

Humane Handling Verification for Livestock and Good Commercial Practices for Poultry

Objectives

Upon completion of this module, you will be able to accomplish the following without the aid of references:

1. Name the two approved methods of slaughter in the Humane Methods of Slaughter Act (HMSA).
2. List the steps in performing the Livestock Humane Handling task in the Public Health Information System (PHIS).
3. List the Humane Activity Tracking System (HATS) categories and give one example of a requirement in each.
4. Given a specific scenario, be able to identify regulatory noncompliance, whether it is egregious, and what action to take, if any.
5. Describe the action an inspector should take when he/she observes a non-egregious incident of inhumane treatment resulting from:
 - a. Facility deficiencies, disrepair, or equipment breakdown
 - b. Establishment employee actions in handling livestock
 - c. Improper stunning
6. Define egregious noncompliance, give two examples, and describe the actions taken.
7. Name the documents completed for non-egregious and egregious noncompliances.
8. List the steps in performing the PHIS Good Commercial Practices (GCP) task.
9. Identify regulatory noncompliance with good commercial practices or mistreatment of birds and actions to take in each case.

References

1. 9 CFR 313: Humane Slaughter of Livestock
2. 9CFR 352.10: Exotic Animals; Voluntary Inspection
3. Humane Methods of Livestock Slaughter Act of 1978
4. Federal Meat Inspection Act Section 603
5. FSIS Directive 6900.2 "Humane Handling and Slaughter of Livestock"
6. FSIS Directive 6100.1 "Ante-Mortem Livestock Inspection"
7. FSIS Directive 6910.1 "District Veterinary Medical Specialist (DVMS) Work Methods"
8. FSIS Notice 76-11 "Disposition of Non-Ambulatory Disabled Cattle"
9. FSIS Notice 09-18 Requirements for the Disposition of Non-Ambulatory Disabled Veal Calves"

10. FSIS Notice 04-17 “Assessment and Verification Reviews of an Official Livestock establishment’s Robust Systematic Approach Plan for Humane Handling and Slaughter”
11. Federal Register Notice Docket No. 04-013N – A Systematic Approach to Humane Handling
12. Poultry Products Inspection Act Section 453(g)(5)
- 13.9 CFR 381.65 (b): Poultry Products Inspection Regulations
14. Federal Register Notice, Docket No. 04-037N, Treatment of Live Poultry Before Slaughter
15. FSIS Directive 6100.3 – “Ante-mortem and Post-mortem Poultry Inspection”
16. FSIS Directive 6110.1 – “Verification of Poultry Good Commercial Practices”
17. Humane Interactive Knowledge Scenarios (livestock and poultry) at: http://www.fsis.usda.gov/FSIS_Employees/HIKE_Scenarios/index.asp
18. AskFSIS
19. PHIS User Guide.

Livestock Humane Handling Verification

Introduction

The Humane Methods of Livestock Slaughter Act (HMSA) of 1978 is the current law requiring the humane slaughter of livestock. The 1978 Act made mandatory the humane slaughter and handling of livestock in connection with slaughter of all food animals slaughtered in USDA inspected establishments. This includes cattle, calves, horses, mules, sheep, goats, swine, and other livestock.

Two methods of slaughter are humane according to the HMSA. The first method requires that livestock be rendered insensible to pain on the first application of the stunning device before being shackled, hoisted, cast, or cut. This means that the animal must be unconscious and unable to feel pain before it is “stuck” (veins and arteries severed so it bleeds out) before it is shackled and hoisted into the air, or before it is dropped onto a table/floor.

The second method is in accordance with the ritual requirements of any religious faith that prescribes a method of slaughter where the animal suffers loss of consciousness by anemia of the brain caused by the simultaneous and instantaneous severance of the carotid arteries with a sharp instrument. This method is known as ritual slaughter. In ritual slaughter, the animal’s throat is cut from side to side with a sharp knife, deeply enough for the major arteries and veins to be severed. Examples of ritual slaughter include Jewish (Kosher) slaughter and Islamic (Halal) slaughter.

Additionally, Section 1906 of the HMSA exempts the handling or other preparation of ritually slaughtered livestock from the terms of the Act. This means that the statutory requirement that livestock be rendered insensible to pain prior to shackling, hoisting, casting, or cutting does not apply to the handling or restraint that is immediately associated with the ritual slaughter cut.

The regulations for humane slaughter are in the Title 9 Code of Federal Regulations (CFR) Part 313, titled *Humane Slaughter of Livestock*. Additional Agency guidance is detailed in the “References” section above. Inspection program personnel (IPP) will verify that establishments are meeting regulatory requirements by performing the Livestock Humane Handling task during every slaughter shift.

At this time, the HMSA of 1978 does not cover poultry. However, welfare practices for poultry are covered by the regulatory requirement for good commercial practices (GCP). The regulations for poultry good commercial practices are in 9 CFR Part 381. GCP for poultry will be discussed later in this material.

Performing the Livestock Humane Handling Task

Inspectors assigned to livestock slaughter will verify that establishments comply with the humane slaughter law and regulations.

Perform the Livestock Humane Handling task each shift that animals are slaughtered, or when animals are on site, even if it is during a processing only shift. PHIS will include the task in the Establishment Task List for all livestock slaughter operations. To perform the task:

- Schedule the task on the Task Calendar in PHIS.
- Initiate or claim the task in PHIS by selecting the component in the Inspection Results section of PHIS.
- Make observations based upon the appropriate HATS categories to determine if there is compliance with the regulatory requirements. HATS categories are covered in the following section.
- Record the task outcome in Inspection Results by selecting the verified regulations and checking the appropriate boxes. If noncompliance is found complete the Noncompliance Record (NR).
- Record the HATS time spent by category while performing humane verification in quarter hour increments.

When performing the task, make certain not to be predictable in how, where, and when observations are performed. Randomly select areas and times such that all areas are observed at different times of the day. In addition, vary the route taken to get to the areas being observed. The bottom line here is that establishment personnel should not be able to anticipate when IPP are going to be observing their humane handling and slaughter methods because they are always in about the same place at about the same time.

NOTE: In some establishments, more than one IPP may perform the Humane Verification task on any given day. In that case, one inspector will perform the routine task and the other IPP will perform a directed task. For example, a Consumer Safety Inspector (CSI) is the Inspector-in-Charge (IIC) at a small slaughter establishment and a Public Health Veterinarian (PHV) covers the establishment on a patrol basis. In that situation, the CSI may perform the routine humane verification task as part of their antemortem duties and the PHV may come later in the day and perform a directed task to verify stunning and consciousness.

HATS Categories

The HATS categories covered while performing the Humane Verification task include the following:

- I. Inclement Weather (9 CFR 313.1 and 313.2): Under this category, IPP record their verification of how the establishment adapts its facilities and handling practices to inclement weather to ensure the humane handling of animals. Some things to look for include:
 - Inclement weather (e.g., rain, heat, snow, ice) having adverse effects on facilities and animal handling;
 - Animals slipping or falling because of wet floors or because of a buildup of snow and ice;
 - Animals with no access to water when water buckets or troughs freeze over;
 - Livestock overheated because of a lack of proper shade or because of a lack of water for cooling;
 - Disabled livestock not in a covered pen protected from the elements.

- II. Truck Unloading (9 CFR 313.1 and 313.2): Under this category, IPP record their verification of the establishment's humane handling procedures during livestock unloading activities. Some things to look for include:
 - Facility conditions causing injury to animals;
 - Vehicles or ramps not be properly positioned, leading to the injury of animals;
 - Animals forced to move faster than a normal walking speed;

- Animals slipping and falling;
- Disabled or U.S. Suspect animals not be separated from normal ambulatory animals;
- Animals being prodded excessively or not driven with a minimum of excitement and discomfort.

III. Water and Feed Availability (9 CFR 313.2): Under this category, IPP record their verification of the establishment's compliance with 9 CFR 313.2(e), which requires that water be available to livestock in all holding pens, and that animals held longer than 24 hours have access to feed. Some things to look for include:

- Water not accessible to livestock in holding pens;
- Food not provided to livestock held for longer than 24 hours.

IV. Ante-mortem Inspection (9 CFR 313.1 and 313.2): Under this category, while IPP are conducting ante-mortem inspection, they are to record the time spent verifying the establishment's facilities and procedures for humanely handling animals during ante-mortem inspection. Some things to look for include:

- Livestock being excessively prodded with an electric prod;
- Livestock being injured because of handling practices;
- Livestock being moved faster than a normal walking speed.

