

UNITED STATES DEPARTMENT OF AGRICULTURE
FOOD SAFETY AND INSPECTION SERVICE
WASHINGTON, DC

FSIS DIRECTIVE

6100.2
Revision 1

10/24/16

POST-MORTEM LIVESTOCK INSPECTION

CHAPTER I - GENERAL

I. PURPOSE

This directive provides instructions to inspection program personnel (IPP) on how to perform post-mortem inspection of livestock. The directive also instructs Public Health Veterinarians (PHVs) on how to document post-mortem inspection findings in the Public Health Information System (PHIS).

II. SIGNIFICANT CHANGES

- A. Provides instructions to IPP on post-mortem inspection procedures for the different species of livestock.
- B. Provides inspection instructions to on-line IPP on palpating swine mesenteric and portal lymph nodes.
- C. Provides instructions to IPP on documenting post-mortem inspection findings in the PHIS Animal Disposition Report. The FSIS Form 6200-14 (Daily Disposition Record) is no longer required, because the post-mortem inspection findings are captured in PHIS.
- D. Provides instructions to the inspector in charge (IIC) on responsibilities and authority for reducing the slaughter line speed.
- E. Provides instructions to IICs on the criteria used to evaluate (and allow) an establishment's request for an alternative method of presentation for carcasses or parts.
- F. Provides instructions to IPP on verifying that the establishment collects and/or documents animal identification devices.

III. CANCELLATIONS

FSIS PHIS Directive 6100.2, *Post-mortem Livestock Inspection*, 4/11/11
FSIS Form 6200-14 (Daily Disposition Record)

IV. BACKGROUND

The Federal Meat Inspection Act (FMIA) (Section 21 U.S.C. 604) and meat inspection regulations (9 CFR 310.1(a)) mandate that IPP are to conduct post-mortem inspection of all livestock carcasses and parts (i.e. cattle, sheep, swine, and goats). IPP are to examine and inspect the livestock carcasses and parts in official establishments in order to determine whether carcasses are wholesome and not adulterated.

DISTRIBUTION: Electronic

OPI: OPPD

Product that is wholesome and not adulterated, and suitable for human consumption, is eligible to bear the mark of inspection as provided by 21 U.S.C. 604 and 9 CFR 310.8.

V. REVIEWING THIS POST-MORTEM LIVESTOCK INSPECTION DIRECTIVE

The IIC may conduct a work unit meeting with IPP that perform post-mortem duties to discuss this directive.

CHAPTER II - GENERAL POST-MORTEM INSPECTION INSTRUCTIONS

I. GENERAL POST-MORTEM INSPECTION STEPS

A. The purpose of post-mortem inspection is to protect the public's health by ensuring that the carcasses and parts that enter commerce are wholesome, not adulterated, and properly marked. This means that any carcasses or parts that are unwholesome or adulterated, and thereby unfit for human food cannot enter commerce.

B. IPP are to examine livestock carcasses that involve the following steps (or stations) of the post-mortem inspection process:

1. Head inspection;
2. Viscera inspection; and
3. Carcass inspection

C. Normally and consistent with past practice, IPP are not to omit any step in the inspection process.

D. According to 9 CFR 310.1 (a), IPP are to perform a careful post-mortem examination and inspection of the carcasses and parts of each animal. The head, tail, tongue, thymus gland, and all viscera of each slaughtered animal, and all blood and other parts of such animal to be used in the preparation of meat food products or medical products, to be handled in such a manner as to identify them with the rest of the carcass and as being derived from the particular animal involved, until the post-mortem examination of the carcass and parts thereof has been completed (9 CFR 310.2 (a)).

E. In large establishments, inspectors are assigned to cover one of the inspection steps (or stations) and rotate to different steps (or stations) according to a rotation pattern. At small or very small establishments, the inspector may perform all of the post-mortem inspection procedures on each animal.

F. IPP are to use organoleptic methods to detect diseases, abnormalities, and contamination of carcasses and parts. These methods include:

1. Sight – observing a disease lesion (e.g., abscess, tumor, injection site lesion);
2. Feel – palpating (e.g., abnormal lump in tissues, abnormal firmness in an organ); and
3. Smell – smelling (e.g., the urine odor of uremia, odor of a broken abscess, chemical odor).

II. TRAINING MATERIAL RESOURCES

When necessary, PHVs and IPP may review the detailed instructions for post-mortem inspection procedures written in the [Post-mortem Inspection training module](#).

III. SUPERVISORY PERSONNEL RESPONSIBILITIES

A. Supervisory personnel supervise on-line IPP who perform post-mortem inspection procedures and off-line IPP who perform verification activities in official establishments. Supervisory personnel refers to:

1. Supervisory Public Health Veterinarians (SPHV);
2. Supervisory Consumer Safety Inspectors (SCSI);
3. The IIC;
4. Multi-IPPs Supervisors; and
5. Frontline Supervisors (FLS).

B. The IIC is to share a hard copy of the post-mortem inspection procedures for the appropriate slaughter class or classes with the on-line IPP by posting it in the Government office.

C. The IIC is to ensure that the on-line IPP are following the post-mortem procedures according to the instructions in this directive and training materials.

D. IICs are to communicate to on-line IPP the established procedures for handling certain carcasses such as a United States (U.S.) Suspect.

E. PHVs ensure they have access to resource materials for the communicable diseases, reportable diseases, and foreign diseases in the PHV training module [Reportable and Foreign Animal Diseases](#) and [FSIS Directive 6000.1, Responsibilities Related to Foreign Animal Diseases and Reportable Conditions](#).

F. Once identified, the IIC is to ensure that the on-line IPP are informed of any necessary safety measures when handling certain carcass zoonotic conditions (e.g., brucellosis reactor). IIC is to ensure that on-line IPP are wearing the necessary safety equipment.

G. Supervisory personnel are to refer to [FSIS Directive 4430.3, In-Plant Performance Systems \(IPPS\)](#) for additional guidance and instructions.

H. The FLS is to ensure that the IICs are following the instructions in the directive and the related post-mortem training materials.

IV. GENERAL CONDITIONS OR LESIONS THAT WARRANT RETENTION OF CARCASSES FOR PHV DISPOSITION

A. IPP are to retain livestock carcasses and their associated parts with lesions or conditions that might render the meat unfit for human consumption and require subsequent inspection by the PHV (9 CFR 310.3 and 310.4). Retained carcasses are not to be washed or trimmed unless authorized by IPP (9 CFR 310.3). IPP are to retain the following types of carcasses (and their associated parts) for PHV disposition:

1. Carcasses of animals designated as U.S. Suspects at ante-mortem inspection (9 CFR 309.2(a) – 309.2(o));
2. Carcasses of animals that contain lesions consistent with tuberculosis (9 CFR 311.2);
3. Carcasses that display disease conditions (or other signs) or herd history that warrant residue testing (9 CFR 310.21 and 311.39); and
4. Carcasses that display signs of disease conditions at post-mortem examination that could reasonably result in condemnation or restriction (e.g., pass for cooking) (9 CFR 311.1).

B. When the PHV determines that correlation is appropriate, the PHV is to correlate with IPP to ensure that they are consistently retaining carcasses that require PHV disposition (9 CFR 310.3).

C. If IPP retain carcasses for PHV disposition and they have questions about the retained carcass, the IPP should notify their PHV that they would like to correlate and at that time they may discuss the retained carcass.

V. OUTCOMES OF INSPECTION

A. The following are possible outcomes of the post-mortem inspection of livestock carcasses and parts:

1. U.S. Inspected and Passed; this carcass and its parts are eligible to receive the marks of inspection (9 CFR 310.8);
2. U.S. Retained: this carcass and its parts are to be retained for PHV disposition (9 CFR 310.3); or
3. U.S. Condemned; this carcass and its parts are not eligible to receive the marks of inspection and cannot enter commerce (9 CFR 310.5).

B. Restricted product is defined as any meat or meat food product that has been inspected and passed, but cannot be released for human consumption because it has a disease or condition that might be transmitted to humans. It is to be subjected to a required restricted product treatment before it can be released for human consumption. There are four types of restricted product treatments. They are:

1. Refrigeration (311.23(a)(2));
2. Heating (311.23(a)(2));
3. Cooking (311.2(d)(f)(g), 311.18(e), 311.24, 311.25); or
4. Use in comminuted cooked meat food product (311.20(b), 311.35(c), 311.37).

C. IPP are to verify that the establishment maintains control over all restricted product.

D. IPP are to verify that the establishment has met the conditions associated with the restrictions before this type of product is allowed to be used as human food.

CHAPTER III – POST-MORTEM INSPECTION PROCEDURES FOR CATTLE

I. POST-MORTEM INSPECTION PROCEDURES (9 CFR 310.1(a)) FOR CATTLE

Only animals that have received FSIS ante-mortem inspection are allowed to receive FSIS post-mortem inspection. U.S. Suspect animals are allowed to move to slaughter after arrangements with the PHV.

II. CATTLE HEAD INSPECTION

A. For Tongue-in head presentation, IPP are to (in the following order):

1. Observe the head's surfaces and eyes;
2. Incise and observe the mandibular, parotid, medial, and lateral retropharyngeal lymph nodes;
3. Incise and observe the lateral and medial masticatory muscles (cheeks) after tongue “dropping”;
and
4. Observe and palpate the tongue.

