GUIDANCE FOR WRITTEN LIVESTOCK HUMANE HANDLING PLAN

The written humane handling plan should detail how your establishment intends to comply with the Humane Methods of Slaughter Act, the Federal Meat Inspection Act, the Vermont Statutes, and regulations to ensure humane handling.

An establishment should take a robust systematic approach to humane handling, with a focus on treating livestock in such a manner as to minimize excitement, discomfort, and accidental injury the entire time they hold livestock in connection with slaughter.

This guidance is largely based on **FSIS Compliance Guide for a Systematic Approach to the Humane Handling of Livestock**. **State of Vermont Statutes** require all Commercial slaughter facilities in the state (federal and state-inspected) to have a written plan of how management will ensure humane handling in their establishment. Therefore, the following document is intended to assist in the development and implementation of a systematic approach to humane handling, and then to assist in the creation of a written robust systematic humane handling and slaughter plan.

Overview of Humane Handling and Slaughter of Livestock

Humane handling and slaughter of livestock prevents needless suffering; results in safer and better working conditions within the slaughtering industry; improves products and slaughtering operations; and produces other benefits for producers, processors, and consumers.

Humane handling requirements involve handling facilities and equipment, personnel practices, and slaughter equipment.
Handling facilities and equipment are addressed in 9 CFR 313.1.
Personnel practices are addressed in 9 CFR 313.2.
Slaughter equipment is addressed in 9 CFR 313.5, 9 CFR 313.15, 9 CFR 313.16, and 9 CFR 313.30.
The text of these regulations are also contained in Attachment 2

Verification of Establishment Humane Handling Activities

State veterinarians and other trained Inspection Program Personnel (IPP) perform humane handling verification activities when establishments slaughter animals, or when animals are on inspected premises. To verify compliance with state and federal humane handling statutes and regulations, IPP make verification observations during their inspection duties. IPP record the time spent performing verification activities in the Humane Activities Tracking System (HATS). The nine HATS categories (see text box) address all of the regulations covering the humane handling and slaughter of livestock.
IPP verify specific facility, handling, or slaughter requirements for each of the categories.

Table 1 identifies each HATS category and the verification activities IPP perform.

WHAT ARE THE HATS CATEGORIES?
I. Inclement Weather
II. Truck Unloading
III. Water and Feed Availability
IV. Ante-mortem Inspection
V. Suspect and Disabled
VI. Electric Prod/Alternative Object Use
VII. Slips and Falls
VIII. Stunning Effectiveness
IX. Conscious Animals on the Rail

Table 1

Category	IPP Verification	Regulations
I. **Inclement Weather**	Verify how the establishment adapts its facilities and holding practices to inclement weather to ensure the humane handling of animals.	9 CFR 313.1 and 313.2
II. Truck Unloading	Verify that the establishment's livestock handling facilities are in proper repair during livestock unloading activities.	9 CFR 313.1 and 313.2
III.**Water and Feed Availability**	Verify the accessibility of water and feed to livestock.	9 CFR 313.2
IV.**Ante-mortem Inspection**	Verify the establishment's procedures for humanely handling livestock during ante-mortem inspection of livestock.	9 CFR 313.1 and 313.2
V. **Suspect and Disabled**	Verify that the establishment handles US Suspect and disabled livestock humanely.	9 CFR 313.1 and 313.2
VI.**Electric Prod, Alternative Object Use**	Verify that the establishment humanely and effectively moves livestock without excessive prodding or the use of sharp objects.	9 CFR 313.2
VII. **Slips and Falls**	Verify that the establishment prevents livestock from slipping and falling due to inadequate footing or improper handling practices.	CFR 313.1 and 313.2
VIII. **Stunning Effectiveness**	Verify the establishment's procedures to appropriately and effectively administer stunning methods that are rapid and effective and that produce unconsciousness in the animals before the animal is shackled, hoisted, thrown, cast, or stuck.	9 CFR 313.5, 313.15, 313.16, and 313.30
IX. **Conscious Animals on the Rail**	Verify, after stunning, that livestock remain unconscious before and after they are shackled, hoisted, thrown, cast, or stuck.	9 CFR 313.5, 313.15, 313.16, and 313.30

Creating a Written Robust Systematic Humane Handling and Slaughter Plan

A **systematic approach** to humane handling and slaughter takes the regulatory requirements in 9 CFR Part 313 and organizes them into a logical approach, marked by attention to detail, regular implementation, and tailoring to the operation of the establishment. Developing a systematic approach to humane handling and slaughter is the first step in ensuring that the establishment complies with the applicable humane handling and slaughter requirements.