V. Suspect and Disabled (9 CFR 313.1 and 313.2): Under this category, IPP record their verification of the measures that an establishment takes to ensure that "U.S. Suspect" and disabled livestock (9 CFR 313.2 (d)) are handled humanely. Some things to look for include:

- Conscious animals being dragged;
- Disabled animals not separated from normal ambulatory animals.

VI. Electric Prod/Alternative Object Use (9 CFR 313.2): Under this category, IPP record their verification of the establishment's procedures for humanely and effectively moving livestock without excessive prodding or the use of sharp objects after ante-mortem inspection has occurred (9 CFR 313.2). Some things to look for include:

- Livestock being excessively prodded resulting in overexcitement or injury;
- Livestock being driven with sharp objects or other means which cause pain or injury.

VII. Slips and Falls (9 CFR 313.1 and 313.2): Under this category, IPP record time spent observing whether any animals are slipping and falling as they are

handled and moved through the livestock facilities. Some things to look for include:

- Livestock slip and fall due to inadequate footing or improper handling practices;
- Livestock slip and fall because of lack of slip resistant flooring.

VIII. Stunning Effectiveness (9 CFR 313.5, 313.15, 313.16, and 313.30): Under this category, IPP record their verification of the establishment's procedures to appropriately and effectively administer stunning methods that produce unconsciousness in the animal before the animal is shackled, hoisted, thrown, cast, or stuck. Some things to look for include:

- Livestock not rendered unconscious with a single application of the stunning methodology;
- No records for carbon dioxide gas concentrations.

IX. Conscious Animals on the Rail (9 CFR 313.5, 313.15, 313.16, and 313.30): Under this category, IPP (usually a Public Health Veterinarian) record their verification that the establishment ensures that animals do not regain consciousness throughout shackling, sticking, and bleeding. This category focuses specifically on the time after stunning and throughout the process of shackling, hoisting, sticking and bleeding of the animal. Some things to look for include:

- Processing (e.g., shackle, hoist, cut) livestock not rendered unconscious by the method of stunning.
- Animals regain consciousness after being stunned.

Determining Which HATS Categories to Verify

When determining the HATS categories to verify, consider the following:

- Each time you perform ante-mortem inspection, you are to make verification observations as described above for HATS Category IV – “Ante-Mortem Inspection”.
- In addition to the daily verification of HATS Category IV, you are to verify one or more other HATS category during each slaughter shift unless you are in a very small establishment (See next section).
- Consider previous inspection results, historical observations, and supervisory direction. You may want to repeat some activities if a significant amount of time has passed between ante-mortem inspection and slaughter.

- It is important to focus on doing complete, quality verifications of each category.

If you are in a multi-IPPS assignment, conduct one or more HATS category verifications whenever you visit an establishment to perform AM and PM inspection disposition activities. Focus on verifying category VIII “Stunning Effectiveness” and category IX “Conscious Animals on the Rail”.

Recording Time in HATS

You are to accurately and completely record the time that you spend on the nine specific HATS categories.

- Record the total time spent verifying each HATS category, in quarter hour increments, rounding up to the next quarter hour.
- There should be an entry of at least one-quarter hour in HATS Category IV – “Ante-mortem Inspection” for every slaughter shift except in very small establishments (see below).
- In addition, verify one or more of the other HATS categories during each slaughter shift and ensure that, over time, all HATS categories are verified and the appropriate time recorded.
- During normal operations, the total maximum time entered across all HATS categories will generally not exceed the total operational hours for that respective shift.

At many very small establishments the total amount of inspection time spent on HATS procedures, including observations at ante-mortem inspection, may only total .25 hour. Therefore, because the minimum amount of time that can be recorded for any given HATS activity is .25 hour, the expectation that .25 hour be entered in HATS Category IV - "Ante-mortem Inspection" for each slaughter shift does not apply at those establishments. Instead, IPP would rotate through the appropriate HATS categories (i.e., those categories actually performed at a particular establishment including Ante-mortem Inspection) and record .25 hour per day in a different HATS category each slaughter day.

Very Small Establishment, Recording HATS Time Example: At Est. 38, which kills only a few animals a day, two or more humane handling HATS categories can be verified in .25 hour. When entering the HATS time, IPP will rotate through the appropriate HATS categories (i.e., those categories actually performed including Category IV: Ante-mortem Inspection) and record .25 hour per day in a different HATS category each slaughter day. In this manner, all HATS activities actually performed by IPP at the establishment are reflected over the course of several slaughter days. The HATS time for Est. 38 might look like this:

Monday – Category VIII Stunning Effectiveness .25 hr.
Tuesday – Category III Water and Feed Availability .25 hr.
Wednesday – Category VI – Electric Prod/Alternative Object Use .25 hr.
Thursday – Category IX – Conscious Animals on the Rail .25 hr.
Friday – Category VII – Slips and Falls .25 hr.

As explained above, Category IV - Ante-mortem Inspection is performed every day but is only recorded as .25 hour at some frequency in the rotation to best reflect actual time spent.

Specific Considerations for the Humane Handling Task

Truck Unloading (9 CFR 313.1, 313. 2)

Establishment personnel are required to meet the regulatory requirements for humane handling and slaughter from the time livestock arrive at the establishment until they are killed. This includes handling associated with livestock trailers. Once a vehicle has entered the official establishment premises, it is considered part of the premises and is subject to the FSIS regulations that ensure humane handling.

This is an important concept to understand because it means that your responsibility for verifying humane handling begins when the animals are coming onto the premises, not just once they reach the holding pens. If you observe a humane handling violation during truck unloading, you are to follow the same procedure as when a violation is observed elsewhere in the facility.

Truck unloading must be done in a manner that allows animals to be unloaded without injury. This includes proper positioning of the trucks, movement of animals while on the trucks, and the movement of animals off the trucks into the holding pens.

Twenty Eight Hour Law

The Animal and Plant Health Inspection Service (APHIS) Twenty-Eight Hour Law requires transporters to stop at least every 28 hours to provide animals with food, water and rest, and those who do not are in violation of this law. If livestock arriving on transport vehicles appear exhausted or dehydrated, IPP need to ask establishment management if the truck driver stopped within 28 hours to provide food, water, and rest to the livestock. IPP are to contact the APHIS Area Veterinary in Charge via their FSIS chain of command if establishment management or the truck driver is unwilling to supply that information, or if IPP believe the condition of the animals could be a result of being deprived of food, water, and rest for more than 28 hours. APHIS can use that information to conduct an investigation. IPP should also prepare a Memorandum of Interview (MOI) to document what was observed and all actions taken.

Conducting Ante-mortem Inspection on Vehicles

IPP can enter onto transport vehicles to conduct ante-mortem inspection if establishment employees cannot humanely remove disabled livestock from the vehicles. The decision to enter a transport vehicle to conduct ante-mortem inspection or to conduct ante-mortem inspection from outside the vehicle is to be made by each inspector individually and is voluntary. Inspection personnel may enter onto the transport vehicle or perform ante-mortem inspection from outside the transport vehicle if, in his or her professional opinion, he or she can safely and adequately conduct the ante-mortem inspection. No adverse or disciplinary action can or will be taken against any inspection program personnel choosing not to conduct ante-mortem inspection of disabled livestock on or from outside of a transport vehicle.

Livestock Pens, Driveways and Ramps (9 CFR 313.1, 313.2)

Personnel responsible for moving livestock must do so with a minimum of excitement and discomfort to the animals. The ramps, driveways, and the floors of pens must be constructed and maintained so that the livestock have good footing. There are many ways this can be accomplished, such as using metal mesh and grooves cut or impressed into the cement. Establishments also need to consider the impact that seasonal weather conditions may have on footing. For example, it may be necessary for the establishment to use sand or some other material on the floors during the winter to overcome slick conditions.

Livestock pens and driveways should be constructed so that animals are not driven around multiple sharp corners. Pens, driveways, and ramps must be maintained in good repair. They must be kept free from sharp or protruding objects that can cause injury. Loose boards, splintered or broken planks, broken pipe rails, broken unloading ramps, and unnecessary openings where the head, feet, or legs of an animal may be injured must be repaired. Pens, alleyways, or fencing in disrepair such that an animal may be injured as a result is considered a regulatory violation of humane practices.

When observing the facilities for compliance, remember to look at the off-loading ramps, inside the holding pens, at the back of solid gates, inside the single file chute, restraint device, and stunning box. You may have to wait until the animals are out of these areas before you can complete your verification activities.

Handling of Livestock (9 CFR 313.1, 313.2)

Livestock must not be driven faster than a normal walking speed. That is, the animals must not be forced by the handlers to move more quickly than their normal walking speed. If you see one or a group of animals running, you need to determine what is causing the animal to run before deciding if there is regulatory

noncompliance. The key here is whether human actions caused the animal to move faster than a walk.

