

**UNITED STATES DEPARTMENT OF AGRICULTURE
FOOD SAFETY AND INSPECTION SERVICE**

PETITION FOR RULEMAKING

Submitted to:

FSIS Docket Clerk
Department of Agriculture
Food Safety and Inspection Service
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Petition:

To Promulgate Additional Regulations Implementing the *Humane Methods of Slaughter Act* to Prevent Incidents of Inhumane Handling and the Needless Suffering of Animals at Slaughter

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May 2013

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1. Introduction

In early 2008, multiple instances of egregious cruelty to cattle at the Westland-Hallmark Meat Packing Co. in Chino, California, caught on videotape by animal protection advocates, resulted in widespread public outrage and eventually led to the largest beef recall in the history of the United States.¹ This incident occurred despite the continual on-site presence of United States Department of Agriculture (“USDA”) inspection personnel and the periodic performance of third-party humane slaughter audits at the plant.

In the aftermath of Westland-Hallmark, Congress held multiple hearings on humane slaughter, and the USDA’s Food Safety and Inspection Service (“FSIS”) took several actions to step up its enforcement of the federal Humane Methods of Slaughter Act² (“HMSA”), including conducting an audit of slaughter plants at high risk for humane violations,³ temporarily increasing the time spent verifying humane handling and slaughter requirements,⁴ and issuing a humane slaughter notice⁵ and additional training modules⁶ for in-plant inspection personnel.

The cruel treatment of animals at slaughter shocked the nation for a second time about 18 months later when egregious mistreatment of non-ambulatory, week-old calves at Bushway Packing in Grand Isle, Vermont, was captured on videotape.⁷ No less than four egregious incidents occurred

¹ See USDA, FSIS, “Statement by Secretary of Agriculture Ed Schafer regarding Hallmark/Westland Meat Packing Company Two Year Product Recall” (news release), Feb. 17, 2008, <http://www.usda.gov/wps/portal/usda/usdahome?contentidonly=true&contentid=2008/02/0046.xml>.

² 7 U.S.C. § 1901 *et seq.*

³ USDA, Office of Inspector General, *Audit Report: Evaluation of FSIS Management Controls over Pre-slaughter Activities*, Nov. 2008, <http://www.usda.gov/oig/webdocs/24601-07-KC.pdf>.

⁴ USDA, FSIS, “Increased Verification of Humane Handling Requirements in Livestock Slaughter Establishments,” Notice 17-08, March 10, 2008.

⁵ USDA, FSIS, “Humane Handling Activities and Documentation in Livestock Slaughter Establishments,” Notice 16-08, March 10, 2008.

⁶ USDA, FSIS, “Regional Training,” http://www.fsis.usda.gov/FSIS_Employees/Regional_Training/. See also USDA, FSIS, “Key Facts: Humane Slaughter,” http://www.fsis.usda.gov/factsheets/key_facts_humane_slaughter/index.asp; USDA, FSIS, “Humane Interactive Knowledge Exchange,” http://www.fsis.usda.gov/FSIS_Employees/HIKE/index.asp.

⁷ USDA, FSIS, “Agriculture Secretary Vilsack Responds to Allegations from the Humane Society of the United States” (news release), Oct. 30, 2009, <http://www.usda.gov/wps/portal/usda/usdahome?contentidonly=true&contentid=2009/10/0540.xml>.

over a six-month period before FSIS finally suspended the plant indefinitely.⁸ Again, Congress held hearings, and once again FSIS took action, this time establishing an “ombudsman” office for FSIS personnel needing direction and support on humane slaughter enforcement⁹ and agreeing to grant a petition to ban the slaughter of non-ambulatory calves.¹⁰

Instances of inhumane slaughter continue, however. FSIS inspectors temporarily shut down operations at Central Valley Meat in Hanford, California, in August 2012 after receiving a video shot by animal protection advocates that showed non-ambulatory cows being handled inhumanely.¹¹ The federal government and McDonald’s Corporation suspended purchases of beef from the plant in response.¹² The plant was eventually allowed to reopen after agreeing to make a number of changes, including requiring workers to undergo training in the humane treatment of animals on a quarterly basis.¹³