B. For Tongue-out – base-up head presentation, IPP are to (in the following order):

1. Incise the lymph nodes attached to the tongue including the medial and lateral retropharyngeal and the mandibular lymph nodes;
2. Observe and palpate the tongue;
3. Observe the head’s surfaces and eyes; and
4. Incise and observe the parotid lymph nodes and the lateral and medial masticatory muscles (cheeks).

C. For Tongue-out – base-down head presentation, IPP are to (in the following order):

1. Incise the lymph nodes attached to the tongue including the medial and lateral retropharyngeal and the mandibular lymph nodes;
2. Observe and palpate the tongue;
3. Observe the head’s surfaces and eyes; and
4. Incise and observe the parotid lymph nodes and the medial and lateral masticatory muscles (cheeks).

D. IPP are to examine carcass heads (9 CFR 310.1 (a)) for the following conditions:

1. Inflammation, exudate, swelling, or masses that indicate disease (9 CFR 311.1);
2. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);

3. Cysts or yellow, green, white, or red lesions in muscles (9 CFR 311.23 and 311.35);
4. Parasites (e.g., cysticercosis, sarcocystosis) (9 CFR 311.21, 311.23, and 311.25);
5. Contamination (e.g., hair, hide, ear canals, lips or horns, ingesta,) 9 CFR 310.18(a);
6. Identifiable specified risk materials (SRMs) (9 CFR 310.22) on edible portions of the product, as per [FSIS Directive 6100.4](#), *Verification Instructions Related to Specified Risk Materials*; and
7. Injection site lesions.

E. When IPP find heads showing signs of abnormalities or disease conditions that may affect the disposition of the carcass while performing post-mortem inspection (9 CFR 310.3), they are to:

1. Retain the head, viscera, and carcass for veterinary disposition if the disease or condition is generalized, or when IPP have questions regarding disease conditions, abnormalities, or the appropriate disposition of the head (9 CFR 310.3 and 500.2). IPP are to attach “retain” tags to carcasses and parts as soon as practical (9 CFR 310.4);
2. Condemn abnormal or diseased tissue and verify that the establishment trims the affected tissues if the disease or condition of the head is localized (9 CFR 310.5 or 310.8). If IPP have any doubt or question as to whether the disease or condition is localized, they are to retain the head, viscera, and carcass for veterinary disposition.

F. When IPP find contamination (e.g., hair, hide, ear canals, lips, or horns), they are to verify that the contamination is removed in a sanitary manner (9 CFR 310.18(a)).

G. If the establishment does not present heads, viscera, and carcasses that are free of contamination, then IPP are to verify that the establishment makes the product wholesome before passing the head, viscera, or carcass by stopping the line, otherwise they are to condemn the product.

H. When contamination on heads continue to reoccur indicative of failure of the establishment's systematic sanitary handling of the heads, the on-line IPP are to notify the off-line IPP to verify the process control.

III. CATTLE VISCERA INSPECTION

A. When an establishment eviscerates carcasses into a viscera truck, IPP are to follow the sequence for “hindquarter inspection” to observe the eviscerated carcass, unless a rail inspector is performing rail inspection. If an establishment eviscerates carcasses onto a moving top table, IPP are to observe the eviscerated carcass.

B. For cattle stomachs, esophagus, and spleen inspection, IPP are to:

1. Observe the mesenteric lymph nodes and abdominal viscera;
2. Observe and palpate the rumeno-reticular junction;
3. Observe the esophagus and the spleen; and
4. Look for (9 CFR 310.1(a)):

- a. Inflammation, exudate, swelling, or masses that indicate disease (CFR 311.1);
- b. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
- c. Cysts or yellow, green, white, or red lesions in muscles of the esophagus (9 CFR 311.23 and 311.35);
- d. Parasites (9 CFR 311.21, 311.23, and 311.25);
- e. Contamination (e.g., ingesta) (9 CFR 310.18(a));
- f. Identifiable SRMs (9 CFR 310.22) on edible portions of the product; and
- g. Bolus for drug delivery.

C. For cattle pluck (heart and lungs) inspection, IPP are to:

- 1. Incise and observe the lymph nodes associated with the lungs, including the mediastinal (posterior, middle, and anterior) and bronchial (right and left);
- 2. Observe and palpate the costal (pertaining to the ribs) surfaces (which appears curved) of the lungs;
- 3. Observe the cut and inner surfaces of the heart, after incising the heart from base to apex, or vice versa, through the interventricular septum;
- 4. Turn the lungs over and observe the ventral surfaces (that appear flat) and the heart's outer surface; and
- 5. Look for (9 CFR 310.1(a):
 - a. Inflammation, exudate, swelling, or masses that indicate disease (CFR 311.1);
 - b. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
 - c. Cysts or yellow, green, white, or red lesions in muscles (9 CFR 311.23 and 311.35);
 - d. Parasites, cysticercosis, sarcocystosis (9 CFR 311.21, 311.23, and 311.25); and
 - e. Contamination (e.g., ingesta), 9 CFR 310.18(a).

D. For cattle liver inspection, IPP are to:

- 1. Incise and observe the hepatic (portal) lymph nodes of the liver;
- 2. Open the bile duct in both directions and observe the contents for flukes;
- 3. Observe and palpate the liver's ventral surface;

4. Turn the liver over, palpate the renal impression, and observe and palpate the parietal [dorsal (back)] surface; and
5. Look for (9 CFR 310.1(a)):
 - a. Inflammation, exudate, swelling, or masses that indicate disease (9 CFR 311.1);
 - b. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
 - c. Parasites, especially liver flukes (distoma) (9 CFR 311.21-311.25);
 - d. Contamination (e.g., ingesta), 9 CFR 310.18(a);
 - e. Carotenosis, which is a yellow-orange discoloration of the liver (9 CFR 311.31);
 - f. Cirrhosis where the liver degenerates and is replaced by hard, tough fibrous connective tissue;
 - g. Melanoma (9 CFR 311.13);
 - h. Sawdust, which is a pinkish-white to yellow-gray necrotic lesion seen in the liver (9 CFR 311.31); and
 - i. Telangiectasis where the liver has purple-red to bluish-black lesions (9 CFR 311.31).

E. When IPP find viscera showing signs of abnormalities or diseases while performing post-mortem inspection, they are to:

1. Retain the viscera, head, and carcass for veterinary disposition if the disease or condition is generalized and affects the viscera, or when IPP have questions regarding disease conditions, abnormalities, or the appropriate disposition of carcasses or parts (9 CFR 310.3). IPP are to attach "retain" tags to carcasses and parts as soon as practical (9 CFR 310.4); and
2. Verify that the establishment trims the affected tissues if the disease or condition of the viscera is localized (9 CFR 310.8). If IPP have any doubt or question as to whether the disease or condition is localized, they are to retain the viscera, head, and carcass for veterinary disposition (9 CFR 310.3).

F. When IPP find contamination (e.g., ingesta), they are to verify that the contamination is removed in a sanitary manner (9 CFR 310.18(a)).

G. When dressing defects on viscera and visible areas of carcasses continue to reoccur to the extent of a possible failure of the establishment's systematic sanitary handling of the carcass or viscera, the on-line IPP are to notify the off-line IPP to verify the process control.

IV. CATTLE CARCASS INSPECTION

A. IPP are to use hindquarter inspection when the establishment combines viscera and carcass inspections. IPP are to:

1. Observe the back of the skinned carcass during evisceration;

2. Palpate the superficial inguinal, or supramammary, and internal iliac lymph nodes; and
3. Observe the body cavities.

B. IPP are to use forequarter inspection to complete the carcass inspection started under hindquarter inspection. IPP are to:

1. Observe the cut surfaces of muscles and bones, the diaphragm's pillars, and the peritoneum;
2. Observe and palpate the kidneys and the diaphragm; and
3. Observe the pleura, neck, and carcass exterior.

C. IPP are to use complete carcass inspection when establishments use moving lines with separate carcass inspection stations. IPP are to:

1. Palpate the superficial inguinal, or supramammary, and internal iliac lymph nodes;
2. Observe the lumbar region;
3. Observe and palpate the kidneys (9 CFR 310.19) (before viscera or carcass inspection, plant employees should adequately expose all kidneys of livestock carcasses from the fat covering and capsule). IPP are to then examine them during viscera or carcass inspection. When examined with the viscera, kidneys are to be removed from the carcass and presented for inspection with other organs;
4. Observe the cut surfaces of muscles and bones, the diaphragm's pillars, and the peritoneum;
5. Observe and palpate the diaphragm; and
6. Observe the pleura, cut surfaces of muscles, bones, neck, and the carcass exterior.

