

Ante-mortem Inspection

Objectives

Upon completion of the Ante-mortem Inspection module the trainee will be able to:

1. Describe the following:
 - a. Ante-mortem inspection
 - b. Delayed slaughter
 - c. Voluntary establishment segregation procedure for swine and sheep
 - d. U.S. Suspect
 - e. U.S. Condemned
 - f. Non-ambulatory disabled
 - g. Reasons for ante-mortem inspection
2. Identify the establishment's responsibilities for:
 - a. Livestock pens
 - b. U.S. Suspect pen for livestock
 - c. Floors in livestock pens
 - d. Assistance for ante-mortem inspection
3. Identify the equipment and supplies that are needed to perform livestock ante-mortem inspection.
4. Describe the appropriate methods for conducting ante-mortem inspection.
5. Complete, given a list of information, the following in livestock inspection:
 - a. A pen card
 - b. FSIS Form 6150-1
6. Given a list describing methods used to dispose of a livestock carcass condemned on ante-mortem, select those methods that are approved by FSIS.

Ante-mortem Inspection

The term ante-mortem means “before death.” Ante-mortem inspection is the inspection of live animals prior to being slaughtered. All livestock presented for slaughter by the establishment to which you are assigned must receive ante-mortem inspection. This inspection is performed by an FSIS veterinarian (PHV) or by a Food Inspector under veterinary supervision. If it is performed by a Food Inspector, the PHV must be notified of any disease conditions that are observed.

Authorities

The Agency’s authority for conducting ante-mortem inspection can be traced to the statutes. The authority for conducting ante-mortem inspection in livestock is found in 21 U.S. Code (USC), Chapter 12, Section 603, of the Federal Meat Inspection Act (FMIA).

The regulations covering ante-mortem inspection of livestock are found in Title 9 - Animals and Animal Products, Chapter III - Food Safety and Inspection Service, Department of Agriculture of the Code of Federal Regulations. Part 307.2 addresses the requirements for facilities for inspection. Part 309 covers ante-mortem inspection. Part 313 addresses the requirement for humane slaughter of livestock. Although we will cover the requirements for humane handling briefly, they are covered more extensively in the humane module of this training.

There are some FSIS Directives and Notices related to ante-mortem inspection. They include the FSIS Directive 6000.1, Revision 1, “Responsibilities Related to Foreign Animal Diseases (FADs) and Reportable Conditions”, FSIS Directive 6000.1, Revision 1, “Ante-Mortem Livestock Inspection”, FSIS Directive 6240.1, Revision 1, “Inspection, Sampling, and Disposition of Animals for Tuberculosis”, FSIS Directive 6900.1, Revision 1, “Humane Handling of Disabled Livestock”, and FSIS Directive 6900.2, “Humane Handling and Slaughter of Livestock”. FSIS Notice 52-09, Ante-Mortem Verification of Livestock offered for Slaughter by the Establishment, issued 8/5/09, addresses the need to verify that slaughtered livestock received ante-mortem inspection. FSIS Directives and Notices are instructions to inspection personnel.

The statutes establish our authority to examine and inspect livestock prior to slaughter. Under the statutes, we are to accept for slaughter as a result of inspection only those animals which are capable of producing products that are acceptable for use as human food. With this goal in mind, the purpose of ante-mortem inspection is to accept only those animals that are healthful, safe from harmful chemical and drug residues, and capable of being converted into wholesome product for the consumer. Inspection of live animals is a screening process to remove obviously diseased animals from the food supply prior to slaughter and to identify animals that require a more extensive postmortem examination by an FSIS PHV. It is the first line of defense in protecting the public from potentially harmful meat products. Those animals that exhibit abnormal signs must be withheld from normal slaughter and segregated for closer examination.

Establishments are required to handle livestock humanely. When you are performing your ante-mortem duties, you will also make observations and document any noncompliance with the humane handling requirements. Be aware of this as we continue. We’ll cover the humane handling requirements in another module.

Establishment Responsibilities for Facilities and Conditions

The regulations identify requirements that the establishment must meet for maintaining facilities where ante-mortem inspection is to be conducted. You are responsible for verifying that the establishment has met the regulatory requirements for maintaining the facilities where ante-mortem inspection is to be conducted. Let's review each of the requirements.

The establishment's responsibilities for maintaining the premises where ante-mortem inspection is to be conducted for livestock are outlined in 9 CFR 307, which covers facilities for inspection, and in 313, the humane handling regulation. Let's review each of them. The pens must be satisfactory for conducting ante-mortem inspection, and maintained in a sanitary condition (307.2(a)). Pens must be kept clean and be well drained (307.2(a)). The pens, driveways, and ramps must be maintained in good repair and free from sharp objects that may cause injury or pain to animals (313.1(a)). The floors of pens, driveways, and ramps must be well constructed and maintained and provide good footing for animals (313.1(b)).