While it may not be possible to avoid all incidents of animal suffering at slaughter, more must be done to reduce inhumane handling at slaughter, particularly that which is egregious and clearly preventable in nature. In an attempt to determine whether regulatory changes could be made to prevent inhumane slaughter—and what those changes might be—the Animal Welfare Institute (“AWI”) conducted a review of more than 1,000 incidents of inhumane handling and slaughter occurring at state and federally inspected slaughter establishments over a recent six-year period. Based on its analysis, AWI concluded that several simple and straight-forward amendments to HMSA regulations could significantly reduce the occurrence of inhumane treatment of animals at U.S. slaughter plants.

⁸ USDA, FSIS, *Quarterly Enforcement Report, October 1, 2009 through December 31, 2009*, at 30, http://www.fsis.usda.gov/PDF/QER_Q1_FY10_Tables1-19.pdf.

⁹ See USDA, FSIS, “Humane Handling Ombudsman,” http://www.fsis.usda.gov/Fact_Sheets/Humane_Handling_Ombudsman/index.asp.

¹⁰ USDA, FSIS, “Final Response to Petition Submitted by the Humane Society of the United States,” March 13, 2013, http://www.fsis.usda.gov/PDF/Petition_Fsis_Resp_HSUS_031313.pdf. See also USDA, FSIS, “USDA Announces Measures to Improve Humane Handling Enforcement” (news release), Dec. 22, 2010, http://www.fsis.usda.gov/News_&_Events/NR_122210_01/index.asp.

¹¹ USDA, FSIS, “USDA Suspends Central Valley Meat for Humane Handling Violations” (news release), Aug. 21, 2012, http://www.fsis.usda.gov/News_&_Events/NR_082112_01/index.asp.

¹² D. Zahniser, “Central Valley Slaughterhouse Reopens after Animal Abuse Claims,” *Los Angeles Times*, Aug. 27, 2012.

¹³ USDA, FSIS, “Notice of Suspension Held in Abeyance” (addressed to Central Valley Meat), Aug. 27, 2012, http://www.fsis.usda.gov/PDF/FOIA/6063AM_Abeyance_082712.pdf.

2. Interests of the Petitioner

Petitioner the Animal Welfare Institute, a non-profit charitable organization, has been alleviating the suffering inflicted on animals by humans since 1951. AWI aims to improve the welfare of animals used in agriculture through engagement with policymakers, scientists, industry, non-governmental organizations, farmers, veterinarians, teachers, and the public. Specifically, AWI seeks to abolish factory farms, support high-welfare family farms, achieve humane slaughter, and improve transport conditions for all animals raised for food. Animal Welfare Approved, a high-welfare food certification, is a program of the Animal Welfare Institute. In administering this program, representatives of AWI audit compliance with its standards on farms and visit slaughter establishments to review animal handling practices. The organization has monitored enforcement of U.S. humane slaughter laws, and lobbied for increased enforcement, for decades. AWI conducted comprehensive reviews of state and federal humane slaughter enforcement in 2008, 2010, and 2012. Headquartered in Washington, DC, AWI has members and supporters throughout the United States.

3. Requested Action

U.S. citizens have the right to petition their government to add, amend, or repeal regulations relating to agriculture under the Right to Petition Government Clause of the First Amendment of the United States Constitution,¹⁴ the Administrative Procedure Act,¹⁵ and USDA regulations.¹⁶ Under this authority, the petitioner submits its petition for rulemaking to the Secretary of the USDA (“Secretary”). Petitioner requests that the Secretary amend HMSA regulations to require all slaughter establishments take a systematic approach to animal welfare by preparing and maintaining a comprehensive, written humane handling plan, and make other changes that are needed to prevent unnecessary incidents of inhumane handling at slaughter. These amendments include requiring routine testing and maintenance of stunning equipment, the availability of backup stunning devices, and employee training in animal handling. The purpose of the requested action is to protect the welfare of animals during the slaughter process and to provide safer and better working conditions for persons engaged in the slaughter industry. The requested

¹⁴ U.S. Const. Amend. I.