D. IPP are to observe all ox tails.

E. IPP are to look for the following abnormalities (9 CFR 310.1(a)):

1. Inflammation, exudate, swelling, or masses that indicate disease (CFR 311.1);
2. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
3. Cysts or yellow, green, white, or red lesions in muscles (9 CFR 311.1);
4. Parasites (9 CFR 311.21, 311.23, and 311.25);
5. Contamination (e.g., fecal material, urine, ingesta, bile, dirt, hair, milk, and foreign matter) (9 CFR 310.18(a));
6. Identifiable SRMs (9 CFR 310.22) on edible portions of the product; and
7. Injection site lesions

F. When IPP find carcasses showing signs of abnormalities or diseases while performing post-mortem inspection (9 CFR 310.3), they are to:

1. Retain the head, viscera, and carcass for veterinary disposition if the disease or condition is generalized and affects the majority of the carcass; or when IPP have questions regarding disease conditions, abnormalities, or the appropriate disposition of carcasses or parts (9 CFR 310.3). IPP will attach “retain tags” to carcasses and parts as soon as practical (9 CFR 310.4); and
2. Condemn abnormal or diseased tissue and verify that the establishment trims the affected tissues, if the disease or condition of the carcass is localized (9 CFR 310.8). If IPP have any doubt or question as to whether the disease or condition is localized, they are to retain the head, viscera, and carcass for veterinary disposition (9 CFR 310.3).

G. When IPP find contamination (e.g., fecal material, urine, ingesta, bile, dirt, hair, and foreign matter), they are to verify that the contamination is removed in a sanitary manner (9 CFR 310.18(a)).

H. When contamination on carcasses (other than feces, ingesta, and milk) continue to reoccur to the extent of a possible failure of the establishment’s systematic sanitary handling of the carcasses, the on-line IPP are to notify the off-line IPP to verify the process control.

I. When the on-line IPP observe contamination of feces, ingesta, and milk on carcasses at the final carcass inspection, they are to follow the instructions in [FSIS Directive 6420.2](#), *Verification of Procedures for Controlling Fecal Material, Ingesta and Milk in Slaughter Operations*.

CHAPTER IV - POST-MORTEM INSPECTION PROCEDURES (9 CFR 310.1(a)) FOR CALVES (BOB VEAL, FORMULA FED VEAL, AND NON-FORMULA FED VEAL)

I. SKINNED CARCASSES

A. For calf head inspection, IPP are to:

1. Observe the head's surfaces;
2. Incise and observe the medial retropharyngeal lymph nodes (both left and right); and
3. Examine heads (9 CFR 310.1 (a)) for the following:
 - a. Inflammation, exudate, swelling, or masses that indicate disease (9 CFR 311.1);
 - b. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
 - c. Cysts or yellow, green, white, or red lesions in muscles (9 CFR 311.23 and 311.35);
 - d. Parasites (e.g., cysticercosis, sarcocystosis) (9 CFR 311.21, 311.23, and 311.25);
 - e. Contamination 9 CFR 310.18(a); and
 - f. Identifiable specified risk materials (SRMs) (9 CFR 310.22) on edible portions of the product.

B. When IPP find heads showing signs of abnormalities or disease conditions that may affect the disposition of the carcass while performing post-mortem inspection (9 CFR 310.3), they are to:

1. Retain the head, viscera, and carcass for veterinary disposition if the disease or condition is generalized, or when IPP have questions regarding disease conditions, abnormalities, or the appropriate disposition of the head (9 CFR 310.3 and 500.2). IPP are to attach "retain" tags to carcasses and parts as soon as practical (9 CFR 310.4); and
2. Condemn abnormal or diseased tissue and verify that the establishment trims the affected tissues if the disease or condition of the head is localized (9 CFR 310.5 or 310.8). If IPP have any doubt or question as to whether the disease or condition is localized, they are to retain the head, viscera, and carcass for veterinary disposition.

C. When IPP find contamination (e.g., hair, hide, ear canals, lips, or horns), they are to verify that the contamination is removed in a sanitary manner (9 CFR 310.18(a)).

D. If the establishment does not present heads, viscera, and carcasses that are free of contamination, then IPP are to verify that the establishment makes the product wholesome before passing the head, viscera, or carcass by stopping the line, otherwise they are to condemn the product.

E. When contamination on heads continue to reoccur indicative of failure of the establishment's systematic sanitary handling of the heads, the on-line IPP are to notify the off-line IPP to verify the process control.

II. CALF VISCERA INSPECTION

A. For calf viscera inspection, IPP are to:

1. Observe and palpate the bronchial and mediastinal lymph nodes of the lungs, the costal (pertaining to the ribs) surfaces of the lungs (which appear curved), and the heart;
2. Turn the lungs over and observe the ventral surfaces (that appear flat);
3. Observe the spleen;
4. Observe and palpate the dorsal surface of the liver;
5. Turn the liver over, observe the ventral surface, and palpate the portal lymph nodes; and
6. Observe the stomach and intestines.

B. IPP are to look for the following when inspecting stomachs, esophagus, and spleen (9 CFR 310.1(a)):

1. Inflammation, exudate, swelling, or masses that indicate disease (CFR 311.1);
2. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
3. Cysts or yellow, green, white, or red lesions in muscles of the esophagus (9 CFR 311.23 and 311.35);
4. Parasites (9 CFR 311.21, 311.23, and 311.25);

5. Contamination (e.g., ingesta) (9 CFR 310.18(a));
 6. Identifiable SRMs (9 CFR 310.22) on edible portions of the product; and
 7. Drug-delivery boluses.
- C. IPP are to look for the following when inspecting pluck (heart and lungs) (9 CFR 310.1(a):
1. Inflammation, exudate, swelling, or masses that indicate disease (CFR 311.1);
 2. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
 3. Cysts or yellow, green, white, or red lesions in muscles (9 CFR 311.23 and 311.35);
 4. Parasites, cysticercosis, sarcocystosis (9 CFR 311.21, 311.23, and 311.25); and
 5. Contamination (e.g., ingesta), 9 CFR 310.18(a).
- D. IPP are to look for the following when inspecting liver (9 CFR 310.1(a):
1. Inflammation, exudate, swelling, or masses that indicate disease (9 CFR 311.1);
 2. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
 3. Parasites, especially liver flukes (distomiasis) (9 CFR 311.21-311.25);
 4. Contamination (e.g., ingesta), 9 CFR 310.18(a);
 5. Carotenosis which is a yellow-orange discoloration of the liver (9 CFR 311.31);
 6. Cirrhosis where the liver degenerates and is replaced by hard, tough fibrous connective tissue;
 7. Melanoma (9 CFR 311.13);
 8. Sawdust, which is a pinkish-white to yellow-gray necrotic lesion seen in the liver (9 CFR 311.31);
and
 9. Telangiectasis where the liver has purple-red to bluish-black lesions (9 CFR 311.31).
- E. When IPP find viscera showing signs of abnormalities or diseases while performing post-mortem inspection, they are to:
1. Retain the viscera, head, and carcass for veterinary disposition if the disease or condition is generalized and affects the viscera; or when IPP have questions regarding disease conditions, abnormalities, or the appropriate disposition of carcasses or parts (9 CFR 310.3). IPP are to attach “retain” tags to carcasses and parts as soon as practical (9 CFR 310.4); and
 2. Verify that the establishment trims the affected tissues if the disease or condition of the viscera is localized (9 CFR 310.8). If IPP have any doubt or question as to whether the disease or condition

is localized, they are to retain the viscera, head, and carcass for veterinary disposition (9 CFR 310.3).

F. When IPP find contamination (e.g., ingesta), they are to verify that the removal of the contamination is performed in a sanitary manner (9 CFR 310.18(a)).

G. When contamination on viscera and visible areas of carcasses continue to reoccur to the extent of a possible failure of the establishment's systematic sanitary handling of the carcass or viscera, the on-line IPP are to notify the off-line IPP to verify the process control.

III. CALF CARCASS INSPECTION

A. For calf carcass inspection, IPP are to:

1. Observe the outer and cut surfaces of the carcass;
2. Lift the forelegs and observe the neck and shoulders;
3. Observe the body cavities; and
4. Observe and palpate the internal iliac lymph nodes and kidneys.

B. IPP are to observe all ox tails.

C. IPP are to look for the following abnormalities (9 CFR 310.1(a)):

1. Inflammation, exudate, swelling, or masses that indicate disease (CFR 311.1);
2. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
3. Cysts or yellow, green, white, or red lesions in muscles (9 CFR 311.1);
4. Parasites (9 CFR 311.21, 311.23, and 311.25);
5. Contamination (e.g., fecal material, urine, ingesta, bile, dirt, hair, milk, and foreign matter) (9 CFR 310.18(a)); and
6. Identifiable SRMs (9 CFR 310.22) on edible portions of the product.

D. When IPP find carcasses showing signs of abnormalities or diseases while performing post-mortem inspection (9 CFR 310.3), they are to:

1. Retain the head, viscera, and carcass for veterinary disposition if the disease or condition is generalized and affects the majority of the carcass; or when IPP have questions regarding disease conditions, abnormalities, or the appropriate disposition of carcasses or parts (9 CFR 310.3). IPP will attach "retain tags" to carcasses and parts as soon as practical (9 CFR 310.4); and
2. Condemn abnormal or diseased tissue and verify that the establishment trims the affected tissues, if the disease or condition of the carcass is localized (9 CFR 310.8). If IPP have any doubt or question as to whether the disease or condition is localized, they are to retain the head, viscera, and carcass for veterinary disposition (9 CFR 310.3).