The lighting must be sufficient for inspection (307.2(b)). You will need to use your judgment in determining whether the light is adequate or not. The regulations do not specify any measurement or level of light that the establishment is required to provide. Suspect pens and restraining devices require more light because these are places where animals are more closely examined during inspection. The establishment must provide adequate areas for holding animals that are identified by FSIS as suspect and condemned (307.2(a)). These are typically designated as the suspect and condemned pens. Pens where suspect animals are held must be covered to protect them from adverse weather conditions (313.1(c)). Although it is not required by the regulations, it is customary for the establishment to provide a covered area for inspection personnel to use during inclement weather. The plant typically also provides a restraining device such as a chute or squeeze gate for restraining animals and taking temperatures during the examination.

It is the responsibility of the plant to provide adequate, competent employees to move, segregate, restrain, identify and dispose of animals (307.2(a)). Do not allow yourself to become the plant foreman in the ante-mortem areas. You must closely monitor plant personnel to assure that they use humane animal handling practices at all times. You must also observe good safety practices since large animals can be very dangerous.

If the plant has not met one or more of its responsibilities, you must take action. The action you may take will vary from withholding inspection of a single pen of animals until the pen is properly identified, or to withholding inspection of all animal pens because the plant has failed to provide an employee to move and restrain the animals. There are more specific details for documenting noncompliance with the humane handling regulations that we cover in humane slaughter material.

Animal Identification

The regulations require that establishments identify the carcass and parts with the animal from which they come (9 CFR 310.2 (a)), and that the establishment maintain

records of the buyer and seller of livestock (9 CFR 320.1(b)(1)(iv)). Tags, tattoos, and segregation are typically used to maintain the identity of the carcass and its parts.

The plant is also required to have an adequate system for the identification of animals passed for slaughter (307.2(a)). One way that establishments commonly meet this regulatory requirement is by using plant identification cards, often referred to as "pen cards" or "drive sheets." The purpose of these cards is to account for all animals in the pen prior to ante-mortem inspection, and to ensure that every animal slaughtered has received ante-mortem inspection. Pen cards may be used to maintain a record of the buyer and seller of the livestock.

Pen cards or drive sheets must be presented to the inspector before ante-mortem inspection is performed. You must record the following information on the document:

- Date ante-mortem inspection was performed
- Pen/lot number
- Number and slaughter class (species/breed) of animals passed for slaughter in the pen/lot
- Time ante-mortem inspection was performed
- Inspector's signature or initials

Generally, the plant will record most of the information directly on the card for you. You should, however, check to see that the information is correct before signing. If you don't receive this document, then the animals are not sufficiently offered for slaughter. This means that you cannot effectively perform ante-mortem inspection and therefore cannot pass the animals for slaughter. In this situation, you do need to let establishment personnel know why you will not pass the animals for slaughter.

In accordance with FSIS Notice 52-09, IPP are to periodically verify how accurately the establishment records the number of livestock presented for ante-mortem inspection. The frequency of this verification is determined by discussion between the PHV and FLS and is based on the establishment's history of accurately recording the number of livestock on the pen card or drive sheet. If you are responsible for performing this task, you should perform verification after the establishment has identified and presented livestock for ante-mortem inspection and have given the applicable pen card to you. If the count is accurate, you can complete ante-mortem inspection. If the numbers are inaccurate, you are to ask management to correct the pen card and cross out the incorrect number, initial the change, and complete ante-mortem inspection. In rare cases that the plant refuses to comply, retain the livestock and immediately contact your immediate supervisor. The offline CSI or PHV would document an NR under the 06D02 procedure code, citing 9 CFR 307.2.

Supplies for Performing Ante-mortem Inspection

The ante-mortem inspection of livestock takes place in the pens. Each animal must be observed. The following equipment and supplies are recommended for performing ante-mortem inspection for livestock. You should have access to a thermometer, U.S. Suspect and U.S. Condemn tags, tagging pliers and hog rings, and a pencil for writing. You may also want to have a pad of paper and a clipboard for taking notes. Many inspectors keep all of these items together in a kit that they keep under lock and key in

the ante-mortem area or in the government office. Some of the items you will be commonly using are:

1. A thermometer-This is usually supplied by the plant management. If you do not have one, or if the one you have is broken, request one from plant management.
2. Tagging Pliers-The tagging pliers, commonly called "hog ringers"; the hog rings are used to attach the suspect and condemn tags to the animal's ear.
3. U.S. Suspect (silver) and U.S. Condemned (red) tags.
4. FSIS Form 6150-1 (Identification Tag-Ante-mortem) is used to record and track suspect and condemned animals.
5. FSIS Form 6502-1 (U. S. Reject/Retain Tag) is attached to areas such as livestock pens to show that they are rejected for use because they didn't meet FSIS requirements and therefore did not pass inspection.