The following four elements represent a systematic approach to humane handling and slaughter of livestock.

Under a SYSTEMATIC APPROACH TO HUMANE HANDLING AND SLAUGHTER, establishments should:

1. Assess the ability of their livestock handling and slaughter practices to minimize distress and injury to livestock.
2. Design facilities and implement handling practices that minimize distress and injury to livestock.
3. Periodically evaluate facilities and handling methods to ensure that they continue to minimize distress and injury to livestock.
4. When necessary, modify facilities and handling methods to ensure that they continue to minimize distress and injury to livestock.

Step 1: Conduct an assessment

Assessing an establishment's entire humane handling and slaughter infrastructure is the first step in gaining an understanding of the strengths and weaknesses, and if there is potential of any component to result in inhumane handling or slaughter of livestock.

The Code of Federal Regulations 9 CFR Part 313, (Attachment 1) describes three general categories of infrastructure:

1) livestock facilities,
2) personnel practices, and
3) slaughter equipment.

1) **Livestock facilities** include the following components:

- Vehicles and trailers used to transport livestock.

- Facilities and equipment through which livestock pass as they move from transport vehicles or trailers to holding facilities, between holding facilities, and from holding facilities to restraining devices.

- Facilities used to hold livestock temporarily.

- Facilities and equipment used to restrict livestock movement during slaughter.

2) **Personnel practices** address the knowledge, skills, and abilities of any person handling livestock on the official premise.

3) **Slaughter equipment** includes the equipment used to render livestock insensible to pain and induce death. The Humane Methods of Slaughter Act describes two methods of slaughter found to be humane.

- Render insensible to pain by a single blow or gunshot or by electrical stunning, chemical exposure or other means.

- Slaughter in accordance with the ritual requirements of a religious faith.

To facilitate an assessment, an establishment can use the sample assessment tool for humane handling and slaughter in **Attachment 1** of this document that FSIS has provided. The tool contains all humane handling requirements as statements. The assessor decides if each statement is true, false, or does not apply to the establishment. The assessor should check "True" if the item was assessed and the statement is True. The assessor should check "False" if the item was assessed and the statement is False (and therefore has the potential to result in inhumane handling or slaughter of livestock). A copy of this assessment tool should be kept as part of the written humane handling plan.

Step 2: Create a robust written plan

After assessment, developing a written plan is the next step.

The following are elements that are important to be addressed in a written plan:

1) A description of your business
2) A dated and signed copy of the initial assessment conducted, (can be a copy of the sample assessment tool if used)
3) Animal Handling plan with written procedures that include:
    a) Description of procedures that the establishment will implement to stay in compliance with the regulations, from off-loading through stunning. **Attachment 2** has each of the regulations listed with questions in **BOLD** to help write out what is done at each step in the process. An establishment could choose to answer the bolded questions, and/or rewrite the bolded questions as statements, as the "handling plan" part of their robust written plan.
    b) Description of how the establishment will address anything that received a "False" on the sample assessment (if any)

4) Written Records
   See Step 3 Below

Step 3: Create a recordkeeping system

Although a recordkeeping system of implementation is not required for a written humane handling to satisfy the State of Vermont's written plan, a recordkeeping system does promote accuracy and provides for accountability.

Establishments may consider the following elements important features of a record keeping system:

1) Monitoring Procedures and Frequencies that demonstrate that the program is implemented as written.
2) Describes actions the establishment will take when it fails to implement the program as written or fails to prevent a noncompliance.

Attachment 2: Sample Assessment Tool for Humane Handling and Slaughter

The sample assessment tool is a starting point. Not all of the parameters listed will apply to all establishments. Some establishments may have additional parameters.