The use of electric prods, canvas slappers, or any other type of implement must be minimized to prevent injury and excitement. The use of implements such as baseball bats, shovels, sharp prods, whips and the like, which in the opinion of the inspector can or will cause injury, are prohibited. Electric prods wired into AC current must not carry a charge higher than 50 volts.

Livestock must have access to water at all times while in holding pens. If they are held longer than 24 hours, they must also have access to feed. Agency policy is that feed must be of appropriate for the age and species of animal being fed. For example, feeding hay to bob veal calves held more than 24 hours would not meet the regulatory requirement for access to feed. If held overnight, they must have enough room in the holding pen to lie down.

Animals that are disabled, non-ambulatory, or designated as U.S. Suspects must be segregated into a separate pen. The pen has to protect these animals from adverse weather conditions until you make your ante-mortem disposition, because the weakened state of these animals renders them less resistant to even "normal" weather conditions. This means that you need to take into account the geographic location of the facility, the season, and the current weather conditions when determining if the covered pen meets regulatory requirements. It also means that the overall level of cover may change, based on the above factors.

The regulations strictly prohibit dragging a conscious animal that is disabled or unable to walk. Establishment personnel must either stun these non-ambulatory disabled animals before dragging them or move the animals by placing them on a skid, stone boat, bucket lift, or some other type of equipment that is suitable for moving a conscious disabled animal.

In response to concerns about humane handling of non-ambulatory cattle, FSIS issued FSIS Notice 76-11 "Disposition of Non-ambulatory Disabled Cattle" and FSIS Notice 09-18 "Requirements for the Disposition of Non-Ambulatory Disabled Veal Calves". These notices direct IPP to condemn all non-ambulatory cattle presented for ante-mortem inspection and verify that establishments promptly euthanize these animals.

Secondary Entrances

Some establishments may use secondary or alternative entrances, such as alleyways, doorways, or passageways, to move livestock into the facility. Secondary entrances are considered potential routes of movement to slaughter that differ from the route followed by the normal livestock population, which is ante-mortem inspected and passed livestock.

There are several concerns with using secondary or alternative pathways.

- First, IPP may not be aware that animals are being moved through these secondary pathways, so may not be able to determine whether the animal is eligible for slaughter. Examples of this include bringing in non-ambulatory disabled cattle, dead, or uninspected animals.
- Second, the nature of the entrance may lead to inhumane handling of the animal. For example, the entrance is so small that the animal may be hurt.
- Third, the equipment used, or lack of equipment, may lead to inhumane handling of the animal. For example, ramps may be slippery or missing altogether.

It is important to recognize that using alternative entrances is not prohibited. However, establishments using secondary or alternative entrances must ensure that livestock entering the establishment do so under conditions that meet all the relevant statutory and regulatory requirements. While performing HATS Category VII – Stunning Effectiveness verification, IPP are to look for evidence that animals are being moved through secondary entrances and verify that the situations described above are not occurring at the establishment.

If IPP find evidence that any of the situations described above are have occurred, they are to control the condemned livestock and take a regulatory control action by tagging the entrance to prevent its use. If IPP observe that livestock have been inhumanely handled because of the nature of the entrance or equipment used, they are to take a regulatory control action and document a noncompliance record in as specified in the “Enforcement” section later in this module.

Stunning (9 CFR 313.2, 313.5, 313.15, 313.16, 313.30)

To meet the statutory requirements in the HMSA, all animals must be rendered insensible to pain by a single blow or gunshot or an electrical, chemical or other means that is rapid and effective, before being shackled, hoisted, thrown, cast, or cut. This requirement includes cattle, calves, horses, mules, sheep, swine, and other livestock.

There are some general principles that apply to all stunning methods

1. Stunning equipment must be maintained in good repair. Equipment in poor repair can interfere with the rapid and effective application of the stunning blow. This can result in an incomplete or unsuccessful stun.
2. Effective stunning requires effective restraint. If an animal is not effectively restrained, it will be much more difficult to locate the stunning blow with a high degree of accuracy. The stunning area should be designed and constructed to limit the free movement of animals.

3. A well-trained and experienced establishment employee must operate stunning devices. The employee must be able to accurately and consistently position the stunning devices so that the animal is rendered immediately unconscious.
4. Animals need to be delivered to the stunning area with a minimum of excitement or discomfort. It is more difficult to place the stunning device accurately, and the method of stunning may not work as effectively, on an excited or injured animal.

With any stunning method, it is important to observe the amount of time it takes for the animal to begin bleeding out (“sticking”) after being stunned. Although there is no regulatory requirement for this time period, if the “stun to stick” interval is prolonged, it could result in animals regaining or beginning to regain sensibility on the bleed rail.

It is also important to perform humane verification at different times of the day. Equipment that may be working well in the morning can malfunction later in the day. Personnel get fatigued, may feel pressure to get a certain number of animals stunned by a particular time, or may be focusing on after work activities. Animals that have been standing around all day can get restless and more difficult to handle quietly and calmly. All these things can contribute to careless handling and/or stunning techniques, resulting in ineffective stuns.

The regulations describe four acceptable methods for producing a state of surgical anesthesia (surgical anesthesia is defined as a state where the animal feels no painful sensations). The four acceptable methods are:

- Chemical (Carbon Dioxide -CO₂)
- Mechanical (captive bolt)
- Mechanical (gunshot)
- Electrical (electrical current)

Carbon Dioxide (9 CFR 313.5)

Carbon dioxide gas (CO₂) is approved for rendering swine, sheep, and calves unconscious. A carbon dioxide gas chamber is designed on the principle that carbon dioxide is heavier than normal atmospheric air. The chamber is open at both ends for the entry and exit of the animals to anesthetizing CO₂ concentrations, or can be a pit structure where animals are lowered into the pit then brought out after inducing insensibility to pain. For swine only, CO₂ can be administered to induce death. Once anesthesia has occurred, the animals are removed from the chamber and are ready to be shackled, hoisted, or placed on a table for bleeding.

The gas must be administered in a way that produces surgical anesthesia quickly and calmly, with a minimum of excitement and discomfort to the animals. The establishment must maintain a uniform carbon dioxide concentration in the chamber so that the degree of anesthesia in exposed animals will be constant. The gas concentration and exposure time, also known as the dwell time, must be recorded graphically throughout each day's operation. All gas-producing and control equipment must be maintained in good repair and all indicators, instruments, and measuring devices must be available for inspection by FSIS.

Mechanical – Captive Bolt (9 CFR 313.15)

There are two types of mechanical captive bolt stunners—penetrating and non-penetrating—used to produce immediate unconsciousness in cattle, sheep, goats, swine, and equine. Both types have gun-type mechanisms that fire a bolt or shaft out of a muzzle. A measured charge of gunpowder (a blank cartridge) or accurately controlled compressed air propels the stunning bolt. A well-trained and experienced establishment employee must operate both types. The employee must be able to accurately and consistently position the stunning devices so that the bolt hits the skull at the right location to produce immediate unconsciousness. The employee must also be able to adjust the air pressure or detonation charge when the sex, the breed, or the size of the animal changes.

Some establishments have adopted a practice of “double knocking”—that is, the animals are stunned with two blows delivered in very rapid succession. The rationale behind this procedure is that the consequences of an animal regaining consciousness are so severe that establishment managers want to make certain that it will not happen. Therefore, there is a second blow as a “security stun” only. The important point to consider here is that to meet the statutory and regulatory requirements, the first stun must be effective at rendering the animal insensible to pain.

When fired, the bolt in the penetrating type of captive bolt stunner penetrates the skull and enters the brain. Unconsciousness is caused by physical brain damage, sudden changes in intracranial pressure, and concussion. Penetrating captive bolt devices powered by compressed air must have accurate, constantly operating air pressure gauges. The gauges must be easily read and conveniently located for inspection by FSIS. The brain from animals stunned with penetrating captive bolts may be saved for edible purposes provided the establishment removes the large blood clots, bone splinters, hair, and debris from the brain.

After a Bovine Spongiform Encephalopathy (BSE) positive cow was found in Washington State on December 2003, a number of policies were issued to protect the public health against BSE. One of these policies involved the prohibition of air-injection stunning of cattle. Air-injection stunning is a method of deliberately injecting compressed air into the cranial cavity as a part of the

stunning process. Therefore, 9 CFR 313.15(b)(2)(ii) states “*Captive bolt stunners that deliberately inject compressed air into the cranium at the end of the penetration cycle shall not be used to stun cattle.*” This is to ensure that portions of the brain are not translocated into the tissues of the carcass as a consequence of humanely stunning cattle during the slaughter process.