Following ante-mortem inspection you must record your findings. You will use the FSIS Form 6150-1 (Identification Tag-Ante-mortem), and possibly the FSIS Form 6200-16 (Summary of Ante-mortem Examination) to record your findings. You will also record your findings on the pen card (a plant form, discussed earlier). Remember that the pen card is a part of the procedure used to identify animals as having received ante-mortem inspection.

Ante-mortem Methodology

Part 309 of the regulations covering livestock inspection states that, "All livestock offered for slaughter in an official establishment shall be examined and inspected on the day of, and before, slaughter." A few small-volume plants are allowed exceptions to this rule, which will be discussed later. Part 309 goes on to say, "Such ante-mortem inspection shall be made in pens on the premises of the establishment at which the livestock are offered for slaughter." If the official establishment serves a dual purpose, such as a public stockyard or sale barn, as well as a slaughter facility, separate pens must be designated for animals presented for ante-mortem inspection and those destined for resale. You would only inspect those intended for slaughter. Livestock ante-mortem must be done by a PHV or a Food Inspector under the supervision of a PHV. Ante-mortem inspection consists of two steps:

1. Observe Animals **at rest**
2. Observe Animals **in motion**

It is important to inspect the animals using both steps because certain abnormal signs, such as labored breathing, are easier to detect while the animals are at rest, while other abnormalities, such as lameness, are more easily detected while in motion. Since the regulations do not require in motion inspection from both sides, you must use your discretion during ante-mortem. You or your supervisor may determine that in motion inspection from both sides is necessary to determine if the animals are eligible to be passed for regular slaughter. An example of this may be in high pathology cattle plants

with a greater incidence of acti, epithelioma, or injection site reactions which all can be unilateral in nature.

When you perform at-rest inspection, position yourself at various locations outside the pen. Observe all of the animals and note their general behavior while they're at rest. Determine if any of the animals show abnormal behavior patterns such as excessive excitability or severe depression. Look at the heads, necks, sides, rumps, and legs of as many animals as you can see. Make a note of any abnormalities.

When you perform in-motion inspection of the animals, you should position yourself outside of the pen next to the open gate so that you can easily view the animals as they are driven by you. You should direct the establishment employee to move all of the animals slowly and individually out of the pen while you observe them for abnormalities by viewing the visible side of the head, neck, shoulder, flank, legs, and rump. If the pen size permits, you may want to position yourself inside the pen and direct the establishment employee to move the animals past you in the pen. Do this only if it is safe. In general, it is only safe to position yourself inside the pen when inspecting small livestock such as sheep, market-sized hogs (up to 250 lbs.) and calves. It cannot be overemphasized to always be alert and think safety. Cattle can be surprisingly fast and agile, particularly when agitated or startled. Never go into a pen of large livestock. This is especially true of a pen with a bull or a cow with a calf. Don't make the mistake of performing in-motion inspection immediately behind a loose, swinging gate. As the animals are driven out of the pen, they could push against the swinging gate and force it against you. Also, never position yourself in a corner or in a place that allows no escape to safety should an animal turn aggressive. Don't climb on high, unstable fences to view the animals during ante-mortem inspection. As in all areas of the plant, wearing your safety helmet during ante-mortem inspection is a good safety practice.

Establishment Segregation, Delayed, and Emergency Ante-mortem Inspection

In addition to the manner in which ante-mortem inspection has just been described, there are other ways for performing it. They include establishment segregation procedures, delayed, and emergency ante-mortem inspection.

The establishment to which you are assigned may be using **voluntary segregation** procedures, formerly known as the alternative method of ante-mortem inspection. Provided the establishment properly presents animals for ante-mortem inspection and properly follows the Humane Slaughter Act, FSIS does permit an establishment to voluntarily segregate abnormal animals to facilitate the scheduling of animals for slaughter. FSIS will only permit market classes of swine and sheep (i.e., market hogs and lambs), arriving for regular slaughter (i.e., not arriving for slaughter under any APHIS Veterinary Services permit or certificate) to be voluntarily segregated by the establishment prior to FSIS ante-mortem inspection activities provided that:

- A. market classes of animals comprise the predominant class slaughtered at the establishment,
- B. the establishment has documented its segregation procedures in a prerequisite program or HACCP plan,
- C. all animals are presented to inspection program personnel for examination,

D. the procedures in the prerequisite program and related records are available to inspection personnel upon request.

E. voluntary segregation is **not** allowed for any class of cattle.

If the establishment is using voluntary segregation procedures you will verify that the segregation procedures are only for market classes of swine and lambs. While performing antemortem inspection, you will examine all animals found normal by the establishment while the animals are “at rest” and select 5 to 10 percent of all animals presented for ante-mortem inspection from several lots and observe them on each side in motion. You will instruct the establishment to move abnormal animals that may be condemned under 9 CFR Part 311 to the designated “Suspect” pen for final disposition by the PHV and you will randomly observe establishment personnel performing segregation procedures.