Sample Assessment Tool for Humane Handling and Slaughter Check "True" if the item does not have the potential to result in inhumane handling and/or slaughter of livestock Check "False" if the item has the potential to result in inhumane handling and/or slaughter of livestock Check "N/A" if the item does not apply to the establishment			
FACILITIES	**True**	**False**	**N/A**
TRANSPORTATION OF LIVESTOCK: TRANSPORT VEHICLES			
Transport vehicles are free from protruding objects.			
Transport vehicles are free from sharp metal of any kind.			
Transport vehicles are free from loose boards.			
Transport vehicles are free from splintered planking.			
Transport vehicles are free from broken planking.			
Transport vehicles are free from openings that can trap livestock's head.			
Transport vehicles are free from openings that can trap livestock's feet.			
Transport vehicles are free from openings that can trap livestock's legs.			
Transport vehicles provide good footing.			
FACILITY RAMPS			
Ramps[8] are in good repair.			
Ramps are free from protruding objects.			
Ramps are free from sharp metal of any kind.			
Ramps are free from loose boards.			
Ramps are free from splintered planking.			
Ramps are free from broken planking.			
Ramps are free from openings that can trap livestock's head.			
Ramps are free from openings that can trap livestock's feet.			
Ramps are free from openings that can trap livestock's legs.			
Ramps provide good footing.			
Ramps arranged to minimize sharp corners.			
Ramps arranged to minimize direction reversal of driven animals.			
FACILITY DRIVEWAYS			
Driveways[9] are in good repair.			
Driveways are free from protruding objects.			
Driveways are free from sharp metal of any kind.			
Driveways are free from loose boards.			
Driveways are free from splintered planking.			
Driveways are free from broken planking.			
Driveways are free from openings that can trap livestock's head.			
Driveways are free from openings that can trap livestock's feet.			
Driveways are free from openings that can trap livestock's legs.			
Driveways provide good footing.			
Driveways arranged to minimize sharp corners.			
Driveways arranged to minimize direction reversal of driven animals.			

[8] The term "ramp" in 9 CFR 313, describes any facility used to transfer livestock from transport vehicles to ground level. Ramps can be fixed structures or mobile equipment.

[9] The terms "driveway," "alley," and "pathway" in 9 CFR 313 are synonymous. They describe a facility used to move livestock from transport vehicles to holding pens, between holding pens, and from holding pens to restraining devices. The livestock industry routinely uses other terms to describe these facilities.

FACILITY HOLDING PENS			
Holding pens[10] are in good repair.			
Holding pens are free from protruding objects.			
Holding pens are free from sharp metal of any kind.			
Holding pens are free from loose boards.			
Holding pens are free from splintered planking.			
Holding pens are free from broken planking.			
Holding pens are free from openings that can trap livestock's head.			
Holding pens are free from openings that can trap livestock's feet.			
Holding pens are free from openings that can trap livestock's legs.			
Holding pens provide good footing.			
Holding pens arranged to minimize sharp corners.			
Holding pens arranged to minimize direction reversal of driven animals.			
Covered holding pens provided for US Suspects.			
FACILITY GATES			
Gates[11] are in good repair.			
Gates are free from protruding objects.			
Gates are free from sharp metal of any kind			
Gates are free from loose boards.			
Gates are free from splintered planking.			
Gates are free from broken planking.			
Gates are free from unnecessary openings that can trap livestock's head.			
Gates are free from unnecessary openings that can trap livestock's feet.			
Gates are free from unnecessary openings that can trap livestock's legs.			
FACILITY RESTRAINING DEVICES			
Restraining devices[12] are in good repair.			
Restraining devices are free from sharp objects.			
Restraining devices are free from protruding sharp metal of any kind.			
Restraining devices are free from protruding objects.			
Restraining devices are free from exposed bolt ends.			
Restraining devices are free from loose boards.			
Restraining devices are free from splintered planking.			
Restraining devices are free from broken planking.			
Restraining devices are free from exposed wheels.			
Restraining devices are free from exposed gears.			
Restraining devices are free from openings that can trap livestock's head.			
Restraining devices are free from openings that can trap livestock's feet.			
Restraining devices are free from openings that can trap livestock's legs.			
Restraining devices comfortably accommodate the livestock restrained.			