E. When IPP find contamination (e.g., fecal material, urine, ingesta, bile, dirt, hair, and foreign matter), they are to verify that the contamination is removed in a sanitary manner (9 CFR 310.18(a)).

F. When contamination on carcasses other than fecal, ingesta, and milk continue to reoccur to the extent of a possible failure of the establishment's systematic sanitary handling of the carcasses, the on-line IPP are to notify the off-line IPP to verify the process control.

G. When the on-line IPP observe contamination of fecal, ingesta, and milk on carcasses at the final carcass inspection, they are to follow the instructions in instructions in [FSIS Directive 6420.2](#).

IV. HIDE-ON CARCASS INSPECTION (9 CFR 310.10)

A. For hide-on carcass inspection, IPP are to:

1. Observe the hide; and
2. Palpate the back.

B. After carcasses are cold-skinned in the cooler, IPP are to examine the carcasses for injection lesions, foreign bodies, parasites, bruises, or other pathology not detectable with the hide still on the carcass. For this reason, hide-on calves cannot enter commerce or carry the mark of inspection.

C. IPP are to look for contamination or parasitic conditions (e.g., grubs and other abnormalities).

D. IPP are to observe all ox tails.

E. IPP are to look for the following abnormalities (9 CFR 310.1(a)):

1. Inflammation, exudate, swelling, or masses that indicate disease (CFR 311.1);
2. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
3. Cysts or yellow, green, white, or red lesions in muscles (9 CFR 311.1);
4. Parasites (9 CFR 311.21, 311.23, and 311.25);
5. Contamination (e.g., fecal material, urine, ingesta, bile, dirt, hair, milk, and foreign matter) (9 CFR 310.18(a)); and
6. Identifiable SRMs (9 CFR 310.22) on edible portions of the product.

F. When IPP find carcasses showing signs of abnormalities or diseases while performing post-mortem inspection (9 CFR 310.3), they are to:

1. Retain the head, viscera, and carcass for veterinary disposition if the disease or condition is generalized and affects the majority of the carcass; or when IPP have questions regarding disease conditions, abnormalities, or the appropriate disposition of carcasses or parts (9 CFR 310.3). IPP will attach "retain tags" to carcasses and parts as soon as practical (9 CFR 310.4); and

2. Condemn abnormal or diseased tissue and verify that the establishment trims the affected tissues, if the disease or condition of the carcass is localized (9 CFR 310.8). If IPP have any doubt or question as to whether the disease or condition is localized, they are to retain the head, viscera, and carcass for veterinary disposition (9 CFR 310.3).

G. When IPP find contamination (e.g., fecal material, urine, ingesta, bile, dirt, hair, and foreign matter), they are to verify that the contamination is removed in a sanitary manner (9 CFR 310.18(a)).

H. When contamination on carcasses other than fecal, ingesta, and milk continue to reoccur to the extent of a possible failure of the establishment's systematic sanitary handling of the carcasses, the on-line IPP are to notify the off-line IPP to verify the process control.

I. When the on-line IPP observe contamination of fecal, ingesta, and milk on carcasses at the final carcass inspection, they are to follow the instructions in instructions in [FSIS Directive 6420.2](#).

V. LARGE (OR HEAVY) CALVES INSPECTION

IPP perform inspection of large (or heavy) calves as described for cattle and for what to look for and the actions to take when inspecting calves post-mortem.

CHAPTER V - POST-MORTEM INSPECTION PROCEDURES (9 CFR 310.1(a)) FOR LAMBS

I. LAMB VISCERA INSPECTION

A. A young sheep or lamb (ovine) carcass meets the following criteria: written documentation that the ovine is less than 14 months of age or the presence of a break joint (epiphysis) of the distal metacarpal bone of either foreleg.

B. For lamb inspection, IPP are to:

1. Observe the abdominal viscera, esophagus, mesenteric lymph nodes, and omental fat;
2. Observe the bile duct and contents and express the gall bladder;
3. Observe and palpate the liver (both sides) and the costal (pertaining to the ribs) surfaces of the lungs (which appear curved);

NOTE: Finding tapeworms in the bile duct may indicate an infestation of tapeworms in the pancreatic gland. The establishment presents the liver with the bile duct incised.

4. Palpate the bronchial and mediastinal lymph nodes;
5. Observe the ventral surfaces of the lungs;
6. Observe and palpate the heart; and
7. Examine the pancreatic glands for wholesomeness if the establishment saves the gland for edible purposes.

- C. IPP are to look for the following when inspecting stomachs, esophagus, and spleen (9 CFR 310.1(a)):
1. Inflammation, exudate, swelling, or masses that indicate disease (CFR 311.1);
 2. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
 3. Cysts or yellow, green, white, or red lesions in muscles of the esophagus (9 CFR 311.23 and 311.35);
 4. Parasites (9 CFR 311.21, 311.23, and 311.25); and
 5. Contamination (e.g., ingesta) (9 CFR 310.18(a)).
- D. IPP are to look for the following when inspecting pluck (heart and lungs) (9 CFR 310.1(a)):
1. Inflammation, exudate, swelling, or masses that indicate disease (CFR 311.1);
 2. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
 3. Cysts or yellow, green, white, or red lesions in muscles (9 CFR 311.23 and 311.35);
 4. Parasites, cysticercosis, sarcocystosis (9 CFR 311.21, 311.23, and 311.25); and
 5. Contamination (e.g., ingesta), 9 CFR 310.18(a).
- E. IPP are to look for the following when inspecting liver (9 CFR 310.1(a)):
1. Inflammation, exudate, swelling, or masses that indicate disease (9 CFR 311.1);
 2. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
 3. Parasites, especially liver flukes (distoma) (9 CFR 311.21-311.25);
 4. Contamination (e.g., ingesta), 9 CFR 310.18(a);
 5. Carotenosis which is a yellow-orange discoloration of the liver (9 CFR 311.31);
 6. Cirrhosis where the liver degenerates and is replaced by hard, tough fibrous connective tissue;
 7. Melanoma (9 CFR 311.13);
 8. Sawdust, which is a pinkish-white to yellow-gray necrotic lesion seen in the liver (9 CFR 311.31); and
 9. Telangiectasis where the liver has purple-red to bluish-black lesions (9 CFR 311.31).
- F. When IPP find viscera showing signs of abnormalities or diseases while performing post-mortem inspection, they are to:
1. Retain the viscera, head, and carcass for veterinary disposition if the disease or condition is generalized and affects the viscera, or when IPP have questions regarding disease conditions,

abnormalities, or the appropriate disposition of carcasses or parts (9 CFR 310.3). IPP are to attach “retain” tags to carcasses and parts as soon as practical (9 CFR 310.4); and

2. Verify that the establishment trims the affected tissues if the disease or condition of the viscera is localized (9 CFR 310.8). If IPP have any doubt or question as to whether the disease or condition is localized, they are to retain the viscera, head, and carcass for veterinary disposition (9 CFR 310.3).

G. When IPP find contamination (e.g., ingesta), they are to verify that the removal of the contamination is performed in a sanitary manner (9 CFR 310.18(a)).

II. LAMB CARCASS-HEAD INSPECTION

A. For lamb carcass-head inspection, IPP are to:

1. Observe the outer surfaces of the carcass;
2. Observe the pelvic, abdominal, and thoracic body cavities;
3. Observe the spleen and kidneys; and
4. Observe the neck, shoulders, and head.

B. IPP are to examine carcasses and parts (9 CFR 310.1(a)) for the following:

1. Inflammation, exudate, swelling, or masses that indicate disease (9 CFR 311.1);
2. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
3. Cysts or yellow, green, white, or red lesions in muscles (9 CFR 311.23 and 311.35);
4. Parasites (e.g., cysticercosis, sarcocystosis) (9 CFR 311.21, 311.23, and 311.25); and
5. Contamination (e.g., hair, hide, ear canals, lips or horns, ingesta,) 9 CFR 310.18(a).

C. When IPP find heads showing signs of abnormalities or disease conditions that may affect the disposition of the carcass while performing post-mortem inspection (9 CFR 310.3), they are to:

1. Retain the head, viscera, and carcass for veterinary disposition if the disease or condition is generalized; or when IPP have questions regarding disease conditions, abnormalities, or the appropriate disposition of the head (9 CFR 310.3 and 500.2). IPP are to attach “retain” tags to carcasses and parts as soon as practical (9 CFR 310.4); and
2. Condemn abnormal or diseased tissue and verify that the establishment trims the affected tissues if the disease or condition of the head is localized (9 CFR 310.5 or 310.8). If IPP have any doubt or question as to whether the disease or condition is localized, they are to retain the head, viscera, and carcass for veterinary disposition.

D. When IPP find contamination (e.g., hair, hide, ear canals, lips, or horns), they are to verify that the contamination is removed in a sanitary manner (9 CFR 310.18(a)).

E. If the establishment does not present heads, viscera, and carcasses that are free of contamination, then IPP are to verify that the establishment makes the product wholesome before passing the head, viscera, or carcass by stopping the line otherwise they are to condemn the product.

