

Slaughterhouses approved or designated by the competent authorities prior to the implementation of the Animal Industry Act shall improve their facilities in order to comply with the Standards herein within two years from its promulgation.

Article 13

Slaughterhouses for exporting the slaughtered livestock or poultry shall comply with relevant regulations provided by the importing country. Article 14

The Standards shall enter into force on the date of promulgation. (In case of any discrepancy in the translation of the Standards, the Chinese text shall govern.)

Data Source: MONISTRY OF AGRICULTURE Laws and Regulations Retrieving System