OTHER DEVICES			
Use of Video or Other Electronic Monitoring or Recording Equipment			

[10] The term "holding pen" describes a facility used to hold livestock temporarily. Livestock enter and exit holding pens from driveways.
[11] The term "gates" means devices designed to mechanically move or drive livestock, and devices designed to keep livestock in motion or compartmentalized. "Gates" describe devices used to limit the movement of one or more livestock. Gates can be manual or mechanical. They can move horizontally, vertically, or pivot on a central axis. The livestock industry routinely uses other terms to describe these devices.
[12] The terms "restraining device," "restraining mechanism," "chute," "stunning area," and "compartment" in 9 CFR 313 are synonymous. They describe a facility used to restrict livestock movement during stunning. The livestock industry routinely uses other terms to describe these facilities.

Personnel Practices	True	False	N/A
Personnel minimize excitement of livestock during movement.			
Personnel minimize excitement of livestock when using electric prods.			
Personnel minimize excitement of livestock when using canvas slappers.			
Personnel minimize excitement of livestock when using other equipment.			
Personnel minimize excitement when using stunning equipment.			
Personnel are trained and the training is documented and reviewed periodically			
Personnel minimize discomfort of livestock during movement.			
Personnel minimize discomfort of livestock when using electric prods.			
Personnel minimize discomfort of livestock when using canvas slappers.			
Personnel minimize discomfort of livestock when using other equipment.			
Personnel minimize discomfort when using stunning equipment.			
Personnel prevent injury of livestock during movement.			
Personnel prevent injury of livestock when using electric prods.			
Personnel prevent injury of livestock when using canvas slappers.			
Personnel prevent injury of livestock when using other equipment.			
Personnel prevent injury when using stunning equipment.			
Personnel move livestock at a normal walking speed.			
Personnel provide livestock in holding pens with access to water.			
Personnel provide livestock held longer than 24 hours with access to feed.			
Personnel provide livestock held overnight with sufficient room to lie down.			
Personnel separate non-ambulatory disabled livestock from normal animals.			
Personnel set electrical prods to lowest effective voltage, not to exceed 50 V AC.			
Personnel do not drag conscious livestock.			
Personnel do not use pipes to drive livestock.			
Personnel do not use sharp objects to drive livestock.			
Personnel do not use pointed objects to drive livestock.			
Personnel are knowledgeable and effective in humane handling methods			
Personnel are knowledgeable and effective in humane slaughter methods			
Personnel transporting livestock comply with 28 Hour Rule			

Stunning (General)	True	False	N/A
Livestock restraint allows the stunner operator to stun accurately.			
Stunning equipment designed for livestock slaughtered.			
Single application of stunning method renders livestock insensible to pain[13].			
Livestock are insensible to pain immediately after stunning method applied.			
Livestock are unconscious and insensible to pain before shackling.			
Livestock are unconscious and insensible to pain before hoisting.			
Livestock are unconscious and insensible to pain before throwing.			
Livestock are unconscious and insensible to pain before casting.			
Livestock are unconscious and insensible to pain before cutting.			
Livestock remain unconscious and insensible to pain throughout shackling.			
Livestock remain unconscious and insensible to pain throughout hoisting.			
Livestock remain unconscious and insensible to pain throughout throwing.			
Livestock remain unconscious and insensible to pain throughout casting.			

[13] The term “insensible to pain” is synonymous with surgical anesthesia and unconsciousness.