¹⁵ 5 U.S.C. § 553(e).

¹⁶ 7 C.F.R. § 1.28.

action is necessary under the Federal Meat Inspection Act (“FMIA”)¹⁷ and the HMSA, which require the Secretary to ensure that the slaughtering of livestock and the handling of livestock in connection with slaughter is carried out only by humane methods. In addition, the proposed regulations are directed at preventing treatment of animals during slaughter which the agency itself has declared constitutes egregious violations of these Acts.

4. Legal Background

4.1 Humane Methods of Slaughter Act

Congress enacted the Humane Methods of Slaughter Act of 1958 “to establish the use of humane methods of slaughter of livestock as a policy of the United States, and for other purposes.”¹⁸ The Act covers handling of animals, in addition to the slaughter process itself. It requires that animals be made insensible to pain “by a single blow or gunshot or an electrical, chemical or other means that is rapid and effective” prior to being shackled, hoisted, or cut. Ritual slaughter in accordance with the requirements of a religious faith is deemed to be humane and exempted from the stunning requirement. However, the ritual exclusion does not exempt ritual slaughter establishments from complying with humane handling requirements.

Congress has taken action related to the HMSA (other than funding initiatives) on four occasions since the law’s initial passage. The Humane Methods of Slaughter Act of 1978 provided an enforcement mechanism by giving food safety inspectors the authority to stop production by withholding inspection until any observed cruel handling or slaughter practices are corrected.¹⁹ The law also expanded coverage of the Act by requiring that any meat imported into the United States come from animals slaughtered under standards equivalent to the federal humane slaughter law and its regulations.²⁰

In 1996, Congress approved legislation²¹ to allow USDA to issue guidelines for the regulations of the commercial transportation of equines for slaughter.²² A section was added to the humane

¹⁷ 21 U.S.C. § 601 *et seq.*

¹⁸ *Id.*

¹⁹ 21 U.S.C. § 603(a).

²⁰ 21 U.S.C. § 620(a).

²¹ P.L. 104-127, Title IX, subtitle A, Apr. 4, 1996, 110 Stat. 1184.

slaughter law in 2002 to address practices involving non-ambulatory animals.²³ Moreover, a resolution was passed as part of the 2002 farm bill that expressed the desire that the Secretary of Agriculture fully enforce the humane slaughter law and continue tracking violations and report those data and relevant trends annually to Congress.²⁴

FMIA and its regulations, including those related to humane handling and slaughter, apply to all federal and state inspected slaughter plants. On-farm slaughter by the farm owner or operator or by a commercial, mobile slaughtering operation is exempt, unless specifically covered under state law. Custom slaughter establishments are also exempt. However, these operations are required to comply with certain sanitary requirements of the food safety regulations,²⁵ and are expected to comply with humane handling and slaughter procedures as well, although no legal requirement currently exists that they do so.

4.2 Humane Methods of Slaughter Act Regulations

USDA published its regulations implementing the 1978 Humane Methods of Slaughter Act in the *Federal Register* in late 1979.²⁶ The regulations address facility construction and maintenance, handling of animals in connection with slaughter, and acceptable methods of slaughter, which include carbon dioxide gas, captive bolt, gunshot, and stunning with electric current.²⁷

The humane slaughter regulations have been modified only twice in the past 20 years. In 1994, USDA amended the regulations to permit use of carbon dioxide to kill—and not merely stun—pigs. The amendment was prompted by a petition filed by the Danish and Swedish Meat Research Institute on behalf of Danish pork companies wishing to import to the U.S. products from animals killed with carbon dioxide gas.²⁸ In 2004, USDA added an amendment to prohibit use of penetrating captive bolt devices that inject air into the cranial cavity of cattle due to the

²² 9 C.F.R. Part 88.

²³ 7 U.S.C. § 1907.

²⁴ P.L. 107-171, Title X, Sec. 10305, May 13, 2002, 116 Stat. 493.