Delayed slaughter is covered in the regulations (309.1(a)). Delayed slaughter is a method of inspection that allows certain low volume plants to have ante-mortem inspection completed on the day before the animals are scheduled to be slaughtered. With this type of inspection, ante-mortem inspection is performed in the afternoon, can only be used at facilities that slaughter 1-15 animals per day, and must have prior approval from the Frontline Supervisor, For example, a low-volume plant may be planning to slaughter two hogs on Friday morning at a time when you will be conducting inspection duties at another establishment. If the plant is approved for delayed slaughter, it is permissible for you to perform ante-mortem inspection late Thursday afternoon when you are at the plant.

Special provisions have been made to allow the **emergency slaughter** of seriously injured animals during other than normal inspection time. As an example, on a Sunday a truck headed for a slaughtering establishment overturns and several of the animals are seriously injured. As a result, the establishment wants to slaughter the animals immediately rather than have them suffer pain until slaughtering operations begin on Monday morning. The establishment must attempt to contact FSIS personnel, explain the situation, and arrangements make for the inspection to take place. If the establishment is unable to contact FSIS personnel, the emergency slaughter provision allows plant personnel to slaughter the animals without ante-mortem inspection provided the carcass and all parts, including the viscera, are retained for postmortem inspection by FSIS. One very important thing to remember about emergency slaughter: It is NOT intended to cover the slaughter of sick or dying animals, only those that are seriously injured. So animals that are sick or dying from a disease are not covered by emergency slaughter. In addition, emergency slaughter is not permitted for cattle.

Ante-mortem Dispositions

There are three possible outcomes, or dispositions, that follow ante-mortem inspection:

- (1) Passed for slaughter –
This means that the animals were determined to be fit for human food.
- (2) U.S. Suspect –
Those animals that clearly exhibit signs of diseases and conditions listed in the regulations must be condemned. This means that they are clearly not fit

for human food, and they must be destroyed and not allowed to enter commerce as human food.

- (3) U.S. Condemned –
Those animals that may exhibit signs of the diseases or conditions defined in the regulations, but further confirmation during post mortem inspection is needed before condemning the carcass or a part of the carcass.

In each of these three cases, there are certain things that you must do. Let's review each situation for livestock.

Passed for Slaughter

After you complete ante-mortem inspection and properly record the results, you will then take action based on your findings. You will allow the animals that you have determined to be free of the diseases and conditions described in the regulations, and therefore fit for human food, to be released for slaughter. You will certify this to the establishment by signing and dating the time of ante-mortem inspection on the establishment's pen card. After you inspect the animals, you sign the card and write the time the animals received inspection. Signing the card indicates that the animals have received ante-mortem inspection and are ready for slaughter. The pen card is taken from the pen and delivered to the postmortem inspector by a plant employee prior to or at the time the animals are driven inside the establishment for slaughter. The postmortem inspector collects all of the pen cards and compares the number of animals recorded on the cards with the number of animals being slaughtered. This is done to determine if all animals being slaughtered have received ante-mortem inspection.

IPP are to verify that ante-mortem inspection has occurred in accordance with FSIS Notice 52-09 at a minimum of once per shift. This is done by comparing the number of animals listed on the documentation (pen card or drive sheet) matches the number of animals driven to slaughter and that the documentation has an IPP signature or initials, and the time ante-mortem was performed. If there is reason to suspect that the animals were slaughtered without ante-mortem inspection, then you are to retain the carcasses and immediately contact your immediate supervisor, who will call the District Office for guidance.

Suspect

Some of the animals may exhibit signs that cause you to question whether the animal is affected by a disease or condition described in the regulations (309.2). You will direct the establishment to place a U.S. Suspect tag in the animal's ear and to segregate those animals with abnormal signs into the U.S. Suspect pen for further observation by the PHV after you have completed the ante-mortem inspection. We'll cover some signs that will cause you to suspect animals of diseases and conditions listed in the regulations in the next section. But for now, a couple of simple examples of animals that should be tagged as U.S. Suspect and placed in the U.S. Suspect pen are animals that are seriously crippled and those that are non-ambulatory. Non-ambulatory livestock were formerly called "downers"; that term has been removed from the regulations and is no longer used. The exception is non-ambulatory cattle, which are to be condemned. Section 309.2(n) states that all animals that are suspect must be set apart and

slaughtered separately. When animals are placed in the U.S. Suspect pen, they must be accompanied by FSIS Form 6150-1 (309.2 (o)).