Many establishments will use the non-penetrating type captive bolt in order to avoid the time-consuming task of physically removing large blood clots, hair, bone, splinters, and debris from the brain. The non-penetrating (concussion) bolt is similar to the penetrating bolt except that it has a bolt with a flattened circular head (mushroom head). When fired, the mushroom head meets the skull, but does not penetrate the brain. The animal becomes insensible from acceleration concussion and sudden changes in intercranial pressure.

Accurate placement of the stunning blow is very important when using a non-penetrating captive bolt stunner. The amount of hair on the animal’s head will also have an impact on the effectiveness of the stunning blow. Because there is no physical destruction of the brain during non-penetrating stunning, close observation and rapid bleed-out is important post-stun to ensure the animal does not regain consciousness.

Mechanical – Gunshot (9 CFR 313.16)

Another type of mechanical device used for stunning is the firearm. It can be used on cattle, calves, sheep, goats, swine, and equine. The caliber of the firearm must be such that a single shot of a bullet or projectile into the animal must produce immediate unconsciousness. If a small-bore firearm is used, the regulations identify the following types of projectiles as acceptable:

- hollow pointed bullets
- frangible iron/plastic composition bullets
- powdered iron missiles

Remember that the standard is that every animal is rendered insensible to pain (unconscious) by a single gunshot, regardless of the type of projectile used.

Always consider your safety when observing stunning done with firearms. Ensure that you are out of the way of ricochet and standing away from the direction of fire.

Regardless of the type of projectile, a large percentage of the brain, cheek meat, and head trimmings may contain whole or fragmented bullets. Therefore, 310.18(b) of the Regulations states that after the head is inspected, the brains, cheek meat, and head trimmings may not be saved for human food. The only portion of the head that can be salvaged for human food is the tongue.

Electrical (9 CFR 313.30)

The final method approved for stunning animals is electric current. Electrical stunning is used for hogs, calves, sheep, and goats. While approved for use in cattle, this is not a common practice. It is most widely used for hogs. The animal is restrained so that the electric current can be applied with a minimum of excitement and discomfort. There are two types of electrical stunning, head only and cardiac arrest. Head only stunning induces a gran mal epileptic seizure, resulting in insensibility to pain. Cardiac arrest stunning will induce a gran mal epileptic seizure and cardiac fibrillation—essentially inducing a heart attack. This means that the head must be stunned first (or simultaneously with the heart) because to stun the chest first would cause pain not insensibility, which is a violation of the humane handling requirements.

The placement of the electrodes varies from establishment to establishment. It can be across the head only (head only stunning), on the head and thoracic region (cardiac arrest stunning), or across the head only then thoracic region only (two phase stunning). The design of the stunning wand can vary considerably (one or two pieces). Whichever way is used, the current passing through the animal must be enough to ensure surgical anesthesia throughout the bleeding operation. The operator must control the timing, voltage, and current so that each animal is properly stunned. If too much current is applied in the stunning process, hemorrhages or other tissue changes can occur that could interfere with the inspection procedure. Too high an electrical current can damage capillaries, resulting in multiple pinpoint hemorrhages in the muscle tissue. This is commonly referred to as "splashing" or "speckling". If this condition is seen on the postmortem disposition rail, it would be prudent to investigate the stunning process and discuss the findings with establishment managers.

To meet the statutory requirements, animals must be stunned prior to being shackled, hoisted, thrown, cast, or cut. With head only stunning the stun to bleed interval should not exceed 30 seconds. This is not a regulatory timeframe, but if the "stun to stick" interval is prolonged, it could result in animals regaining or beginning to regain sensibility on the bleed rail. In cardiac arrest stunning, the stun to stick interval is not as critical because the animal is much less likely to regain sensibility. However, some establishments have had problems with cardiac arrest stunned animals regaining consciousness and stunning effectiveness must be verified on a regular basis.

Ritual Slaughter (HMSA)

Slaughtering is permitted without a stunning device in accordance with ritual requirements. An example would be kosher slaughter. The animal is fully conscious when the stick or cut takes place. The cut is done by a Shochet (slaughterer) chosen from the community, trained in the laws of the orthodox

religion, and supervised by a rabbi in his area. The cut is made with a razor sharp knife called a Chalef that is honed after each cut.

In Halal slaughter, a person of the Islamic faith or a designee performs the ritual cut. A prayer to Allah is recited during the procedure. You may see a lot of variation in how Halal slaughter is done. Many religious authorities will accept stunning either before or after the ritual slaughter cut.

The ritual slaughter cut and the handling and restraint that immediately precedes that cut is often called the “ritual bubble”. The activities that occur within that “ritual bubble” fall under Section 1906 of the HMSA, and are protected as part of the Constitutional right of religious freedom. This does not mean that Agency personnel are to ignore completely what happens within the “ritual bubble”—what it means is that Agency personnel don’t enforce humane handling regulations within that “ritual bubble”. That said, if you see something during the “ritual bubble” that concerns you, contact your immediate supervisor and the District Veterinary Medical Specialist (DVMS) for guidance on what action can be initiated.

It is important to understand that ritual slaughter establishments are required to meet all the humane handling regulatory requirements except stunning prior to shackling, hoisting, throwing, cutting, or casting. All animals must be unconscious or insensible to pain prior to any dressing procedures such as head skinning, leg removal, ear removal, horn removal, or opening hide patterns.

When you perform your humane verification activities in a ritual slaughter situation, you will observe all HAT categories except stunning effectiveness. An exception to this is if stunning methods are an accepted part of that religious slaughter protocol. For example, you will verify the availability of water, check the condition of pens and ramps and that there is no excessive prodding in any part of the establishment when moving animals. You will also verify that after the ritual cut (and any additional cuts to facilitate bleeding) no dressing procedure (e.g. head skinning, leg removal, ear removal, horn removal, opening the hide) is performed until the animal is insensible to pain.

Assessing Unconsciousness (9 CFR 313.5, 313.15, 313.16, 313.30)

Livestock must remain insensible to pain (unconscious) from the time they are stunned until they are dead. You can use the following signs to verify that animals are insensible to pain (unconscious):

1. The head dangles from a flaccid (limp and flexible) neck. If the animals are suspended from an overhead rail, the head should hang straight down. This can be difficult to see if the animal is lying on its side.
2. The tongue may hang straight down and out of the mouth.

3. The eyelids should be wide open and the pupils fully dilated so, at a distance, the eyes appear black.
4. There is no vocalization—mooring, bellowing, baaing, or squealing.

You may observe movement of the head and neck. This movement can be because of involuntary reflexes caused by random firing of damaged muscle neurons. It can be associated with movement of equipment. It may also be voluntary movement because the animal is regaining consciousness.

Some of the signs that an animal might be returning to sensibility include:

1. Rhythmic breathing.
2. Eye reflex in response to touch. This sign is not used for electrically stunned animals. Also, be very aware of safety if using this method to check insensibility.
3. Spontaneous natural eye blinks without touching the eye or eye area.
4. Tense and moving tongue or lips.

These signs need to be carefully assessed and interpreted, as they are indications that the animal *may* be returning to consciousness or that the stunning was ineffective. They are not, in and of themselves, a definitive determination that the animal is conscious and able to feel pain.

A previously stunned animal that has regained sensibility (consciousness) may vocalize. It may also show a “righting reflex”. The term “righting reflex” is used to describe the physical actions taken by an animal to move itself into a normal lying, sitting or standing posture. For example, a conscious cow hanging from a bleed rail will show a contracted back, stiff extended neck and rigid extended forelegs as it tries to pull itself into a normal upright position. An animal lying flat on its side may try to lift its head, and may try to roll up onto its chest or stand. On occasion, you may see an animal’s neck flex laterally—that is, to one side — after it’s been stunned and hoisted. Do not mistake this sideways spasm for a “righting reflex”; make sure you look at the head to determine if the animal is unconscious. Vocalization and the righting reflex are always signs that the animal is conscious and able to feel pain.

When assessing unconsciousness, you need to observe the animals at different places along the bleed rail. For example, you could perform verification just after stunning when the animal is in the shackle pit. Then, you could observe animals after they have been hanging on the bleed rail for several minutes. Always be aware of your safety when performing verification of unconsciousness.

If you observe an animal regain consciousness after stunning, you must contact your supervisor immediately, and take the actions described in the “Enforcement” section below.

If the establishment participates in the Agriculture Marketing Service (AMS) National School Lunch Program (NSLP), determine whether the establishment is meeting the AMS Animal Welfare Requirements, including a review of all humane handling records generated in accordance with this program. If you have reason to believe that the establishment is not fully following its AMS NSLP humane handling obligations, notify your immediate supervisor and the DVMS.