F. When IPP find carcasses showing signs of abnormalities or diseases while performing post-mortem inspection (9 CFR 310.3), they are to:

1. Retain the head, viscera, and carcass for veterinary disposition if the disease or condition is generalized and affects the majority of the carcass, or when IPP have questions regarding disease conditions, abnormalities, or the appropriate disposition of carcasses or parts (9 CFR 310.3). IPP will attach "retain tags" to carcasses and parts as soon as practical (9 CFR 310.4); and
2. Condemn abnormal or diseased tissue and verify that the establishment trims the affected tissues, if the disease or condition of the carcass is localized (9 CFR 310.8). If IPP have any doubt or question as to whether the disease or condition is localized, they are to retain the head, viscera, and carcass for veterinary disposition (9 CFR 310.3).

G. When IPP find contamination (e.g., fecal material, urine, ingesta, bile, dirt, hair, and foreign matter), they are to verify that the contamination is removed in a sanitary manner (9 CFR 310.18(a)).

H. When the on-line IPP observe contamination of fecal, ingesta, and milk on carcasses at the final carcass inspection, they are to follow the instructions in instructions in [FSIS Directive 6420.2](#).

I. IPP are to selectively palpate observed abnormalities and retain for veterinary disposition carcasses with abnormalities requiring incisions to make disposition determinations (9 CFR 310.3).

CHAPTER VI - POST-MORTEM INSPECTION PROCEDURES (9 CFR 310.1(a)) FOR SHEEP AND GOATS

I. SHEEP AND GOAT VISCERA INSPECTION

A. For sheep and goat inspection, IPP are to:

1. Observe the abdominal viscera, esophagus, mesenteric lymph nodes, and omental fat;
2. Express the gall bladder and observe the cut bile duct and expressed content for tapeworms;
3. Observe and palpate the liver (both sides);
4. Observe and palpate the costal (pertaining to the ribs) surfaces of the lungs (which appear curved);
5. Palpate the bronchial and mediastinal lymph nodes;
6. Observe the ventral surfaces of the lungs;
7. Observe and palpate the heart; and
8. Examine the pancreatic glands for wholesomeness if the establishment saves them for edible purposes.

NOTE: The establishment should present the liver with the bile duct incised.

- B. IPP are to look for the following when inspecting stomachs, esophagus, and spleen (9 CFR 310.1(a)):
1. Inflammation, exudate, swelling, or masses that indicate disease (CFR 311.1);
 2. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
 3. Cysts or yellow, green, white, or red lesions in muscles of the esophagus (9 CFR 311.23 and 311.35);
 4. Parasites (9 CFR 311.21, 311.23, and 311.25); and
 5. Contamination (e.g., ingesta) (9 CFR 310.18(a)).
- C. IPP are to look for the following when inspecting pluck (heart and lungs) (9 CFR 310.1(a)):
1. Inflammation, exudate, swelling, or masses that indicate disease (CFR 311.1);
 2. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
 3. Cysts or yellow, green, white, or red lesions in muscles (9 CFR 311.23 and 311.35);
 4. Parasites, cysticercosis, sarcocystosis (9 CFR 311.21, 311.23, and 311.25); and
 5. Contamination (e.g., ingesta), 9 CFR 310.18(a).
- D. IPP are to look for the following when inspecting liver (9 CFR 310.1(a)):
1. Inflammation, exudate, swelling, or masses that indicate disease (9 CFR 311.1);
 2. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
 3. Parasites, especially liver flukes (distoma) (9 CFR 311.21-311.25);
 4. Contamination (e.g., ingesta), 9 CFR 310.18(a);
 5. Carotenosis which is a yellow-orange discoloration of the liver (9 CFR 311.31);
 6. Cirrhosis where the liver degenerates and is replaced by hard, tough fibrous connective tissue;
 7. Melanoma (9 CFR 311.13);
 8. Sawdust, which is a pinkish-white to yellow-gray necrotic lesion seen in the liver (9 CFR 311.31); and
 9. Telangiectasis where the liver has purple-red to bluish-black lesions (9 CFR 311.31).

E. When IPP find viscera showing signs of abnormalities or diseases while performing post-mortem inspection, they are to:

1. Retain the viscera, head, and carcass for veterinary disposition if the disease or condition is generalized and affects the viscera; or when IPP have questions regarding disease conditions, abnormalities, or the appropriate disposition of carcasses or parts (9 CFR 310.3). IPP are to attach "retain" tags to carcasses and parts as soon as practical (9 CFR 310.4); and
2. Verify that the establishment trims the affected tissues if the disease or condition of the viscera is localized (9 CFR 310.8). If IPP have any doubt or question as to whether the disease or condition is localized, they are to retain the viscera, head, and carcass for veterinary disposition (9 CFR 310.3).

F. When IPP find contamination defects (e.g., ingesta), they are to verify that the contamination is removed in a sanitary manner (9 CFR 310.18(a)).

II. SHEEP AND GOAT CARCASS-HEAD INSPECTION

A. For sheep and goat carcass-head inspection, IPP are to:

1. Observe the outer surfaces of the carcass and the body cavities (pelvic, abdominal, and thoracic) and the spleen;
2. Observe and palpate the kidneys;
3. Observe and palpate the prefemoral, superficial inguinal or supramammary, and popliteal lymph nodes;
4. Palpate the back and sides of the carcass;
5. Palpate the prescapular lymph nodes and shoulders; and
6. Lift the forelegs and observe the neck, shoulders, and head.

B. IPP are to examine carcasses and parts (9 CFR 310.1(a)) for the following:

1. Inflammation, exudate, swelling, or masses that indicate disease (9 CFR 311.1);
2. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
3. Cysts or yellow, green, white, or red lesions in muscles (9 CFR 311.23 and 311.35);
4. Parasites (e.g., cysticercosis, sarcocystosis) (9 CFR 311.21, 311.23, and 311.25); and
5. Contamination (e.g., hair, hide, ear canals, lips or horns, ingesta,) 9 CFR 310.18(a).

C. When IPP find heads showing signs of abnormalities or disease conditions that may affect the disposition of the carcass while performing post-mortem inspection (9 CFR 310.3), they are to:

1. Retain the head, viscera, and carcass for veterinary disposition if the disease or condition is generalized; or when IPP have questions regarding disease conditions, abnormalities, or the

appropriate disposition of the head (9 CFR 310.3 and 500.2). IPP are to attach “retain” tags to carcasses and parts as soon as practical (9 CFR 310.4); and

2. Condemn abnormal or diseased tissue and verify that the establishment trims the affected tissues if the disease or condition of the head is localized (9 CFR 310.5 or 310.8). If IPP have any doubt or question as to whether the disease or condition is localized, they are to retain the head, viscera, and carcass for veterinary disposition.

D. When IPP find contamination (e.g., hair, hide, ear canals, lips, or horns), they are to verify that the contamination is removed in a sanitary manner (9 CFR 310.18(a)).

E. If the establishment does not present heads, viscera, and carcasses that are free of contamination, then IPP are to verify that the establishment makes the product wholesome before passing the head, viscera, or carcass by stopping the line, otherwise they are to condemn the product.

F. When IPP find carcasses showing signs of abnormalities, diseases, or evidence of injections while performing post-mortem inspection (9 CFR 310.3), they are to:

1. Retain the head, viscera, and carcass for veterinary disposition if the disease or condition is generalized and affects the majority of the carcass; or when IPP have questions regarding disease conditions, abnormalities, or the appropriate disposition of carcasses or parts (9 CFR 310.3). IPP will attach “retain tags” to carcasses and parts as soon as practical (9 CFR 310.4); and
2. Condemn abnormal or diseased tissue and verify that the establishment trims the affected tissues, if the disease or condition of the carcass is localized (9 CFR 310.8). If IPP have any doubt or question as to whether the disease or condition is localized, they are to retain the head, viscera, and carcass for veterinary disposition (9 CFR 310.3).

G. When IPP find contamination (e.g., fecal material, urine, ingesta, bile, dirt, hair, and foreign matter), they are to verify that the contamination is removed in a sanitary manner (9 CFR 310.18(a)).

H. When the on-line IPP observe contamination of fecal, ingesta, and milk on carcasses at the final carcass inspection, they are to follow the instructions in instructions in [FSIS Directive 6420.2](#).

I. IPP are to incise the body lymph nodes whenever palpation is inadequate to determine the absence of abscesses indicating caseous lymphadenitis and are to leave the incised nodes attached to the carcass for final inspection.

CHAPTER VII - POST-MORTEM INSPECTION PROCEDURES (9 CFR 310.1(a)) FOR SWINE

I. SWINE HEAD INSPECTION

A. For swine head inspection, IPP are to:

1. Observe the head and cut surfaces;
2. Incise and observe the mandibular lymph nodes; and
3. Observe the carcass when required.

B. IPP are to examine heads (9 CFR 310.1(a)) for the following:

1. Inflammation, exudate, swelling, or masses that indicate disease (9 CFR 311.1);
2. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
3. Cysts or yellow, green, white, or red lesions in muscles (9 CFR 311.23 and 311.35);
4. Parasites (e.g., cysticercosis, sarcocystosis) (9 CFR 311.21, 311.23, and 311.25);
5. Injection site lesions; and
6. Contamination (e.g., hair, hide, ear canals, lips, ingesta, bruises), 9 CFR 310.18(a).