After further examination of an animal in the U.S. Suspect pen, the PHV may determine that the animal is not fit for human food according to the regulations and that it must be condemned. Alternately, the PHV may determine that the suspect animal is normal or that the abnormal signs you observed are not severe enough to have the animal suspected or condemned. This animal may be released for slaughter. If the plant employee moves this animal out of the U.S. Suspect pen and into a different pen, be sure to make the necessary changes on the pen card. A third possibility is to have the suspect animal slaughtered separately and given a thorough postmortem examination by the PHV.

Section 309.2 (p) provides for occasions when the plant requests and receives permission to hold an animal for treatment in an effort to improve the animal's condition to the point that it may become eligible for slaughter. This "on-premises treatment" is a relatively rare occurrence, but, if it does occur, the PHV has certain responsibilities. The identity of the animal must be maintained throughout the treatment period. The animal must be placed in a separate pen identified with a pen card. In addition, the FSIS Form 6150-1 must be changed. Cross out the word, "slaughter," and write in the phrase "held for treatment" in the appropriate space. Following the treatment, the PHV will examine the animal and direct you as to what action to take.

Another possibility is that the plant may request and receive permission to have an animal treated off-premises, such as at a local veterinary clinic. These animals must also be kept in an identified pen until they are picked up for treatment. The U.S. Suspect tag is removed just before the animal is shipped. The tag can be removed because a different type of identification system will be used to identify the animal after it leaves the plant premises.

Condemned

An animal that is condemned during ante-mortem inspection is not eligible for slaughter because it has been identified as having diseases or conditions specified in the regulations that make it unfit for human food. For example, 309.3 states that dead, dying, disabled, or diseased livestock are to be condemned. It is your responsibility to identify the animal so that it is neither slaughtered nor used for human food. This is accomplished by placing a U. S. Condemned tag in the animal's ear. The FSIS Form 6150-1 must also be completed. The number of the U. S. Condemned tag that was placed in the animal's ear is written in the space provided on the form.

Section 309.13 covers the regulatory requirements for the disposition of condemned livestock. Any livestock that is condemned must have a U. S. Condemned tag placed in its ear. The FSIS PHV usually completes form 6150-1, and ensures that the establishment properly disposes of the condemned animal.

Since the plant cannot slaughter a condemned animal nor use it for human food, the plant usually promptly kills the animal and immediately disposes of the carcass in one of two ways that have been approved by regulation. Many plants have their own disposal equipment and facilities. When a carcass is disposed of in this way, it is termed "on-premises rendering." Plants that do not have their own disposal equipment and facilities

have the carcass sent to some other place. This is called "off-premises disposal." Regardless of the plant's method of disposal, inspection personnel have certain responsibilities. These responsibilities are detailed in regulations under 9 CFR Part 314, Handling and Disposal of Condemned or Other Inedible Products at Official Establishments. Refer to this regulation when your job assignment requires you to oversee the disposal of a condemned animal.

Here's an example. Obviously, as indicated earlier, a dead animal may not be used for human food. When you observe an animal that arrives at the plant dead or subsequently dies in a pen, including the suspect pen, you must make sure that there is an adequate control to prevent the animal from entering the food supply. You must take the following steps:

1. Identify the animal as condemned with a red U.S. Condemned tag.
2. Fill out an FSIS Form 6150-1 and write the words "Dead in Pens" or "Dead on Arrival" in the "Tagged For" space.
3. Have the animal properly disposed of. (Follow the requirements in 9 CFR Part 314)

Special Circumstances

If an animal that has been designated as a U.S. Suspect **dies in the pens**, you must have the U.S. Suspect tag removed and replaced with U.S. Condemned tag and make the necessary changes on the FSIS Form 6150-1.

FSIS Form 6150-1

As indicated earlier, when you perform the ante-mortem inspection procedure, you observe each animal for abnormal signs. When you find an animal exhibiting signs of the diseases and conditions described in the regulations, you may be called upon to record the signs on the FSIS Form 6150-1. The form has two sections. The upper section contains most of the information that identifies the animal, such as the kind of animal, sex of the animal, and the animal's approximate weight. You will complete the upper section of the card. Under the "kind of animal" section, terms like Hereford, Jersey, Buffalo, Santa Gertrudis, Hampshire, Yorkshire, Duroc, etc., should be used. When you are using a single 6150-1 form to identify more than one animal, be sure to indicate the number in the section "kind of animal": 3 Herefords, 2 Holsteins, etc. Also record all back tag numbers, ear tag numbers, etc., for each animal. The lower section, the postmortem report, will be completed by the PHV responsible for postmortem inspection.

The FSIS Form 6150-1 contains the following sections:

Slaughter at establishment - Indicate the official establishment number where the animal is to be slaughtered.

Condemned or suspect tag - If you apply a U.S. Suspect tag, enter the number of the tag and cross out the word "condemned?"

Sex - Use terms like bull, cow, heifer, shoat, ewe, barrow, etc.