If the establishment has an identified robust systematic approach, verify that the establishment is following its written animal handling program. If the establishment is not following its program, first discuss your observations with establishment management. Document the discussions on an MOI. If the establishment continues to ineffectively implement its written animal handling program, notify your immediate supervisor and the DVMS of your concerns by email.

Off-hour Verification Visits

Performing unannounced humane handling verification at a time when IPP are not on duty is another component of HATS. Contact your immediate supervisor and the District Veterinary Medical Specialist (DVMS) if you think you need to perform humane handling verification when there is no assigned tour of duty for inspection and services.

The IIC, in conjunction with the FLS and DVMS, determines how frequently IPP need to perform off-hour inspection to observe the livestock facilities and handling practices. This decision is based on establishment history or other observations, such as:

- A significant percentage of animals are unloaded outside normal hours of operation when Federal Inspectors are not on duty.
- Animals are frequently held over the weekend and automatic watering devices are not present in pens and/or that there is no access to food within 24 hours of their receipt at the facility.
- Animals delivered outside the regular tour of duties are found with injuries during ante-mortem inspection.
- Down or disabled animals are being delivered to the establishment outside the regular tour of duty when inspection program personnel (IPP) are not on duty.
- Phone calls have been received from eyewitnesses alleging inhumane handling practices during times when IPP are not on duty.

All time incurred in the performance of off-hour inspection will be paid as non-reimbursable overtime. Document your observations on FSIS Form 8100-1, and record time under the appropriate HATS category in the livestock humane handling task on the date for the next regularly scheduled inspection shift (slaughter or processing shift, whichever is first). If noncompliance is identified, write the NR on the date for the next regularly scheduled inspection shift.

Systematic Approach

There is no regulatory requirement for an establishment to use a systematic approach to humane handling and no requirement that such approach, if used, be in writing. However, an establishment may choose to develop and implement in a robust way a written animal handling program that effectively addresses the four aspects of a systematic approach that FSIS outlined in the 2004 Federal Register Notice. For a systematic approach to be considered “robust” it would have to be written. These four steps are:

1. Conduct an initial assessment of where, and under what circumstances, livestock may experience excitement, discomfort, or accidental injury while being handled in connection with slaughter, and of where, and under what circumstances, stunning problems may occur;
2. Design facilities and implement practices that will minimize excitement, discomfort, and accidental injury to livestock;
3. Evaluate periodically the handling methods the establishment employs to ensure that those methods minimize excitement, discomfort, or accidental injury and evaluate those stunning methods periodically to ensure that all livestock are rendered insensible to pain by a single blow; and
4. Respond to the evaluations, as appropriate, by addressing problems immediately and by improving those practices and modifying facilities when necessary to minimize excitement, discomfort, and accidental injury to livestock.

If the establishment has a robust systematic approach, FSIS will take that into consideration should it be necessary to determine how to proceed when an incident occurs that involves egregious inhumane treatment.

When establishment management states that it believes it has an animal handling program that equates to a robust systematic approach, you are to ask to review the program and any records generated during its implementation. As a part of performing your daily humane handling verification task, which includes observations for the Humane Activities Tracking System (HATS), observe the establishment employees handle and slaughter animals. Verify that establishment employees are following their animal handling program and are implementing effective corrective actions when appropriate.

Recognize that the establishment is not required to provide you access to a written humane handling program. However, without access to the written program, you will not be able to verify effective implementation of a humane handling program that the establishment considers as systematic. Because a documented systematic approach is not a regulatory requirement, failure to implement provisions of such a program is not a noncompliance unless such failure to implement results in an identifiable failure to meet specific regulatory requirements.

If an establishment claims to have implemented a robust systematic approach, but you observe that the establishment is not following the written animal handling program, first discuss your observations with establishment management and document this discussion on an MOI. If you continue to observe ineffective implementation of the animal handling program, notify the DO (DVMS) and your immediate supervisor of your concerns by email. This notification serves as documentation of your concerns.

Enforcement

The thought process that you should follow when performing the humane handling verification includes:

1. Is there noncompliance?
2. If so, is it egregious?
3. What action should be taken?

If you observe a humane handling noncompliance, you must take immediate action if animals are being harmed. For example, if you observe an employee driving livestock with an instrument (the edge of a shovel, a pointed metal prod) that can cause injury, you must stop that action from continuing.

Once that is done, your next step is to decide if the noncompliance is egregious or non-egregious because the actions you take will be dictated by that determination. An egregious humane handling violation is so serious that it warrants an immediate suspension of the assignment of inspectors under the authority of the Rules of Practice (9 CFR 500.3(b)).

Non-egregious Violations

When a noncompliance is observed, 9 CFR Part 313.50 specifies a progression of enforcement actions allowing for an escalating response by IPP when the establishment does not comply with the humane slaughter of livestock regulations.

- First, notify establishment managers of the humane handling noncompliance, if not already done when addressing the needs of the animal.
- Second, request that establishment managers immediately correct the situation and take the necessary steps to prevent recurrence.
- Third, document the noncompliance on a noncompliance report (NR).

If necessary, take a regulatory control action (RCA) to prevent further injury to the animal or to prevent injuries from occurring to other animals. You will also

take the appropriate regulatory control action if you do not receive an adequate response or corrective actions to the NR or if the noncompliance observed continues to occur. The appropriate regulatory control action depends on the nature of the noncompliance. Remember that the goals of applying a tag are to control the situation and prevent further injury or distress to animals.

- If the noncompliance is the result of facility deficiencies, disrepair, or equipment breakdown, but is not immediately causing injury or distress to livestock, attach a U.S. Retain/Reject tag to the noncompliant equipment/pen/etc. Noncompliance examples include holes in pen floors or fences that can trap/injure an animal's legs or feet.
- If the noncompliance is the result of establishment employee actions in the handling or moving of livestock and animals are being injured or treated inhumanely, attach the tag either at a point specific to the location and nature of the violation or to the alleyways leading to the stunning area. Noncompliance examples include animals driven faster than a normal walking speed or animals slipping and falling because of slick floors.

The tag will remain in place until the establishment operator implements appropriate immediate actions and measures to prevent recurrence. The tag shall not be removed by anyone other than an inspector. All livestock slaughtered prior to the tagging may be dressed, processed, or prepared under inspection.

Whenever a non-egregious violation of the humane slaughter requirements is observed, inspection personnel must document the incident on a NR and send a copy to the DVMS at the District Office. It is important that it clearly and specifically describe exactly what was observed, including any response by the animal (if the noncompliance involved animal discomfort or injury). Specify all the relevant regulations that pertain to the incident. At the top of Block 10 (where the noncompliance is described) on the NR, list the HATS category you were performing when you saw the noncompliance. If the noncompliance is covered by a second HATS category, note both categories on the NR.

If the establishment continues to have noncompliances or does not adequately correct previously documented noncompliances, the IIC is to communicate this to the FLS and DVMS. The IIC will work with the FLS and DVMS to determine if a Notice of Intended Enforcement (NOIE) should be issued for multiple noncompliances.

Egregious Violations

Under the Rules of Practice, 9 CFR 500.3(b), FSIS can suspend assignment of inspectors at an establishment without prior notification for humane handling violations. Humane handling violations for which immediate suspension is warranted are termed egregious.

So, what is an egregious violation? The Webster dictionary defines egregious as conspicuously bad or flagrant. The Agency defines it as any act or condition that results in severe harm to animals, for example:

1. making cuts on or skinning conscious animals,
2. excessive beating or prodding of ambulatory or non-ambulatory disabled animals or dragging of conscious animals,
3. driving animals off semi-trailers over a drop off without providing adequate unloading facilities (animals are falling to the ground),
4. running equipment over animals,
5. stunning of animals and then allowing them to regain consciousness,
6. multiple attempts, especially in the absence of immediate corrective measures, to stun an animal versus a single blow or shot that renders an animal immediately unconscious,
7. dismembering conscious animals, for example, cutting off ears or removing feet ,
8. leaving disabled livestock exposed to adverse climate conditions while awaiting disposition, or
9. otherwise causing unnecessary pain and suffering to animals, including situations on trucks.

This is a list of some actions that are considered egregious. Each incident of inhumane slaughter or handling needs to be assessed individually by IPP.

If you observe a violation that you believe is egregious, your next set of actions will depend on whether or not you are the IIC. If you are the IIC, place a U.S. Retain/Reject tag at the appropriate place and inform establishment managers that you are communicating with the FLS, District Office and DVMS to discuss the incident and recommend that a suspension without notification is imposed in accordance with 9 CFR 500.3(b).