C. When IPP find heads showing signs of abnormalities or disease conditions that may affect the disposition of the carcass while performing post-mortem inspection (9 CFR 310.3), they are to:

1. Retain the head, viscera, and carcass for veterinary disposition if the disease or condition is generalized; or when IPP have questions regarding disease conditions, abnormalities, or the appropriate disposition of the head (9 CFR 310.3 and 500.2). IPP are to attach "retain" tags to carcasses and parts as soon as practical (9 CFR 310.4); and
2. Condemn abnormal or diseased tissue and verify that the establishment trims the affected tissues if the disease or condition of the head is localized (9 CFR 310.5 or 310.8). If IPP have any doubt or question as to whether the disease or condition is localized, they are to retain the head, viscera, and carcass for veterinary disposition.

D. When IPP find contamination (e.g., hair, hide, ear canals, or lips), they are to verify that the contamination is removed in a sanitary manner (9 CFR 310.18(a)).

E. If the establishment does not present heads, viscera, and carcasses that are free of contamination, IPP are to verify that the establishment makes the product wholesome before passing the head, viscera, or carcass by stopping the line; or else they are to condemn the product.

II. SWINE VISCERA INSPECTION

A. For swine viscera inspection, IPP are to:

1. Observe the eviscerated carcass, viscera, and parietal (top) surface of the spleen;
2. Observe and palpate the mesenteric lymph nodes;
3. Palpate the portal lymph nodes;
4. Observe the dorsal surfaces of the lungs and the mediastinal lymph nodes;
5. Palpate bronchial lymph nodes; then, turn the lungs over and observe the ventral surfaces of the lungs;
6. Observe the heart and dorsal surface of the liver; and

7. Turn the liver over and observe the ventral surface.
- B. IPP are to observe the non-gravid uteri and ovaries when saved for edible use.
- C. IPP are to look for the following when inspecting stomachs, esophagus, and spleen (9 CFR 310.1(a)):
1. Inflammation, exudate, swelling, or masses that indicate disease (CFR 311.1);
 2. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
 3. Cysts or yellow, green, white, or red lesions in muscles of the esophagus (9 CFR 311.23 and 311.35);
 4. Parasites (9 CFR 311.21, 311.23, and 311.25); and
 5. Contamination (e.g., ingesta) (9 CFR 310.18(a)).
- D. IPP are to look for the following when inspecting pluck (heart and lungs) (9 CFR 310.1(a)):
1. Inflammation, exudate, swelling, or masses that indicate disease (CFR 311.1);
 2. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
 3. Cysts or yellow, green, white, or red lesions in muscles (9 CFR 311.23 and 311.35);
 4. Parasites, cysticercosis, sarcocystosis (9 CFR 311.21, 311.23, and 311.25); and
 5. Contamination (e.g., ingesta), 9 CFR 310.18(a).
- E. IPP are to look for the following when inspecting liver (9 CFR 310.1(a)):
1. Inflammation, exudate, swelling, or masses that indicate disease (9 CFR 311.1);
 2. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
 3. Parasites, especially liver flukes (distoma) (9 CFR 311.21-311.25);
 4. Contamination (e.g., ingesta), 9 CFR 310.18(a);
 5. Carotenosis which is a yellow-orange discoloration of the liver (9 CFR 311.31);
 6. Cirrhosis where the liver degenerates and is replaced by hard, tough fibrous connective tissue;
 7. Melanoma (9 CFR 311.13);
 8. Sawdust, which is a pinkish-white to yellow-gray necrotic lesion seen in the liver (9 CFR 311.31); and
 9. Telangiectasis where the liver has purple-red to bluish-black lesions (9 CFR 311.31).

F. When IPP find viscera showing signs of abnormalities or diseases while performing post-mortem inspection, they are to:

1. Retain the viscera, head, and carcass for veterinary disposition if the disease or condition is generalized and affects the viscera; or when IPP have questions regarding disease conditions, abnormalities, or the appropriate disposition of carcasses or parts (9 CFR 310.3). IPP are to attach "retain" tags to carcasses and parts as soon as practical (9 CFR 310.4); and
2. Verify that the establishment trims the affected tissues if the disease or condition of the viscera is localized (9 CFR 310.8). If IPP have any doubt or question as to whether the disease or condition is localized, they are to retain the viscera, head, and carcass for veterinary disposition (9 CFR 310.3).

G. When IPP find contamination (e.g., ingesta), they are to verify that the contamination is removed in a sanitary manner (9 CFR 310.18(a)).

III. SWINE CARCASS INSPECTION

A. For swine carcass inspection, IPP are to:

1. Observe the back of the carcass by looking in a mirror, or when a mirror is not present, by turning the carcass to observe the back of the carcass; and
2. Observe the front parts and inside of the carcass; then grasp, turn, and observe both sides of the kidneys.

B. IPP are to look for the following abnormalities (9 CFR 310.1(a)):

1. Inflammation, exudate, swelling, or masses that indicate disease (CFR 311.1);
2. Pathology or abnormal conditions in lymph nodes (9 CFR 311.1);
3. Cysts or yellow, green, white, or red lesions in muscles (9 CFR 311.1);
4. Parasites (9 CFR 311.21, 311.23, and 311.25);
5. Injection site lesions; and
6. Contamination (e.g., fecal material, urine, ingesta, bile, dirt, hair, milk, and foreign matter) (9 CFR 310.18(a)).

C. When IPP find carcasses showing signs of abnormalities or diseases while performing post-mortem inspection (9 CFR 310.3), they are to:

1. Retain the head, viscera, and carcass for veterinary disposition if the disease or condition is generalized and affects the majority of the carcass; or when IPP have questions regarding disease conditions, abnormalities, or the appropriate disposition of carcasses or parts (9 CFR 310.3). IPP will attach "retain tags" to carcasses and parts as soon as practical (9 CFR 310.4); and
2. Condemn abnormal or diseased tissue and verify that the establishment trims the affected tissues, if the disease or condition of the carcass is localized (9 CFR 310.8). If IPP have any doubt or

question as to whether the disease or condition is localized, they are to retain the head, viscera, and carcass for veterinary disposition (9 CFR 310.3).

D. When IPP find contamination (e.g., fecal material, urine, ingesta, bile, dirt, hair, and foreign matter), they are to verify that the contamination is removed in a sanitary manner (9 CFR 310.18(a)).

E. When the on-line IPP observe contamination of fecal, ingesta, and milk on carcasses at the final carcass inspection, they are to follow the instructions in instructions in [FSIS Directive 6420.2](#).

CHAPTER VIII – LIVESTOCK IDENTIFICATION

I. GENERAL

A. IPP are to be aware that the establishment is required to maintain, in an acceptable manner, the identification of each carcass and its associated parts until post-mortem inspection is completed (9 CFR 310.2 (a)). However, there are many forms of livestock identification that are used during post-mortem inspection and include:

1. All live animal identification necessary for traceback to producer, supplier, or origin (e.g. ear tags, back tags, implants, or other identifying devices, State-Federal back tags, etc.) per 9 CFR 310.2(a) and (b);
2. Documentation in the form of a “pen card” system that ensures animals submitted for post-mortem inspection have received ante-mortem inspection and are passed for slaughter (e.g. drive card) per [FSIS Directive 6100.1](#);
3. Identification of individual carcasses and associated parts by the establishment until post-mortem inspection is completed (e.g. carcass ID tags) per 9 CFR 310.2(a); and
4. Identification of individual carcasses and associated parts for retention by FSIS. The identification is to be established by affixing U.S. Retained tags (9 CFR 310.4).

B. The establishment is also required to collect animal identification devices as described in 9 CFR 310.2 (b). Official Federal or State and non-official livestock identification are needed (but not limited to) to:

1. Identify and notify suppliers of livestock carcasses found at slaughter with potentially violative drug residues. See [FSIS Directive 10,800.1](#), *Procedures for Residue Sampling, Testing, and Other Responsibilities for the National Residue Program*;
2. Document disposal of individual animal or carcass slaughtered under restriction (e.g., FSIS controlled slaughter of livestock with reportable animal diseases (e.g., brucellosis or tuberculosis (TB) reactor animals) under the Animal and Plant Health Inspection Service (APHIS) herd liquidation programs). See [FSIS Directive 6240.1](#), *Inspection, Sampling, and Disposition of Animals for Tuberculosis*;
3. Facilitate the early detection, origin, and containment of foreign animal diseases and other reportable diseases. See [FSIS Directive 6000.1](#); and

4. Identify the origins of livestock condemned on ante-mortem inspection for central nervous system (CNS) conditions as specified in [FSIS Directive 10,400.1](#), *Sample Collection from Cattle under the Bovine Spongiform Encephalopathy (BSE) Ongoing Surveillance Program*.

C. In addition, 9 CFR 310.2(b)(4) indicates that the FLS may allow any alternative method (that is reliable) proposed by the operator of an official establishment for handling the types of animal identification devices to meet the regulatory requirements in [9 CFR 310.2\(b\)](#).

D. When evaluating the establishment's alternative proposal, the FLS is to consider the origin (feedlot vs. dealer, sale barn) and class of livestock (e.g. cull dairy, veal, and sick pen realizers) as presented for inspection and slaughter by the establishment.