Tagged for - Indicate the condition for which you tagged the animal, (e.g., actinobacillosis, epithelioma, non-ambulatory disabled, TB reactor, pneumonia, broken leg, etc). If you feel it is necessary to add more information, use a phrase like "see back of form" and then write the information on the back of the form.

Temperature - Indicate the temperature in degrees F. You must take the temperature of all non-ambulatory disabled livestock, TB reactors, mastitis elimination cows, and all animals exhibiting signs of an abnormal temperature.

Weight - Estimate the animal's weight in pounds.

Remarks - The PHV will complete the remarks section after determining the ante-mortem disposition and then sign and date the form. Depending on local policy, the optional postmortem report section may or may not be completed.

FSIS Form 6200-16

The FSIS Form 6200-16 (Summary of Ante-mortem Examination) is used to record daily ante-mortem activities. This form is optional and its use is at the discretion of the Frontline Supervisor.

General Signs of Diseases and Conditions

This section covers some general signs that indicate an animal may have a condition or disease referenced in the regulations, making it unwholesome, adulterated, or unfit for human food. In general, these signs include the following.

- Body movement
- Body condition
- Signs on the body's surface

Abnormal Body Movement

Ante-mortem signs that indicate an animal may have a condition or disease referenced in the regulations can be associated with body movement and action, body position, condition, function, surfaces, discharges, and body odor. Some examples of the signs associated with body movement, action and position include:

1. Lameness or limping-sometimes the cause of lameness is rather obvious; sometimes not.
2. Stiffness and pain-lameness may be caused by arthritis in one or more joints.
3. Central Nervous System (CNS) diseases-certain diseases such as rabies and listeriosis can affect the brain and CNS. The animal may appear extremely nervous or restless, excessively anxious or upset, or stagger or circle.
4. Certain poisons and toxic residues that the animal has been exposed to may cause abnormal movement and action, such as staggering or circling.

5. Depression or disinterest may be a sign that the animal is in a dying or moribund state. A moribund animal may not respond to noises or other stimuli. Animals in a moribund condition are not eligible for slaughter.
6. It is possible that an animal that is depressed or fails to respond normally to stimuli could be under the influence of a tranquilizer. Tranquilized animals are not eligible for slaughter. Tranquilizers and other drugs have specific withdrawal periods that must elapse before the animal is eligible for slaughter.
7. An animal may be disoriented and run into things or butt its head against objects.
8. Animals may scratch excessively or rub their hide against objects. Scratching and rubbing associated with hair loss may indicate that the animal has lice or mange infestation. Scabies is a mange condition that is a reportable disease. The PHV must report this condition to other health agencies. These agencies may want to take skin scrapings from the animal to confirm the diagnosis.
9. Animals may have muscle tremors or shivering, hold their head to one side, or have any number of abnormal gaits.
10. Animals may strain and assume abnormal body positions. For example, urinary or intestinal disorders may cause straining and abnormal positions such as arching of the back, tucking in of the abdomen (stomach), and extending the neck and tail.
11. An animal may have difficulty in rising or be unable to get up at all or be standing but unable to walk (or ambulate). These animals may be recumbent non-ambulatory or standing non-ambulatory for a variety of reasons ranging from an injury to severe illness or depression. All non-ambulatory livestock must be examined by the PHV. The PHV may choose to examine these animals where they are rather than move them to the U.S. Suspect pen to avoid unnecessary handling and pain or injury to the animal. All cattle that are non-ambulatory when presented for ante-mortem must be condemned.

Abnormal Body Condition

You will also see animals with signs associated with abnormal body condition. Examples of abnormal body condition include:

1. Animals that are extremely thin and weak - you may see animals that are thin and weak due to chronic disease problems such as pericarditis, pneumonia, nephritis, etc. Animals that are in very poor condition and exhibit other signs such as depression, lethargy, respiratory difficulty, etc., should be placed in the U.S. Suspect pen. Remember, though, that animals can be normally thin. So thinness alone may not be an abnormal sign. For example, some old cows may be very thin, but they may be bright and alert, have a good appetite, and show no other abnormal signs. They should not be placed in the U.S. Suspect pen.
2. Calves (especially when very young) may be weak, thin, and dehydrated. They may be uncoordinated or barely able to stand. They should be placed in the U.S. Suspect pen.

Abnormal signs associated with body functions include respiratory distress such as labored or rapid breathing. These signs are commonly seen in animals with lung disorders such as pneumonia. Coughing and sneezing are other signs associated with pneumonia and other respiratory disorders.

You may occasionally see animals in the act of parturition, which is giving birth to young. The regulations prohibit the slaughter of these animals for human food until after they have given birth and passed the placenta (afterbirth). A cow with mastitis may have a hot, hard, swollen, and tender udder. Milk secretion may have partially or entirely stopped. A loss of appetite may be present. In advanced cases, the udder may become hardened throughout.