If you are not the IIC, attach a U.S. Retain/Reject tag at the appropriate place, and inform establishment managers that you are taking a regulatory control action and that no more animals can be slaughtered until you contact the IIC. Whichever action is taken, all livestock slaughtered before the action may be dressed, processed, or prepared under inspection.

The IIC will immediately notify the FLS, District Office and the DVMS of the incident to discuss and recommend a suspension action. The exception to documenting an NR is if the violation is determined to be egregious.

The IIC will also document the facts that serve as the basis of the suspension action on a memorandum of interview (MOI) and promptly provide that information electronically to the DO and the DVMS for their use. The MOI will form the basis of the Notice of Suspension documented by the DVMS and DO staff and of the Administrative Enforcement Report.

Delayed Implementation – Egregious Violations

The IIC may also delay implementing the suspension action if immediate action is likely to result in inhumane treatment of additional animals until he/she can ensure that animals on-site or in-transit have been handled humanely. An example is a line stoppage that may result in animals having to stay on a truck during an extremely hot day. The IIC should encourage establishment management to redirect as many animals that are enroute as possible and to order the stoppage of further loading of animals onto trucks at the source location. The IIC needs to consider:

- What immediate corrective action the establishment is taking?
- How likely is it, given the establishment's history, that the corrective action will be effective in preventing a recurrence of the root cause of the situation?
- How many animals are on premises or enroute that will need to be slaughtered?
- What conditions threaten the welfare of the animals if they are not promptly slaughtered?

The IIC needs to let the district office know that the suspension action will be delayed. Also, a line inspector trained in humane handling must be moved to an appropriate area to directly observe establishment employees handling or slaughtering animals, which may require a line speed adjustment according to staffing standards in 9 CFR 310.1.

The IIC may allow slaughter to continue at a reduced line speed for a limited time on her or his own authority. This is not intended for a “kill-out” of animals at the facility; it is only for a “kill-down” to ensure that the number of animals to be held on-site meets the requirements for holding animals overnight. Contact your supervisor if you are concerned about allowing slaughter to continue at reduced line speeds.

When the IIC determines that animals will not be subjected to inhumane handling, the suspension must be promptly implemented. IICs are to document their observations and actions in an MOI and submit it to the district office.

Enforcement Discretion – Egregious Violations

When certain conditions are met, the IIC can recommend that the egregious act be subject to enforcement discretion and recommend issuance a Notice of Intended Enforcement (NOIE) rather than a notice of suspension. This would be when the establishment has met all of the following conditions:

- Does not have any recent humane handling related enforcement actions;

- Has consistently been meeting the humane handling regulatory requirements;
- Has been operating under a written animal handling program that establishment management has proffered as a robust systematic approach and made accessible to IPP; and
- Has demonstrated the robustness of the program to IPP by effectively and consistently implementing all aspects of its program.

The decision to recommend this enforcement action is based on the Rules of Practice regulation (9 CFR 500.3(b)) that states: “FSIS also *may* impose a suspension without providing the establishment prior notification because the establishment is handling or slaughtering animals inhumanely.” In determining whether the egregious act is an anomaly, and whether the establishment should be allowed to continue to operate, the IIC, FLS, DO, and DVMS are to consider:

- Whether the establishment is operating under an animal handling program that provides for how the establishment will respond if an unforeseeable event of this type occurs;
- Whether there is any basis for concern that the planned response in the establishment’s animal handling program will not effectively address the problem; and
- Whether the establishment has consistently and effectively implemented their animal handling program over time.

Exotic Species

Exotic animals (voluntary inspection) are covered under 9 CFR 352.10. This section includes regulations that address humane handling during ante-mortem inspection and stunning practices to render the animals unconscious. The regulation states, “Humane handling of an exotic animal during ante-mortem inspection shall be in accordance with the provisions contained in 9 CFR 313.2”. This covers unloading procedures, methods of moving exotics through the holding facility, handling of disabled animals, access to water and feed if held over 24 hours, and the effective application of stunning methods. 9 CFR Part 352.10(a)(5) states that “Stunning to render the animals unconscious shall be in accordance with 313.15 or 313.16.”, which are the stunning by captive bolt and by gunshot sections of the humane handling regulations

Livestock specified by 9 CFR 352 include antelope, bison, buffalo, catalo (cattalo), and deer. Additionally, exotic animals are defined by 9 CFR 352.1(k) as any reindeer, elk, deer, antelope, water buffalo or bison.

If you have questions or concerns about repetitive noncompliances violations with exotic animal humane handling and slaughter, contact the DVMS. Although we cannot take action under the Rules of Practice, 9 CFR 500.3(b), these issues can be effectively addressed. If IPP observe an egregious humane handling

noncompliance, they should immediately take a regulatory control action to prevent continued egregious humane handling and orally notify the establishment management that the district is being contacted. IPP will then work with the DVMS and District Office personnel to document the noncompliance in a MOI and District Office personnel may initiate a denial of service action.

Custom Exempt Operations

The FMIA (21 U.S.C. 610(b)) prohibits slaughter or handling of livestock in connection with slaughter in any manner not in accordance with 7 U.S.C. 1901-1906 (HMSA). This applies to all animals on the premises of a federally inspected establishment whether those animals are designated for slaughter under federal inspection or for slaughter under a Custom Exempt program.

When FSIS IPP are on-site performing assigned official duties related to regulated product, and there is concurrent handling and slaughter of livestock under a Custom Exempt program, Agency expectations are that if IPP observe inhumane handling or slaughter practices of custom exempt livestock, they are to take the following actions:

- Immediately notify establishment management of their observations and request that establishment management address the issue;
- Document their observations on an MOI;
- Provide a copy of the MOI by email to their immediate supervisor, and the DVMS or a DDM if the DVMS is not available.
- Provide a copy of the MOI (printed or electronic) to establishment management.

The district management team will take any further actions, consistent with the instructions found in FSIS Directive 5930.1, "Custom Exempt Review Process."

Poultry Good Commercial Practices (GCP) Verification

There is no humane handling statute requiring humane handling in poultry. However, there is a regulatory requirement that poultry are slaughtered using good commercial practices (GCP). This regulatory requirement will be verified while performing the Good Commercial Practice task.

In the PPIA Section 453(g)(5), a poultry product is adulterated if, among other circumstances, it is in whole, or in part, the product of any poultry which has died otherwise than by slaughter. The regulations require that poultry be slaughtered in accordance with good commercial practices, in a manner that will result in thorough bleeding of the poultry carcass and will ensure that breathing has stopped before scalding (9 CFR 381.65 (b)). Poultry that are still breathing on entering the scald die from drowning not from slaughter and are considered adulterated and unfit for human food. These cadavers are automatically condemned on postmortem inspection per 9 CFR 381.90.

On September 28, 2005, the Agency published a Federal Register Notice, Docket No. 04-037N, Treatment of Live Poultry Before Slaughter. In that FR Notice, humane handling terminology was used for the first time by the Agency when describing the live poultry being handled in a way consistent with good commercial practices. FSIS went on to describe a systematic approach for industry to use. The Agency defined a “systematic approach” as one in which establishments focus on treating poultry in such a manner as to minimize excitement, discomfort, and accidental injury the entire time that live poultry is held in connection with slaughter. Recognize that this approach is voluntary on the part of industry; also recognize that it signals a change by the Agency to a more assertive approach to the handling of live poultry.

FSIS Directive 6100.3, “Ante-Mortem and Post-Mortem Poultry Inspection” and FSIS Directive 6110.1 “Verification of Poultry Good Commercial Practices” provide guidance on performing GCP verification activities. Additional information is available in a Humane Interactive Knowledge Exchange—01-05—addressing the issue of humane handling of poultry. It discusses the observation of still breathing chickens entering the scald tank and identifies the enforcement actions that taken by IPP when noncompliance with regulatory requirements is observed.

GCP Verification Activities

IPP assigned to poultry slaughter facilities are expected on a daily, per shift basis when the establishment slaughters, to perform a poultry good commercial practice task.

To perform the task you will do the following:

- Schedule the task on your Task Calendar in PHIS.
- Initiate or claim the task in PHIS by selecting the component in the Inspection Results section of PHIS.
- Visit the receiving through pre-scald areas to systematically observe whether establishment employees are mistreating birds or handling them in a way that will cause death or injury or prevent thorough bleeding or result in excessive bruising.
- Record the task outcome in Inspection Results by selecting the verified regulations and checking the appropriate boxes. If noncompliance is found complete the Noncompliance Record (NR).