²⁵ 9 C.F.R. § 303.1.

²⁶ 44 FR 68813, Nov. 30, 1979.

²⁷ 9 C.F.R. Part 313.

²⁸ 59 FR 21640, Apr. 26, 1994.

findings of a risk assessment on bovine spongiform encephalopathy.²⁹ Neither of these amendments was aimed at improving the humane treatment of animals before and/or during slaughter.

While no new regulations have been promulgated in recent years, USDA has issued several notices and directives³⁰ related to humane slaughter. They address such topics as ritual slaughter procedures, assessing stunning effectiveness, and the treatment of non-ambulatory animals, and appear to have been published, in large part, as a response to documented reports of animal cruelty at slaughter.³¹

FSIS Directive 6900.2, Humane Handling and Slaughter of Livestock, defines egregious inhumane treatment as “any act or condition that results in severe harm to animals, for example:

- making cuts on or skinning conscious animals;
- excessive beating or prodding of ambulatory or nonambulatory disabled animals or dragging of conscious animals;
- driving animals off semi-trailers over a drop off without providing adequate unloading facilities;
- running equipment over conscious animals;
- stunning of animals and then allowing them to regain consciousness;
- 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;
- dismembering conscious animals, for example, cutting off ears or removing feet;
- leaving disabled livestock exposed to adverse climate conditions while awaiting disposition; or

²⁹ 69 FR 18891, Jan. 12, 2004.

³⁰ See http://www.fsis.usda.gov/regulations_&_policies/regulations_directives_&_notices/index.asp.

³¹ For example, in 2004 FSIS issued a notice on humane handling, saying it was doing so “because there has been considerable congressional and public interest about the humane treatment of animals, and because the number of humane handling noncompliance incidents documented by FSIS in establishments has increased over the last three years.” See 69 FR 54625, Sept. 9, 2004. Further, in 2005, FSIS issued a similar notice related to the treatment of live poultry before slaughter after exposure of numerous instances of animal cruelty in poultry slaughter plants by animal protection advocates. See 70 FR 56624, Sept. 28, 2005.

- otherwise causing unnecessary pain and suffering to animals, including situations on trucks.”³²

In 2004, FSIS published a notice in the *Federal Register* “encouraging livestock slaughter establishments to use a systematic approach to humane handling and slaughter to best ensure that they meet the requirements of the HMSA, FMIA, and implementing regulations.”³³ In 2008—after the incident at Westland-Hallmark—USDA’s Agricultural Marketing Service (“AMS”) issued animal handling and welfare technical requirements for suppliers participating in federal nutrition assistance programs.³⁴ A written quality management plan, addressing the provisions of the American Meat Institute’s (“AMI”) *Recommended Animal Handling Guidelines and Audit Guide*, is a requirement of participation. Notable 2013 updates to the technical requirements include requiring that vendors and their raw material suppliers establish an animal handling and welfare steering committee and requiring certification for the individual(s) facilitating a vendor’s animal handling and welfare training program.³⁵

5. Factual Background

AWI has continuously analyzed state and federal enforcement of humane slaughter laws for more than five years. In 2008, AWI published a comprehensive review of state and federal enforcement over a 10-year period, 1998 through 2007.³⁶ In 2010, AWI published an update to the earlier report, which aimed to determine whether enforcement had increased in the aftermath of the Westland-Hallmark incident, and to compare state and federal enforcement of humane slaughter laws.³⁷ This report found that enforcement was up overall since early 2008 when the

³² USDA, FSIS, “Humane Handling and Slaughter of Livestock,” Directive 6900.2, Aug. 15, 2011, at 2-3, <http://www.fsis.usda.gov/OPPDE/rdad/FSISDirectives/6900.2.pdf>.

³³ 69 FR 54625, Sept. 9, 2004.

³⁴ USDA, AMS, “Technical Requirements Schedule—Animal Handling and Welfare 2010 (TRS-AHW-2010),” effective date May 2010.