Animals may exhibit pain. Pain may be manifested by signs such as groaning, grunting, or grinding of teeth. You may also see animals that have difficulty drinking and swallowing or appear to be blind. All of these signs are abnormal and may be associated with a great variety of diseases.

It is not uncommon during ante-mortem inspection to observe an animal with an eye missing. Any bovine with an eye missing must be handled as a U. S. Suspect. Be sure to place this animal in the U. S. Suspect pen for the PHV to examine. These animals are suspects for epithelioma (cancer eye).

Abnormal Signs on the Body's Surface

There are a great number of abnormal signs associated with body surfaces. Injuries and fractures are included in this group. When observing animals, be on the alert for abnormal growths, swellings, and enlargements such as hernias. Two common conditions you may see are actinomycosis and epithelioma. Actinomycosis (commonly called "acti" or "lumpy jaw") involves the bony structures of the head, particularly the lower jaw (mandible). Epithelioma (commonly referred to as "cancer eye" or "bug eye") is a neoplastic growth involving the eye, eyelids, and the orbital region. The tumor appears to originate in either the cornea, third eyelid, or the eyelids. Herefords are by far the breed most commonly affected.

Abnormalities of the skin and mucus membranes will be observed while performing ante-mortem inspection. Animals may exhibit a variety of skin lesions including papillomas (warts). They may have a roughened, dry, or dehydrated hair coat or large patches of hair missing. Be on the lookout for superficial ulcers, sores, blisters or vesicles, particularly around the feet or around the mouth. There are several diseases that may cause these signs, including the dreaded foot-and-mouth disease, which is a reportable disease. If lesions are infested with maggots, notify the PHV because he or she will have to collect samples and send them to the laboratory. The laboratory will examine the maggots to see if they are screwworm larvae. Allied government animal health agencies work vigilantly to ensure that screwworm flies are not reestablished in this country.

The color of exposed membranes of the body, such as the gums or the eyes, may be an indication of a disease condition. The membranes may appear reddened, or very pale, or may have a yellowish color to them.

While observing body surfaces, be on the lookout for injection sites. Abnormal swelling, especially in the round or neck areas, could be an indication that animal was recently

given an injection. Approved drugs have a very specific withdrawal period prior to slaughter that, if not followed, can result in potentially harmful residues in the muscle tissue. If you observe an injection site on an animal, you must make it a U. S. Suspect so that the PHV can perform tests to determine if residues are present in the tissues.

Animals may also show signs of abnormal body discharges or abnormal odors. Abnormal discharges can include excessive salivation, diarrhea, blood, and pus. In a broad sense, animals with a retained placenta (afterbirth) can be included in this group. Be sure that animals with a retained placenta are placed in the U.S. Suspect pen as the regulations prohibit the slaughtering of such animals until all the membranes have been passed.

Along with a thorough visual examination of animals, your sense of smell is a very important aspect of performing ante-mortem inspection. For example, an animal may have a prolapsed rectum or uterus that has become infected and results in a strong, foul odor. At times when looking at a large pen of animals you may not at first see a wound or prolapse, but you may detect the characteristic odor that will alert you to look more closely at the animals. An epithelioma of the eye that has become infected is another example of an abnormality that may be associated with a very characteristic foul odor.

One of the steps in examining suspect livestock the PHV can perform is to take the temperature of the animal. This chart shows the range of normal body temperatures, as well as the condemnation temperatures, for the various species. The regulations specifically state a certain temperature at which the PHV must condemn the animal. This chart is given as a reference.

Article I. Normal Animal Temperature Ranges				
	Cattle	Swine	Sheep	Horses
Maximum	102.5	104.0	104.0	100.5
Average	101.5	102.5	102.5	100.0
Minimum	100.0	100.5	102.0	99.0
Veterinarian Condemns on Ante-mortem if:				
	105.0	106.0	105.0	105.0

Vaccine Livestock

Section 309.11 of the regulations state that, "Vaccine livestock with unhealed lesions of vaccine, accompanied with fever, which have not been exposed to any other infectious or contagious disease are not required to be slaughtered and may be released for removal from the premises."

Biological Residues

Section 309.16 of the regulations covers livestock suspected of having biological residues. This includes livestock that have been exposed to any type of substance that would make the carcass or parts unfit for human food or otherwise adulterated. These livestock must be condemned. They may be held under the custody of FSIS until the animal's metabolic processes have reduced the residue sufficiently for the carcass or parts to become fit for human food and not adulterated. In these cases, once the holding time period has passed, the animal must be returned for slaughter and be re-examined in ante-mortem inspection. It is permitted to allow these animals to be slaughtered for the purpose of collecting tissue to conduct an analysis of the residue. The analysis can include in-plant screening tests.