Livestock remain unconscious and insensible to pain throughout cutting.			
Livestock remain unconscious and insensible to pain throughout bleeding.			
Stunning equipment operator is skilled.			
Stunning equipment operator is attentive.			
Stunning equipment operator is aware of their responsibility.			
Stunning equipment operator is trained.			
Stunning equipment operator is experienced.			
Stunning (Carbon Dioxide)	**True**	**False**	**N/A**
Carbon dioxide does not induce death in calves and sheep.			
Only sheep, calves and swine are slaughtered with carbon dioxide.			
All carbon dioxide delivery devices are in good repair.			
Concentration of carbon dioxide gas delivered is uniform.			
Rate of carbon dioxide gas delivery is sufficient.			
Rate of carbon dioxide gas delivery is uniform.			
Mixing of carbon dioxide gas and air within the chamber is adequate.			
Carbon dioxide gas delivered is free from noxious or irritating gases.			
Atmospheric air delivered is free from noxious or irritating gases.			
All carbon dioxide monitoring devices are in good repair.			
Sampling of carbon dioxide gas within the chamber is continuous.			
Samples of carbon dioxide gas collected are representative from within the chamber.			
Monitoring of carbon dioxide gas concentration within the chamber is continuous.			
Recordings of carbon dioxide gas concentration are graphical.			
Monitoring of carbon dioxide gas exposure time within the chamber is continuous.			
Recordings of carbon dioxide gas exposure time are graphical.			
All carbon dioxide delivery and recording devices are available for inspection by FSIS.			
An exhaust system prevents non-uniform carbon dioxide concentrations in chamber.			
An exhaust system prevents carbon dioxide contamination of the ambient air.			

Stunning (Captive Bolt)	**True**	**False**	**N/A**
Captive bolt stunners that inject compressed air into the cranium not used to stun cattle.			
Captive bolt stunning equipment is in good repair.			
Compressed air delivered at constant pressure.			
Air pressure monitoring devices are accurate.			
Air pressure monitoring devices operate constantly.			
Air pressure monitoring devices are easy to read.			
Air pressure gauges are conveniently located.			
Captive bolt stunning equipment equipped with safety features.			
Operator accurately directs the captive bolt to produce immediate unconsciousness.			
Operator selects appropriate captive bolt stunner for size of livestock.			
Stunning (Gunshot)	**True**	**False**	**N/A**
Firearms maintained in good repair.			
Operator uses hollow pointed or frangible iron plastic composition bullets; powdered iron missiles			
Operator accurately directs the bullet to produce immediate unconsciousness.			
Operator selects appropriate caliber bullet for size of livestock.			
Stunning (Electrical)	**True**	**False**	**N/A**
Suitable timing, voltage and current control devices are used.			
Electrical stunning equipment is in good repair.			
Duration, voltage, and current monitoring devices are accurate.			

Duration, voltage, and current monitoring devices are easy to read.			
Duration, voltage, and current monitoring devices are conveniently located.			
Duration, voltage, and current monitoring devices are available for FSIS inspection.			
Operator selects appropriate electrical stunner settings for size of livestock.			
Operator accurately places the electrical stunner to produce immediate unconsciousness.			
Ritual Slaughter	**True**	**False**	**N/A**
Ritual slaughter performed by the religious authority (or duly-appointed designee)			
Ritual slaughter performed in accordance with standard set by the religious authority.			
No additional dressing cuts are made until livestock are insensible to pain.			

ATTACHMENT 2

The following document lists the current state and federal regulations, followed by questions in **BOLD,** to help you think about what you actually do in your establishment to comply with the regulations. Although there is not a required format for the writing of the plan, an establishment could choose to answer the bolded questions, and/or rewrite the bolded questions as statements, as the "handling plan" part of their robust written plan. It should be comprehensive and at the minimum address each of the following regulations:

9 CFR 313.1: Livestock pens, driveways, ramps:

(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.

Do you maintain the pens, driveways and ramps so that they remain in good repair and free from sharp or protruding objects?

(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.

Are the floors constructed and maintained to assume good footing for animals? List any slip resistant surfaces you have in place, and describe what you do in special circumstances (such as icy or muddy conditions) to ensure slip resistance.

(c) U.S. Suspects (as defined in §301.2(xxx)) and dying, diseased, and disabled livestock (as defined in §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.

Where is your covered pen for disabled or suspect animals located?
Describe the protection it offers from bad weather and how it separates them from the other animals that are able to walk.

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

Describe the set up or design of your establishment and how animals move from offloading to the pens. Does this setup minimize direction reversal (turning around) of animals when being moved?

9 CFR 313.2: Handling of Livestock

(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.

Describe how you move animals. Are they are driven at a walking speed with minimum excitement?

What direction or oversight is given to non-employees (truck drivers, farmers, animal owners, etc.) on humane handling of livestock when they help with the offloading of animals? For examples, are they told verbally of your requirements, are they given a handout, are they not allowed to help with offloading at all?