Some things to look for include:

- establishment employees breaking the bird's legs to hold them in the shackles
- birds frozen inside cages or frozen to the cages in cold weather
- birds dead from heat exhaustion—you would primarily see heavy panting in poultry suffering from heat stress.
- establishment employees driving over live birds with equipment or trucks in the unloading or live hang area

If the poultry are stunned prior to bleeding, check the stunning equipment to ensure it is functioning properly. Poultry that have been effectively stunned will have an arched neck and tucked-in wings posture.

Check in the bleeding area to determine if the bleeding equipment is functioning properly. One way that you might be alerted to problems with the bleeding equipment is if the line inspectors report increased number or clusters of cadavers at inspection stations or increased numbers of bruised wings or legs.

Once a week, IPP are to randomly select a day to review establishment records documenting adherence to good commercial practices. This review takes the place of observation in the receiving through pre-scald areas. Recognize that establishments are not required to maintain written or GCP records of good commercial practices. If records are not kept, IPP are to visit the receiving through pre-scald areas as above.

If such records are kept and made available, IPP are to review a sample of the records and assess whether there is evidence that the establishment is monitoring its GCPs in the receiving through pre-scald areas. An establishment may use video surveillance of live poultry handling areas and can offer this as a

form of record. IPP are also to determine if there is enough information in the records to judge that the establishment is following good commercial practices. If there is not enough information to make that judgment, IPP are to visit the receiving through pre-scald areas to verify compliance with the statute and regulations.

Enforcement

During poultry handling and slaughter, IPP are to document through NRs or MOIs, establishment failure to follow GCP. From a regulatory perspective, adherence to GCP is a process control issue and not a bird-by-bird performance standard issue.

If the establishment is not following good commercial practices, and birds are dying other than by slaughter, you are to document a noncompliance record citing 9 CFR 381.65(b), using the poultry good commercial practices task in PHIS. IPP are to write NRs for GCP noncompliance only when they can demonstrate that an establishment has lost process control and that there is an ongoing trend of bird dying otherwise than by slaughter.

Writing a GCP NR

1. IPP are to document loss of process control by the establishment, and thus not operating in accordance with GCPs, when there is repeated occurrence of birds:
 - a. Dying otherwise than by slaughter (repeatedly entering the scalding tank while still breathing); and
 - b. Not being appropriately bled out (as evidenced by equipment malfunction that results in increased numbers or clusters of cadavers being condemned); or
 - c. Being intentionally and repeatedly mistreated by establishment personnel

2. IPP should consider the following questions to determine if there has been a loss of process control:
 - a. What is the problem?
 - b. How long did the problem last?
 - c. How did the establishment react?
 - d. How did they correct the problem and did it reoccur?
 - e. What were the periods of control?

3. IPP are to document the noncompliance with 9 CFR 381.65(b) when the establishment is not following GCP. An isolated incident does not represent a loss of process control and should be documented in a mistreatment MOI, not an NR. IPP are not to quote the Humane Methods of Slaughter Act of 1978. Refer to attachments 1 and 2 of FSIS Directive

6110.1 for an example of an NR for 9 CFR 381.65(b) noncompliance in PHIS.

Poultry Mistreatment MOIs

Poultry MOIs are primarily issued when the establishment is mistreating birds up until the kill step, but the mistreatment event does not demonstrate that the establishment's process is out of control. The MOI documents the discussion between IPP and the establishment management about the poultry mistreatment event. In addition, you are to document the discussion and any planned actions on the part of the establishment in a MOI. Give a copy of the MOI to establishment managers, keep a copy in the inspection file, and send a copy to the DVMS.

1. IPP should document poultry mistreatment MOI when: for example,
 - a. Isolated instances of a bird still breathing when entering the scald
 - b. Unusually high number of injuries to birds such as broken legs, wings, but no evidence of intentional mistreatment
2. After observing poultry mistreatment, IPP should:
 - a. Notify the establishment immediately
 - b. Discuss the mistreatment after the event is resolved, and advise the establishment that preventing mistreatment decreases the production of adulterated carcasses.
 - c. Document the discussion, and any establishment's planned actions

DVMS

The DVMS will review the MOIs and GCP NRs and determine if additional action is warranted. The correlation includes review to determine accuracy and consistency of documentation. In specific situations, after review of mistreatment MOIs, the DVMS may need to notify appropriate state officials.

If you have questions or concerns about what you observe during poultry slaughter, contact the DVMS for guidance.

Hands-on Activity

The following hands-on section is intended to provide experience with the PHIS Livestock Humane Handling and Poultry Good Commercial Practices verification tasks.

For the hands-on activity, you will:

- Document a Livestock Humane Handling task (as Robert Allen)
- Document a Poultry Good Commercial Practices task (as Cindy Soundly)

Follow these steps along with the instructor.

- ▶ Open the laptop
- ▶ Log-onto laptop:
 - User Name: **FSIS_user**
 - Password: **FSIS**
- ▶ Double click the Start Internet Explorer icon
- ▶ PHIS Log-in
 - Select User: **Robert Allen (your #)**

Document Livestock Humane Handling

1. Click **Task Calendar** in navigation menu
2. Select Establishment: **Open Beef**
3. In **Task Name** filter by "**Livestock**", identify the appropriate Livestock Humane Handling task (Use the task for the appropriate start and end dates that contain today's date.)
4. Schedule a routine task for today (Schedule by clicking the **Add**_link in the "Routine" column.)
5. Scroll down to the **Task Calendar** section
6. Right click on **Livestock Humane Handling** task scheduled for today
7. Select **Document** to pull up Inspection Results
8. Click on the **Activity** tab and click in the **Review and Observation** radio button, then click the **Save** button
9. Click the **HATS** tab
10. Click in **Verified** boxes for the following:
 - Adequate Measures for Inclement Weather
 - Truck Unloading
 - Handling During Ante Mortem Inspection
 - Stunning Effectiveness
 - Check for Conscious Animals on the Rail
11. For each item enter **15 minutes**. Enter the time for each item by clicking on (Select) in the field under the Duration (Min/Hrs) column
12. Click **Save**

13. Click the **Regulations** tab, and click verified for 313.1, 313.2, 313.15(a)(1), 313.15(a)(3), 313.15(b)(1)(iii) and 313.15(b)(2)(i).
14. Check the **Inspection Completed** box then click **Save**
15. Click the **small X** to close the pop-up window and then **Sign out**

Document Poultry Good Commercial Practices

1. Log on as **Cindy Soundly (your #)**
2. Click **Task Calendar** in navigation menu
3. Select Establishment: **Novosibar**
4. In **Task Name** filter by "Poultry", identify the appropriate Poultry Good Commercial Practices task
5. Schedule one routine task for today
6. Scroll down, and right click on today's **Poultry Good Commercial Practices Task**
7. Select **Document**
8. Click on **Activity** tab, click **Review and Observation** radio button, then click the **Save** button
9. Click **Regulations** tab, and click the **Verified** box for 381.65(b)
10. Click the **Findings** tab

Note: When IPP find mistreatment of live poultry during the performance of the GCP task, they are to issue an MOI. Policy requires that the MOI be associated with the GCP task. **IPP do not use the left navigation menu to create the MOI.** IPP click the Findings tab on the Inspection Results page; check the Non-Regulatory Concerns box, click the save button, click the Create/Edit MOI button at the bottom of the Inspection Results page, and click the Add MOI link on MOI List page.

11. Check the **Inspection Completed** box, then click the **Save** button
12. **Sign out**

Workshop: Humane Handling Verification

1. Name the two approved methods of humane slaughter in the HMSA.

2. List the nine HATS categories.

3. Read the following situations and answer the questions.

A. Ice, snow, or mud buildup is causing cattle to slip and slide on the unloading chute. Two animals fall down but immediately rise and appear unharmed.

- Does this scenario represent noncompliance?
- If so, is it an egregious situation?
- What action should be taken by inspection personnel?

B. A sow goes down at the bottom of the truck unloading chute. Dozens of swine continue to exit the trailer for several minutes repeatedly stepping on and hitting the downed sow which vocalizes loudly in response.

- Does this scenario represent noncompliance?
- If so, is it an egregious situation?
- What action should be taken by inspection personnel?