NOTE: The APHIS final rule: [Traceability for Livestock Moved Interstate](#) [Vol. 78 (6), pp. 2040-2075] was published January 9, 2013. This rule establishes minimum national official identification and documentation requirements for the traceability of livestock moving interstate.

II. IPP VERIFICATION

A. IPP are to verify that the establishment collects, handles, and maintains all animal identification devices (i.e., official and non-official man-made animal identification devices) and maintains such identification with the identity of carcass and parts until post mortem inspection is completed. The identification devices are:

1. [Official USDA ear tags](#) (excluding FSIS official devices for identification of livestock disposed and rendered **on-site** per [9 CFR 309.18](#)):
 - a. Vaccination (e.g., calf-hood "Bangs" or Brucellosis) tags;
 - b. Official USDA official [State-Federal market back tags](#); and
 - c. [Official USDA Radio-frequency identification \(RFID\) or other electronic tags or buttons](#);
2. Identification devices from [livestock imported from Canada](#) (see [FSIS Directive 9530.1](#), *Importation of Live Canadian Cattle, Sheep, and Goats Into the United States*) or Mexico (See [FSIS Directive 9700.1](#), *Importation of Live Cattle from Mexico into the United States for Immediate Slaughter*):
 - a. Canadian tags;
 - b. Any special ID used on [cattle imported from Mexico](#) (blue metal tags) and presented for slaughter; and
 - c. Cattle imported from Mexico with a "M" brand on the cheek;
3. Non-official sales tags:
 - a. Livestock market or sale barn backtags; and
 - b. Ear bangle; and
4. Non-official herd or feedlot or other identification tags or devices:

- a. Producer ear tags; and
- b. Feedlot identification tags.

C. IPP are to record any tattoo numbers present on swine selected for chemical residue testing if there is no other type of animal ID information available for the selected animal.

D. IPP are to verify, once every month during slaughter operations, the livestock identification requirements in [9 CFR 310.2](#) when performing the scheduled “Other Inspection Requirements” task in PHIS.

E. IPP are to refer to [FSIS Directive 6100.1](#) if the establishment slaughters livestock that did not receive ante-mortem inspection for disposition instructions.

III. DOCUMENTATION AND ENFORCEMENT

IPP are to document noncompliance with 9 CFR 310.2 (for livestock identification) under the “Other Inspection Requirements” task. See [FSIS Directive 10,800.1](#), for related instructions on documenting noncompliance with live animal identification requirements.

CHAPTER IX - LINE SPEEDS, INSPECTION RESPONSIBILITIES AND AUTHORITIES FOR REDUCING SLAUGHTER LINE SPEED

I. GENERAL

A. The FMIA provides that there is to be an inspection to assess whether carcasses are not adulterated and can be passed for human consumption (21 U.S.C. 604).

B. Maximum line speeds established by FSIS are permitted on the slaughter (or eviscerating line) when optimum conditions exist (9 CFR 310.1(b)(1)). When there are less than optimum conditions, line speed adjustment is required to ensure that IPP can perform a post-mortem inspection of livestock carcasses.

C. IICs are to ensure that IPP can perform a post-mortem inspection in livestock carcasses at all times.

D. IICs are to slow maximum allowed line speeds when slaughter process control is not maintained because of inconsistencies in size, class of animal, health, pathology, contamination, sanitary dressing or presentation of carcasses (9 CFR 310.1(b)(1)).

II. IIC AUTHORITIES AND RESPONSIBILITIES

A. IICs are to perform or assign verifications to determine when the inspection procedures cannot be adequately performed at the current line speed because of particular deficiencies in carcass preparation or presentation by the establishment at that higher speed; or because the health condition of the particular animals indicates a need for a more extensive inspection (9 CFR 310.1(b)(1)). PHVs and IICs are to reduce the line speed to one at which IPP can perform the proper post-mortem inspection procedures.

B. IICs are to, in conjunction with specific verifications of slaughter line speed process control, perform or assign verification activities to determine whether the establishment’s slaughter and sanitary dressing procedures are controlling contamination that may affect IPP’s ability to perform proper post-mortem inspection procedures.

C. IICs are to use the PHIS Beef Sanitary Dressing task to document noncompliance, in accordance with [FSIS Directive 6410.1](#), when PHVs or IICs determine that there is evidence that insanitary conditions have been created resulting in the inability of the on-line IPP to adequately perform the proper post-mortem inspection procedures.

D. IICs are to use the PHIS Other Inspection Requirements task to document noncompliance, only when the maximum allowed line speed has been exceeded; or when particular deficiencies in carcass preparation or presentation have resulted in the PHV or IIC slowing the line speed. In the NR, the IIC is to describe findings that support the reduction in line speed, citing 9 CFR 310.1(b)(1):

1. Measure the maximum allowed line speed using physical methods. The maximum allowed line speed is a whole number. Any line speed measurement resulting in a fraction is to be rounded up; and
2. Assess as quickly as possible in conjunction with sanitary dressing verifications, as appropriate, presentation and health status of the lot when on-line IPP report potential problems with presentation, sanitary dressing, contamination, pathology, or health status of the animals.

E. The PHV or IIC is responsible for ensuring a safe work environment for IPP.

F. The PHV or IIC is to report Safety hazards according to instructions in [FSIS Directive 4791.12](#), *Reporting and Correcting Occupational Hazards*. If a significant safety hazard is observed for either IPP, the PHV or IIC is to contact the FSIS Occupational Safety and Health Specialist assigned to their local District who is to investigate and take the appropriate action.

G. If an inspector is injured, the supervisors are to follow the procedures in [FSIS Directive 4810.1](#), *On-The-Job Injury and Illness Compensation*, and can contact the FSIS Workers' Compensation Branch for assistance directly at 1-800-370-3747.

H. If there is a situation where imminent danger (e.g. fire, gas explosion, natural gas leaks, broken ammonia line, etc.) is found or reported, the PHV or IIC is to remove FSIS employees from the workplace. (see [FSIS Directive 4791.12](#)).

I. PHVs and IICs are responsible for ensuring that each on-line inspector is aware of his or her authority as described below. The PHV or IIC also is to regularly correlate appropriate Agency standards and monitor performance for each inspector to assure uniformity of inspection procedures and actions.

III. ON-LINE IPP AUTHORITIES AND RESPONSIBILITIES

A. On-line inspectors do not have the authority to slow line speeds.

B. In order to ensure their safety and health, on-line inspectors are to stop the line for hazards needing immediate intervention. Some examples, not all inclusive, are preventing injury because of malfunctioning of automated shackles, saws, or other equipment or accidental splashing of bile or fluid in the eyes. FSIS on-line inspectors are to stop the line if establishment employees report that an imminent danger is present.

C. On-line inspectors assigned to a livestock slaughter establishment are to:

1. Notify the IIC or off-line IPP if they detect trends of increasing contamination, pathology, disease, or improper presentation;

2. Stop the line according to [FSIS Directive 6240.1](#) and [FSIS Directive 6100.1](#); and

NOTE: In livestock operations there may be a rail out system that may reduce the need to stop the line.

3. Stop the line at times when the on-line inspector's ability to conduct a complete post-mortem inspection is being impeded by the establishment's helper or other establishment personnel. IPP are to approve the establishment's restarting the line.

CHAPTER X - ALTERNATIVE METHODS OF PRESENTATION

I. GENERAL

Official establishments may present certain carcasses, carcass parts or organs differently than expected. The alternative method may result in reduction of the optimum chain speed permitted by FSIS in 9 CFR 310.1. Under no circumstances are IPP to compromise the requirement for careful post-mortem examination and inspection of the carcasses and parts of livestock slaughtered at official establishments (9 CFR 310.1(a)).

II. KIDNEY PRESENTATION

IPP are to observe and palpate exposed kidney (9 CFR 310.19). Kidney may be presented for inspection attached to the carcasses at final carcass inspection station; or the viscera table (with other viscera).

III. PRESENTATION OF OXTAIL

IPP are to observe all ox tails. Ox tails may be presented:

1. Attached to the carcass before removing the tail at final rail inspection;
2. Pinned to the carcass (if previously removed) at final rail inspection;
3. With the viscera on the viscera table; or
4. By other means, such as a moving tail chain.

IV. BATCH COLLECTION METHODS

This applies to parts and organs not presented for inspection such as front shank tendons and blood, and for parts (or organs) presented for inspection such as hearts, livers, kidneys, etc., that are harvested from carcasses that are U.S. Retained at the final carcass inspection station for PHV disposition. IPP are to verify that:

1. Whenever the PHV condemns a carcass at any post-mortem inspection station, the establishment employee immediately communicates the condemnation to management and the batch or lot containing the parts and organs from the condemned carcass are disposed of and not used for human food;
2. The accuracy of the batch collection method procedures ensures that the organs or carcass parts are successfully collected; and
3. The establishment is following its batch collection method procedures when performing the PHIS "Other Inspection Requirements" task.

NOTE: There has never been a requirement that the batch collection method must be in writing. However, the IIC must approve such a program.