Research Animals

Section 309.17 covers livestock that have been used for research purposes. The regulations prohibit the slaughter of any livestock that have been used in experiments involving biological products, drugs, or chemicals unless the establishment has written documentation of the safety of these animals from an appropriate authority, such as APHIS, EPA, or FDA. Any animals that have been subjected to food additives or pesticide chemicals must demonstrate compliance with the FDA tolerance levels for these substances. The PHV may deny or withdraw slaughter for any suspect animals to ensure that all products that are prepared at the establishment are free from adulteration.

Veterinary Services

Veterinary Services (VS) is an organizational unit of the Animal and Plant Health Inspection Service (APHIS). The overall mission of VS is to control or eradicate specified animal diseases in this country. Your role will be to contact the PHV when you suspect animals of having a disease. Reportable diseases include anthrax, bluetongue, cysticercosis, scabies, tuberculosis, contagious ecthyma, myiasis (screwworm), scrapie, and vesicular diseases. Of these diseases, anthrax, cysticercosis, tuberculosis, and contagious ecthyma are transmissible to humans. Foreign animal diseases include bovine spongiform encephalopathy (BSE), foot and mouth disease, rinderpest, African swine fever, hog cholera, contagious bovine pleuropneumonia, and Teschen's disease. In most cases, VS will want the animal held so they can examine it. For example, in the case of livestock, the PHV will first identify the animal with a reportable disease as U. S. Condemned and then have the animal placed in a separate pen identified with a pen card. The establishment employees will be notified that the animal is not to be removed from the pen for any reason without the permission of the PHV or some other animal health official.

Antemortem Workshop

Write your answers in the space provided.

1. State the body temperature at which each of the following species must be condemned.

Cattle _____ Sheep _____ Swine _____

2. Which tag should be used for tagging an animal found dead in the pens?

_____ Silver U. S. Suspect tag
_____ Red U. S. Condemned tag
_____ A tag is **not** necessary

3. Non-ambulatory disabled livestock are animals

_____ unable to rise or walk
_____ showing signs of an abnormal condition
_____ found dead in the pens

4. U.S. Suspect is an animal

_____ that is obviously sick
_____ that will not respond to stimuli
_____ An animal identified with a U.S. Suspect tag in its ear or one that has been segregated into the U.S. Suspect pen because of an abnormal condition

5. U.S. Suspect tag

_____ "U.S. Rejected."
_____ A serially numbered metal tag bearing the term "U.S. Suspect" and is silver in color

6. U.S. Condemned tag

_____ A serially numbered metal ear tag bearing the term "U.S. Condemned"- usually red in color
_____ The paper tag used to identify equipment or product as "U.S. Retained" or "U.S. Rejected"

7. Emergency slaughter

_____ The humane slaughter of an animal which has become sick or is in a dying state during the time an inspector is *not* on duty or *not* available for inspection

_____ The humane slaughter animals, other than cattle, which are injured at night, on a holiday, or during a weekend, and an inspector is *not* on duty or *not* available for inspection

8. From the following list of facilities and equipment, select those that the official establishment must provide according to regulatory requirements: (Ref. 9 CFR 307 and 313)

_____ Covered suspect pen

_____ Sufficient lighting in the pens

_____ Satisfactory assistants to handle livestock

_____ Suspect and condemned tags

_____ Satisfactory equipment for antemortem inspection

_____ Curbs at least 12" high around the antemortem pens

_____ Drinking water for livestock in all holding pens

_____ Adequate hose connections for cleanup purposes

_____ Paved and drained pens and alleyways

9. Use the following information to complete the pen card below:

You just performed ante-mortem inspection on 24 animals (13 Holstein cows, 5 Angus steers, and 6 Hereford heifers) in pen #16. They are in Lot #39. One of the 13 cows had a vaginal prolapse, therefore, you had her placed in the U. S. Suspect pen

PEN CARD	
DATE _____	PEN# _____
SPECIES: _____	LOT _____
BREED: _____	
NUMBER: _____	
TIME _____	SIGNATURE _____

10. What happens to the above pen card when the animals are sent to slaughter?

11. Complete the FSIS Form 6150-1 using the following information:

You performed ante-mortem inspection on this date at Est. 38. The PHV condemned one Hereford bull for epithelioma. (back tag #999 and condemn tag #456)

U.S. DEPARTMENT OF AGRICULTURE FOOD SAFETY AND INSPECTION SERVICE MEAT AND POULTRY INSPECTION OPERATIONS	
IDENTIFICATION TAG-ANTE-MORTEM	
SLAUGHTER AT EST. NO.	
CONDEMNED OR SUSPECT TAG NO.	
KIND OF ANIMAL	SEX
TAGGED FOR	
TEMPERATURE	WEIGHT
REMARKS	
INSPECTOR	DATE
POST MORTEM REPORT	
FINDINGS	
DISPOSAL	
INSPECTOR	DATE
FSIS FORM 6150-1 (9/99)	REPLACES MP 402-2 9/83 WHICH MAY BE USED UNTIL EXHAUSTED