³⁵ USDA, AMS, “Technical Requirements Schedule—Animal Handling and Welfare 2013 (TRS-AHW-2013),” effective date July 2013. AMS considered, but ultimately did not require, remote video auditing at slaughter facilities for the 2013 updates. *See* USDA, AMS, “Notice to the Trade: Animal Handling and Welfare Requirement Modifications for Federal Nutrition Assistance Programs,” Dec. 2012.

³⁶ D. Jones, *Crimes without Consequences: The Enforcement of Humane Slaughter Laws in the United States*, May 2008.

³⁷ Animal Welfare Institute, *Humane Slaughter Update: Comparing State and Federal Enforcement of Humane Slaughter Laws*, July 2010. Exhibit A.

Westland-Hallmark incident occurred, but that it varied widely among individual states and federal districts. Repeat state and federal violators was identified as a significant problem, along with inadequate training and a subsequent lack of consistency in response to humane slaughter violations by state and federal inspection personnel. The report concluded that while allocation of resources to humane slaughter activities appeared to have increased for state plants, resources devoted to humane handling at the federal level continued to constitute less than 2 percent of total funding for food safety inspections.³⁸

Both of the earlier reports drew conclusions about the level of humane slaughter law enforcement based on records obtained from public records requests to state and federal departments of agriculture and from records posted on the FSIS website. In 2012 AWI again submitted a public records request to each state operating a meat inspection program,³⁹ this time requesting records for all enforcement actions occurring since January 1, 2010.⁴⁰ In addition, a number of Freedom of Information Act requests for federal enforcement records⁴¹ were submitted to FSIS between January 2010 and March 2012, at which time FSIS began routinely posting on its website records related to Notices of Suspension and Notices of Intended Enforcement for humane slaughter violations.⁴²

³⁸ *Id.* An analysis of the Budget of the United States and FSIS data by the Government Accountability Office (GAO) estimated that between 1.23 and 1.46 percent of FSIS' total annual appropriations for federal food safety inspection for the years 2005 through 2008 went to activities related to humane handling inspection. GAO, *Humane Methods of Slaughter Act: Actions are Needed to Strengthen Enforcement*, GAO-10-203, Feb. 2010, at 32.

³⁹ Twenty-seven states operate meat or meat and poultry inspection programs. See USDA, FSIS, "Listing of Participating States," http://www.fsis.usda.gov/regulations_&_policies/Listing_of_Participating_States/index.asp.

⁴⁰ The public records requests sought copies of all enforcement actions for violations of humane slaughter regulations, including all noncompliance records, memorandums of interview, warnings, suspension of plant operations, reinstatement of plant suspension, revocation of plant license, civil penalties, and criminal prosecutions.

⁴¹ These requests sought copies of noncompliance records, memorandums of interview, warning letters, suspension of plant operations, and reinstatement of plant suspension.

⁴² See USDA, FSIS, "Humane Handling Enforcement Actions," http://www.fsis.usda.gov/regulations_&_policies/Humane_Handling_Enforcement_Actions/index.asp.

5.1 Humane Enforcement at Federally Inspected Plants

The number of federal plants suspended for humane slaughter violations increased dramatically after the previously described incident at Westland-Hallmark, which occurred in early 2008.⁴³ Enforcement, in terms of plant suspensions and other regulatory actions, is dependent upon the ability of inspection personnel to observe violations. However, the amount of time spent by FSIS personnel on humane handling activities at individual slaughter plants varies widely. In its 2010 report on humane slaughter enforcement, the Government Accountability Office (“GAO”) noted that Humane Activities Tracking System (“HATS”) time varied from 1.8 hours per shift to 9.7 hours per shift at 15 large slaughter plants for pigs.⁴⁴ Similarly, the amount of time spent on humane activities varies significantly by federal district, from a low of less than one hour per 1,000 animals to a high of approximately 20 hours per 1,000 animals, according to data containing in FSIS Humane Handling Quarterly Reports.⁴⁵