V. UNSPLIT STERNUM OF LIVESTOCK CARCASSES IN SLAUGHTER ESTABLISHMENTS

A. 9 CFR 310.12 outlines the regulatory requirements for the sternum to be split in each livestock carcass and the abdominal and thoracic viscera to be removed to allow proper inspection of carcasses and viscera. However, some official establishments that slaughter pigs, sheep, goats, or veal calves have customers that request the sternum (brisket) not be split during slaughter for the purpose of roasting the whole carcass on a barbecue spit or other customary method of preparation that requires an intact sternum, so that stuffing may be added.

B. FSIS has allowed the slaughter of livestock without splitting the sternum when an establishment's procedures are conducted in a sanitary manner, and IPP are able to conduct proper post-mortem inspection.

C. IPP are to be aware that the alternative method of presentation of carcasses with an intact sternum are not to compromise the sanitary dressing of the carcasses, the zero tolerance requirements, or post-mortem inspection procedures or interfere with inspection in any way.

D. When an official establishment that is splitting the sternum requests not to split the sternum, the PHV or IIC is to use the following criteria to evaluate the request and to render a decision on whether to allow or continue to allow the alternative method of presentation if:

1. IPP are able to carefully and properly inspect the presented carcass and viscera in accordance with 9 CFR 310.1(a) and the instructions to IPP in this directive;
2. The alternative method of presentation does not interfere with proper sanitary dressing; create insanitary conditions under 9 CFR 416 and 310.18(a); and does not interfere with visualization of kidneys, as required by 9 CFR 310.19;
3. The establishment is equipped with facilities that allow IPP to conduct proper post-mortem inspection. Such facilities may include, but are not limited to, adequate lighting to inspect the inside of the carcass, proper inspection stands, and when warranted, assistance with carcass presentation for inspection;
4. The establishment is able to reduce the chain speed as deemed necessary by the PHV or IIC, or to stop the line as deemed necessary by IPP to allow complete carcass and viscera inspection as instructed in this directive; and
5. The establishment splits the sternum when requested by IPP to address concerns related to lesions, pathological conditions, or other conditions that necessitate splitting the sternum in order to properly conduct inspection.

E. The PHV or IIC is to deny the establishment's request for the alternative method of presentation when the establishment cannot meet these criteria.

F. If the IPP determine that sanitary conditions have not been maintained, or that adulterated product would enter commerce, they are to issue a NR and the appropriate enforcement action as set out in [FSIS Directive 5000.1](#), *Verifying An Establishment's Food Safety System*.

NOTE: FSIS defines roaster pigs in the U.S. National Residue Program Data (Red Book) as “animals of both sexes and any age marketed with the carcass unsplit and with head intact.”

CHAPTER XI - DOCUMENTING POST- MORTEM INSPECTION FOR LIVESTOCK

I. DOCUMENTING RESULTS OF POST-MORTEM INSPECTION

- A. PHVs are no longer to use the FSIS Form 6100-14 (the Daily Disposition Record) and the weekly summary sheet to capture official post-mortem inspection data. The official post-mortem inspection data is captured in PHIS.
- B. PHVs (or IPP) are to enter the livestock slaughter data and ante-mortem and post-mortem data into PHIS.
- C. PHVs are to enter each disposition that they make and the animal is to be specifically associated with a U.S. Retained or U.S. Suspect tag number. Livestock condemned on ante-mortem inspection are specifically associated with a U.S. Condemned tag (“red metal tag”) number.
- D. PHVs (or IPP) are to enter the data for livestock slaughtered on a per shift basis.
- E. Each time IPP enter slaughter data, they are to select the slaughter establishment, the slaughter date, and the shift on which to enter the information.
- F. PHVs are to enter, in PHIS, only the carcass dispositions made by the PHV. These carcasses are carcasses that were railed out for PHV disposition. PHV or IPP are not to enter into PHIS the dispositions made on parts, or viscera, by line inspectors as part of their post-mortem inspection activities.
- G. Detailed instructions for entering the post-mortem inspection results in the appropriate fields may be found in the PHIS User Guide.
- H. The data entry for post-mortem inspection and carcass disposition is a continuation of the entry of ante-mortem inspection data that is found in this directive.
- I. Custom slaughter tallies are to be reported by IPP only if reported by the establishment to IPP.
- J. PHVs may enter in the free text narrative box any additional information for post-mortem carcass disposition, such as pathological findings to support the disposition and animal identification.
- K. PHVs have the option to enter the disposition for a single carcass by selecting “Add Disposition Record” or add multiple disposition records by clicking on “Add Multiple Disposition Records”.
- L. PHVs are to enter the number of collected brucellosis and tuberculosis samples taken. This is also the page for collecting information on BSE tests.

II. STEPS TO ENTER DAILY SLAUGHTER DATA FOR LIVESTOCK

IPP are to do the following when entering daily slaughter data:

1. Login from the PHIS Homepage;

2. Click on "Animal Disposition" to view the submenus and then click on the "Establishment Reporting". On the Establishment Reporting page the user selects the establishment for which they want to enter or view data. Only establishments to which the inspector is assigned will appear in the establishment selection list;
3. The user then specifies the date, shift, and slaughter type. Only the shift and slaughter types listed in the grant of inspection will be available. If the selected day or shift has been designated a "no slaughter day", it will prevent data being entered for that day or shift;
4. When the data is complete click "Continue";
5. The "Class Summary List" opens and the user can initiate data entry for the day's slaughter by clicking on the "Add inspected slaughter" link or "Add custom slaughter" link. Clicking on "Add Inspected Slaughter" link will display the "Class Summary Information";
6. Choose the appropriate class of livestock in the dropdown box;
7. Click "Add Sub-Class" to record tallies and condemnations by sub-class;
8. On the "Subclass Summary" page add the head count, live weight, and dressed weight. Check "Weight Not Reported" if weight information is not available;
9. Click "Add Disposition Record" to add disposition data for individual animals or click "Add Multiple Disposition Record" to add data for multiple animals. Click "Add Disposition Records" it will open the "Daily Disposition Record Detail" page;
10. Enter the sub-class, tag type, tag number, animal's condition, disposition, and narrative information on the "Daily Disposition Record Detail" page;
11. Click "Save" to save the data and return to the "Sub-Class Summary" List;
12. Click "Save" to save and return to the "Class Summary List";
13. The "Class Summary List" Page will summarize the daily tallies entered so far;
14. To generate a condemnation report click on the "Print" icon in the Condemnation Certificate column;
15. PHIS will present a list of condemnation tags;
16. Select the tags you want included in the certificate and click "Run individual Report" or "Run Consolidated Report". The condemnation certificate will be prepared;
17. To add custom slaughter tallies Click on "Add Custom Slaughter" on the Class Summary List page. This will open the "Sub-Class Summary" Page;
18. Here the user enters summary data on the custom slaughter disposition report for the selected establishment, date, and shift; and

19. These data will be combined with inspected slaughter on the Class Summary List.

III. STEPS TO ENTER NO KILL PERIOD

To enter information for a “no kill period”, IPP are to follow instructions in the PHIS user guide:

1. From the Navigation Menu under “Animal Disposition: select “No Kill Period”;
2. On the “No Kill Period” page select the establishment, the shift, and click on “Add No Inspected Slaughter Period;”
3. Enter the start date, end date and reason code; and
4. Enter “Save”.

IV. COMPLETING THE CERTIFICATE OF ANTE-MORTEM OR POST-MORTEM DISPOSITION OF TAGGED ANIMALS, FSIS FORM 6000-13

A. PHVs are to generate and print the Condemn Certificate, FSIS Form 6000-13 within PHIS and present it to establishment management when requested. Refer to the PHIS User Guide.

B. The condemnation certificates may be automatically generated by PHIS for both ante-mortem and post-mortem condemned livestock for print-out and PHV signature.

C. The PHIS condemned report parameter for condemned certificates may be generated on all condemned carcasses or certain selected carcasses on a particular day.

D. Also, condemned report parameters allow generation of an individual report for each condemned animal by selecting “Run Individual Report or of a consolidated report for all condemned livestock by selecting “Run Consolidated Report”.

CHAPTER XII – DATA ANALYSIS AND QUESTIONS

I. DATA ANALYSIS

One year after issuance of this directive, the Office of Policy and Program Development (OPPD) will conduct a policy effectiveness analysis of relevant data to look for areas of confusion or inconsistent application of these instructions and determine if or what future actions are needed to address any identified problems.

II. QUESTIONS

Refer questions regarding this directive to the Policy Development Staff through [askFSIS](#) or by telephone at 1-800-233-3935. When submitting a question, use the Submit a Question tab, and enter the following information in the fields provided:

Subject Field: Enter **Directive 6100.2**

Question Field: Enter your question with as much detail as possible.

Product Field: Select **General Inspection Policy** from the drop-down menu.

Category Field: Select **Regulations/Agency Issuances** from the drop-down menu.

Policy Arena: Select **Domestic (U.S.) only** from the drop-down menu.

When all fields are complete, press **Continue** and at the next screen press **Finish Submitting Question**.

NOTE: Refer to [FSIS Directive 5620.1](#), *Using askFSIS*, for additional information on submitting questions

A handwritten signature in black ink, appearing to read "David Joseph". The signature is written in a cursive style with a large initial "D" and "J".

Assistant Administrator
Office of Policy and Program Development