(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.

Describe the implements or objects do you use to drive animals.

How do you assure they are used properly to minimize excitement, and that they do not cause injury or pain when used?

(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 §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.

<u>The dragging of disabled conscious animals is prohibited</u>.

1) **What is your protocol for animals that arrive to the establishment on a vehicle and that are unable to rise or walk?**
2) **How do you handle animals that are unable to move or get up once they are in your establishment?**
3) **If you use equipment for moving conscious downed animals, what kind of equipment do you use?**
4) **If you choose to stun these downers that cannot get up, where in your establishment do you do this? Do you then bleed them at that spot, or do you use appropriate equipment to move them somewhere else to bleed? How long is it typically between the time you stun them to the time you bleed them?**

(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.

Describe how animals have access to water at all times in holding pens.
Describe how animals that are held on a transport truck waiting to be offloaded have access to water?
Do you hold animals overnight? If so, describe the room they are given to lie down?
Do you hold animals greater than 24 hours? If so, describe their access to food.

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

Methods of Stunning

6 Vermont Statutes Annotated, Chapter 201 § 3132. Prohibition:
No slaughterer, packer or stockyard operator may bleed or slaughter livestock except by a humane method. The use of a manually operated hammer, sledge, poleax or similar instrument is not a humane method within the meaning of this chapter.
"Humane method" means either:
(A) A method whereby the animal is rendered insensible to pain by mechanical, electrical, chemical or other means that is rapid and effective before being shackled, hoisted, thrown, cast or cut.
(B) A method in accordance with ritual requirements of the Jewish faith or any other religious faith whereby 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.

What method(s) do you use to effectively stun animals before shackling, hoisting, throwing, casting or cutting the animal?

For Mechanical: Captive Bolt, proceed to page 15.
For Mechanical: Gunshot, proceed to page 18.

9 CFR 313.5: Chemical: Carbon Dioxide

- Approved for swine, sheep and calves only
- Please contact the VT Agency of Agriculture if you are planning to use Chemical stunning methods for a listing of the applicable regulations

9 CFR 313.30: Electrical: stunning or slaughtering with electric current

- Approved for swine, sheep, calves, cattle, and goats only
- Please contact the VT Agency of Agriculture if you are planning to use Electrical stunning methods for a listing of the applicable regulations

9 CFR 313.15: Mechanical: Captive bolt

- Approved for all livestock

The slaughtering of sheep, swine, goats, calves, cattle, horses, mules, and other equines by using captive bolt stunners and the handling in connection therewith, in compliance with the provisions contained in this section, are hereby designated and approved as humane methods of slaughtering and handling of such animals under the Act.

(a) Application of stunners, required effect; handling.

(1) The captive bolt stunners shall be applied to the livestock in accordance with this section so as to produce immediate unconsciousness in the animals before they are shackled, hoisted, thrown, cast, or cut. The animals shall be stunned in such a manner that they will be rendered unconscious with a minimum of excitement and discomfort.

(2) The driving of the animals to the stunning area shall be done with a minimum of excitement and discomfort to the animals. Delivery of calm animals to the stunning areas is essential since accurate placement of stunning equipment is difficult on nervous or injured animals. Among other things, this requires that, in driving animals to the stunning areas, electrical equipment be used as little as possible and with the lowest effective voltage.

This was addressed under Handling of Livestock. If you do something extra to minimize the excitement of animals as they are driven to the stunning area, please describe.

(3) Immediately after the stunning blow is delivered the animals shall be in a state of complete unconsciousness and remain in this condition throughout shackling, sticking and bleeding.

(b) Facilities and procedures —

(1) General requirements for stunning facilities; operator.

(i) Acceptable captive bolt stunning instruments may be either skull penetrating or nonpenetrating. The latter type is also described as a concussion or mushroom type stunner. <u>Penetrating</u> instruments on detonation deliver bolts of varying diameters and lengths through the skull and into the brain. Unconsciousness is produced immediately by physical brain destruction and a combination of changes in intracranial pressure and acceleration concussion. <u>Nonpenetrating</u> or mushroom stunners on detonation deliver a bolt with a flattened circular head against the external surface of the animal's head over the brain. Diameter of the striking surface of the stunner may vary as conditions require. Unconsciousness is produced immediately by a combination of acceleration concussion and changes in intracranial pressures. A combination instrument utilizing both penetrating and nonpenetrating principles is acceptable. Energizing of instruments may be accomplished by detonation of measured charges of gunpowder or accurately controlled compressed air. Captive bolts shall be of such size and design that, when properly positioned and activated, immediate unconsciousness is produced.