- C. An electric battery operated prod is used only occasionally on balking swine at the conveyor-restrainer entrance. The prod is never used on the anus, eyes, ears, or other sensitive parts and is not used excessively on any of the animals.
- Does this scenario represent noncompliance?
 - If so, is it an egregious situation?
 - What action should be taken by inspection personnel?
- D. Inspectors at the cattle head inspection station notice that some heads have 2 or 3 “knock holes”. They notify offline IPP of the multiple knock holes. The offline inspector immediately proceeds to the stunning area and observes that establishment personnel consistently produce insensibility with one shot of the captive bolt gun. The establishment has a good history of properly stunning animals and sometimes the employee doing the knocking administers additional “security” knocks to ensure animals remain insensible.
- Does this scenario represent noncompliance?
 - Is it an egregious situation?
 - What action should be taken by inspection personnel?
- E. A head fork (or wand) placed behind the ears is used to electrically stun a market hog. The hog becomes stiff, goes down, and appears properly stunned. By the time it is hoisted on the line rhythmic breathing has returned, the eyes begin to blink normally, and the front feet begin paddling motions. A plant employee sticks the animal’s neck and it responds with vocalization, struggling, and trying to lift its head while looking around until it expires from blood loss about 30 seconds later.
- Does this scenario represent noncompliance?
 - If so, is it an egregious situation?
 - What action, if any, should be taken by inspection personnel?

Attachment 1

Overview of the Humane Handling and Slaughter Regulations (9 CFR 313)

A. Regulations related to livestock pens, driveways and ramps

9 CFR section 313.1 states:

(a) Livestock pens, driveways and ramps shall be maintained in good repair. They shall be free from sharp or protruding objects which may, in the opinion of the inspector, cause injury or pain to the animals. Loose boards, splintered or broken planking and unnecessary openings where the head, feet, or legs of an animal may be injured shall be repaired.

(b) Floors of livestock pens, ramps, and driveways shall be constructed and maintained so as to provide good footing for livestock. Slip resistant or waffled floor surfaces, cleated ramps and the use of sand, as appropriate, during winter months are examples of acceptable construction and maintenance.

(c) U.S. Suspects (as defined in 9 CFR 301.2(xxx)) and dying, diseased, and disabled livestock 9 CFR 301.2(y) shall be provided with a covered pen sufficient, in the opinion of the inspector, to protect them from the adverse climatic conditions of the locale while awaiting disposition by the inspector.

(d) Livestock pens and driveways shall be so arranged that sharp corners and direction reversal of driven animals are minimized.

B. Regulation related to handling of livestock

9 CFR section 313.2 states:

(a) Driving of livestock from the unloading ramps to the holding pens and from the holding pens to the stunning area shall be done with a minimum of excitement and discomfort to the animals. Livestock shall not be forced to move faster than a normal walking speed.

(b) Electric prods, canvas slappers, or other implements employed to drive animals shall be used as little as possible in order to minimize excitement and injury. Any use of such implements which, in the opinion of the inspector, is excessive, is prohibited. Electrical prods attached to AC house current shall be reduced by a transformer to the lowest effective voltage not to exceed 50 volts AC.

(c) Pipes, sharp or pointed objects, and other items which, in the opinion of the inspector, would cause injury or unnecessary pain to the animal shall not be used to drive livestock.

(d) Disabled livestock and other animals unable to move.

(1) Disabled animals and other animals unable to move shall be separated from normal ambulatory animals and placed in the covered pen provided for in section 313.1(c).

(2) The dragging of disabled animals and other animals unable to move, while conscious, is prohibited. Stunned animals may, however, be dragged.

(3) Disabled animals and other animals unable to move may be moved, while conscious, on equipment suitable for such purposes; e.g., stone boats. (e) Animals shall have access to water in all holding pens and, if held longer than 24 hours, access to feed.

There shall be sufficient room in the holding pen for animals held overnight to lie down.

(f) Stunning methods approved in section 313.30 shall be effectively applied to animals prior to their being shackled, hoisted, thrown, cast or cut.

C. General regulatory requirements related to approved stunning methods

Appropriate stunning methods are required for an establishment to be in compliance with the HMSA. When stunning is done correctly, animals feel no pain, are rendered instantly unconscious, and remain unconscious until slaughtered. There are four methods of stunning approved for livestock. A summary of these approved stunning methods appear below (refer to 9 CFR sections 313.5, 313.15, 313.16 and 313.30).

Chemical; carbon dioxide

Regulatory requirements for the use of carbon dioxide as a humane method of slaughter are specified in section 313.5 and include, among other things, the following:

- 1) Carbon dioxide gas may be used to slaughter and handle sheep, calves and swine.
- 2) The carbon dioxide gas shall be administered in a chamber so as to produce surgical anesthesia (a state where an animal feels no painful sensation) before the animal is shackled, hoisted, thrown, cast, or cut. Animals shall be exposed to the carbon dioxide gas in a way that will accomplish the anesthesia quickly and calmly.
- 3) Gas concentrations and exposure times shall be graphically recorded throughout each day's operation.
- 4) It is necessary that the operator be skilled, attentive, and aware of his or her responsibility.

Mechanical; captive bolt

Regulatory requirements for the use of captive bolt stunners as a humane method of slaughter are specified in section 313.15 and include, among other things, the following:

- 1) Captive bolt stunners may be used to slaughter and handle sheep, swine, goats, calves, cattle, horses, mules, and other equines.
- 2) The captive bolt stunners shall be applied to livestock so as to produce immediate unconsciousness in the animals before they are shackled, hoisted, thrown, cast, or cut.
- 3) The stunning operation is an exacting procedure and requires a well-trained and experienced operator who must use the correct detonating charge with regard to kind, breed, size, age, and sex of the animal to produce the desired results.
- 4) Stunning instruments must be maintained in good repair.

Mechanical; gunshot

Regulatory requirements for the use of gunshot as a humane method of slaughter are specified in section 313.16 and include, among other things, the following:

- 1) Shooting by firearms may be used to slaughter and handle cattle, calves, sheep, swine, goats, horses, mules, and other equines.
- 2) A single shot delivery of a bullet or projectile into the animal is to produce immediate unconsciousness in the animal before it is shackled, hoisted, thrown, cast or cut.
- 3) Firearms must be maintained in good repair.
- 4) The shooting operation is an exacting procedure and requires a well-trained and experienced operator who must be able to accurately direct the projectile to produce immediate unconsciousness.
- 5) The operator must use the correct caliber firearm, powder charge and type of ammunition to produce instant unconsciousness in the animal.

Electrical; stunning or slaughtering with electric current

Regulatory requirements for the use of electric current as a humane method of slaughter are specified in section 313.30 and include, among other things, the following:

- 1) Electric current may be used to slaughter swine, sheep, calves, cattle, and goats.
- 2) The animal shall be exposed to the electric current in a way that will accomplish surgical anesthesia (a state where an animal feels no painful sensation) quickly and effectively before they are shackled, hoisted, thrown, cast, or cut.
- 3) It is necessary that the operator of electric current application equipment be skilled, attentive, and aware of his or her responsibility.
- 4) Suitable timing, voltage and current control devices shall be used to ensure that each animal receives the necessary electrical charge to produce immediate unconsciousness.⁹

Enforcement

CFR 313.50 Tagging of equipment, alleyways, pens, or compartments to prevent inhumane slaughter or handling in connection with slaughter.

When an inspector observes an incident of inhumane slaughter or handling in connection with slaughter, he/she shall inform the establishment operator of the incident and request that the operator take the necessary steps to prevent a recurrence. If the establishment operator fails to take such action or fails to promptly provide the inspector with satisfactory assurances that such action will be taken, the inspector shall follow the procedures specified in paragraph (a), (b), or (c) of this section, as appropriate.

(a) If the cause of inhumane treatment is the result of facility deficiencies, disrepair, or equipment breakdown, the inspector shall attach a "U.S. Rejected" tag thereto. No equipment, alleyway, pen or compartment so tagged shall be used until made acceptable to the inspector. The tag shall not be removed by anyone other than an inspector. All livestock slaughtered prior to such tagging may be dressed, processed, or prepared under inspection.

(b) If the cause of inhumane treatment is the result of establishment employee actions in the handling or moving of livestock, the inspector shall attach a "U.S. Rejected" tag to the alleyways leading to the stunning area. After the tagging of the alleyway, no more livestock shall be moved to the stunning area until the inspector receives satisfactory assurances from the establishment operator that there will not be a recurrence. The tag shall not be removed by anyone other than an inspector. All livestock slaughtered prior to the tagging may be dressed, processed, or prepared under inspection.

(c) If the cause of inhumane treatment is the result of improper stunning, the inspector shall attach a "U.S. Rejected" tag to the stunning area. Stunning procedures shall not be resumed until the inspector receives satisfactory assurances from the establishment operator that there will not be a recurrence. The tag shall not be removed by anyone other than an inspector. All livestock slaughtered prior to such tagging may be dressed, processed, or prepared under inspection.