(ii) To assure uniform unconsciousness with every blow, compressed air devices must be equipped to deliver the necessary constant air pressure and must have accurate, constantly operating air pressure gauges. Gauges must be easily read and conveniently located for use by the stunning operator and the inspector. For purposes of protecting employees, inspectors, and others, it is desirable that any stunning device be equipped with safety features to prevent injuries from accidental discharge. Stunning instruments must be maintained in good repair.

Describe how you keep stunning instruments maintained in good repair.
What is the maintenance schedule for the stunner?
Where do you write down (i.e. document) when maintenance is done on the stunner?

(iii) The stunning area shall be so designed and constructed as to limit the free movements of animals sufficiently to allow the operator to locate the stunning blow with a high degree of accuracy. All chutes, alleys, gates and restraining mechanisms between and including holding pens and stunning areas shall be free from pain-producing features such as exposed bolt ends, loose boards, splintered or broken planking, and protruding sharp metal of any kind. There shall be no unnecessary holes or other openings where feet or legs of animals may be injured. Overhead drop gates shall be suitably covered on the bottom edge to prevent injury on contact with animals. Roughened or cleated cement shall be used as flooring in chutes leading to stunning areas to reduce falls of animals. Chutes, alleys, and stunning areas shall be so designed that they will comfortably accommodate the kinds of animals to be stunned.

How is the stunning area designed to limit the movements of animals to allow for accurate stunning?
Describe any special restraints you have for certain species of animals.
Describe your method of restraining animals for stunning.
How many animals are stunned at one time?
How do you reduce falls of animals in chutes leading to, and in the stunning area itself?

(iv) The stunning operation is an exacting procedure and requires a well-trained and experienced operator. He must be able to accurately place the stunning instrument to produce immediate unconsciousness. He must use the correct detonating charge with regard to kind, breed, size, age, and sex of the animal to produce the desired results.

How do you assure the effectiveness of the captive bolt in producing immediate unconsciousness?
Are your employees instructed to look for signs of unconsciousness in animals after stunning?
How do you train employees for this job to ensure their methods are effective?
How do you document their training?

What is the protocol if the initial stun is not effective and the animal is still conscious? Do you use a back-up firearm?
What kind of detonating charge does the employee use when stunning animals?
How is it decided as to what kind of charge is used?

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(2) Special requirements and prohibitions.

(i) Choice of instrument and force required to produce immediate unconsciousness varies, depending on kind, breed, size, age, and sex of the animal. Young swine, lambs, and calves usually require less stunning force than mature animals of the same kind. Bulls, rams, and boars usually require skull penetration to produce immediate unconsciousness. Charges suitable for smaller kinds of livestock such as swine or for young animals are not acceptably interchanged for use on larger kinds or older livestock, respectively.

(ii) 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.

What is your policy on the use of captive bolt stunners that inject air?

9 CFR 313.16: Mechanical: Gunshot

The slaughtering of cattle, calves, sheep, swine, goats, horses, mules, and other equines by shooting with firearms and the handling in connection therewith, in compliance with the provisions contained in this section, are hereby designated and approved as humane methods of slaughtering and handling of such animals under the Act.

Do you use a firearm to stun animals?

What type of firearm?

If you don't used a firearm every time, under what conditions would you use a one?

(a) Utilization of firearms, required effect; handling.

(1) The firearms shall be employed in the delivery of a bullet or projectile into the animal in accordance with this section so as to produce immediate unconsciousness in the animal by a single shot before it is shackled, hoisted, thrown, cast, or cut. The animal shall be shot in such a manner that they will be rendered unconscious with a minimum of excitement and discomfort.

(2) The driving of the animals to the shooting areas shall be done with a minimum of excitement and discomfort to the animals. Delivery of calm animals to the shooting area is essential since accurate placement of the bullet is difficult in case of nervous or injured animals. Among other things, this requires that, in driving animals to the shooting areas, electrical equipment be used as little as possible and with the lowest effective voltage.

Where is the area when you employ the use of firearms?

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(3) Immediately after the firearm is discharged and the projectile is delivered, the animal shall be in a state of complete unconsciousness and remain in this condition throughout shackling, sticking and bleeding.

(b) Facilities and procedure —

(1) General requirements for shooting facilities; operator.

(i) On discharge, acceptable firearms dispatch free projectiles or bullets of varying sizes and diameters through the skull and into the brain. Unconsciousness is produced immediately by a combination of physical brain destruction and changes in intracranial pressure. Caliber of firearms shall be such that when properly aimed and discharged, the projectile produces immediate unconsciousness.

(ii) To assure uniform unconsciousness of the animal with every discharge where small-bore firearms are employed, it is necessary to use one of the following type projectiles: Hollow pointed bullets; frangible iron plastic composition bullets; or powdered iron missiles. When powdered iron missiles are used, the firearms shall be in close proximity with the skull of the animal when fired. Firearms must be maintained in good repair. For purposes of protecting employees, inspectors and others, it is desirable that all firearms be equipped with safety devices to prevent injuries from accidental discharge. Aiming and discharging of firearms should be directed away from operating areas.

What type of bullets are used?

Does the type of bullet used vary depending on the species/size/etc. of the animal?

How is the firearm maintained?

(iii) The provisions contained in §313.15(b)(1)(iii) with respect to the stunning area also apply to the shooting area.
(iv) The shooting operation is an exacting procedure and requires a well-trained and experienced operator. He must be able to accurately direct the projectile to produce immediate unconsciousness. He must use the correct caliber firearm, powder charge and type of ammunition to produce the desired results.
What employee training is given for the use of the firearm as a stunning device?
How do you document their training?
Are your employees instructed to look for signs of unconsciousness in animals after stunning?
How is the stunning area designed to limit the movements of animals to allow for accurate stunning?
Describe any special restraints you have for certain species of animals.
Describe your method of restraining animals for stunning?
How many animals are stunned at one time?
How do you reduce falls of animals in chutes leading to, and in the stunning area itself?

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(2) Special requirements. Choice of firearms and ammunition with respect to caliber and choice of powder charge required to produce immediate unconsciousness of the animal may vary depending on age and sex of the animal. In the case of bulls, rams, and boars, small bore firearms may be used provided they are able to produce immediate unconsciousness of the animals. Small bore firearms are usually effective for stunning other cattle, sheep, swine, and goats, and calves, horses, and mules.

How do you assure the effectiveness of the firearm in producing immediate unconsciousness, given the species, size, age of the animals?
What is the protocol if the initial stun is not effective and the animal is still conscious?

Additional Information:

Describe any additional training employees are given on handling of livestock not mentioned above.

Please describe any additional information that has been incorporated into your humane handling program that was not asked for above.

Describe any humane handling audits you conduct or have conducted for you.

REFERENCES

Humane Methods of Slaughter Act (7 USC, Chapter 48) Federal

Meat Inspection Act (21 USC, Chapter 12)

Humane Slaughter of Livestock Regulations (9 CFR, Part 313)

Rules of Practice Regulations (9 CFR, Part 500)

Federal Register Notice: Humane Handling and Slaughter Requirements and the Merits of a Systematic Approach to Meet Such Requirements (69 FR 54625-54627)

Humane Handling and Slaughter of Livestock (FSIS Directive 6900.2)

Humane Handling of Livestock and Poultry - An Educational Guidebook Based on FSIS Policies Dr.

Temple Grandin's Website (http://www.grandin.com/)

28 Hour Rule (Title 49, Section 80502 of the US Code)

The information contained in this publication was created solely as a general guide and as a public service in order to provide a broad educational overview of humane handling regulations. The laws and regulations in this area are complex and their interpretation and application to each situation may vary. Because we do not know how you are using this information, we do not make any warranties or guarantees (express or implied) about the information as it relates to your particular situation. Please contact Meat Inspection with specific questions.