AWI’s 2010 report noted that a number of federal plants had multiple suspensions for humane slaughter violations during the period 2007 to 2009.⁴⁶ One plant was closed down on five occasions for humane violations in 2008 alone, and in another case a plant was suspended eight times between May 2007 and November 2009.⁴⁷ The Bushway Packing plant in Vermont, cited previously, was suspended for humane slaughter violations in May, June, July, and October 2009.⁴⁸

An analysis of enforcement actions for the period 2010 to 2012 showed that fewer plants were experiencing repeat suspensions compared to the previous period, as shown in Figure 1. Of all plants suspended during that time, less than 20 percent had multiple suspensions. However, plant suspensions may not be a reliable indicator of compliance with humane slaughter regulations. A

⁴³ Suspensions jumped from 12 in 2007 to 97 in 2008. See USDA, FSIS, “Quarterly Enforcement Reports,” available at http://www.fsis.usda.gov/regulations_&_policies/Quarterly_Enforcement_Reports/index.asp.

⁴⁴ GAO, *Humane Methods of Slaughter Act: Actions are Needed to Strengthen Enforcement*, GAO-10-203, Feb. 2010, at 30.

⁴⁵ USDA, FSIS, “Humane Handling Quarterly Reports,” available at http://www.fsis.usda.gov/regulations_&_policies/Humane_Handling_Enforcement_Reports/index.asp.

⁴⁶ Exhibit A, at 14-15.

⁴⁷ *Id.*

⁴⁸ *Id.*

report by the USDA Office of Inspector General, issued in May 2013, noted that FSIS inspectors did not always take appropriate enforcement actions at 8 of 30 pig slaughter plants visited.⁴⁹ Specifically, in 10 instances inspectors did not suspend plants after observing egregious humane handling violations.⁵⁰

Figure 1. Suspensions per Federal Plant^a			
# Suspensions	2002-2004 % Plants	2007-2009 % Plants	2010-2012 % Plants
1	84.4	27.8	81.4
2	12.5	38.9	13.6
3	3.1	16.7	5.1
4-5	0	11.1	0
6+	0	5.6	0

^a Of plants with one or more suspension during the indicated period.

5.2 Humane Enforcement at State Inspected Plants

All 27 states operating meat inspection programs responded to requests from AWI for humane slaughter enforcement records for the period January 1, 2010 through mid-2012.⁵¹ The total number of state Noncompliance Records (“NRs”) written for humane slaughter violations remained relatively unchanged from the previously studied three-year period (2007-2009), while the total number of suspensions for all states increased by 50 percent, from 12 to 18 (Figure 2).

⁴⁹ USDA, OIG, *Food Safety and Inspection Service – Inspection and Enforcement Activities at Swine Slaughter Plants*, Audit Report 24601-0001-41, May 2013, <http://www.usda.gov/oig/webdocs/24601-0001-41.pdf>.

⁵⁰ *Id.*, at 22-25.

⁵¹ The exact date range for the records varies by state according to when the individual state responded to the records request. Alabama Department of Agriculture and Industries refused to copy and mail the records, but offered to make the records available for review. South Carolina (Clemson University) refused to supply records based on a recent change in the South Carolina Code (Section 47-4-170) which prohibits the disclosure of information that may be used to identify a business activity subject to regulation by the South Carolina Department of Agriculture.

Figure 2. State Enforcement Actions

State	Noncompliance Records			Suspensions		
	2002-2004	2007-2009	2010-2012 ^a	2002-2004	2007-2009	2010-2012 ^a
Alabama	0	7	0 ^d	0	0	0 ^d
Arizona	0	0	6	0	0	0
Delaware	0	0 ^b	0 ^b	0	0 ^b	0 ^b
Georgia	0	5	3	0	0	1
Illinois	0	1	73	0	1	2
Indiana	3	4	0	0	0	0
Iowa	0	12	20	0	0	2
Kansas	2	12	11	0	0	1
Louisiana	0	0	0	0	0	0
Maine	0	2	6	0	0	3
Minnesota	2	5	7	1	0	0
Mississippi	0	3	5	0	0	0
Missouri	0	4	1	0	0	0
Montana	0	1	3	0	0	0
North Carolina	7	23	29	0	4	5
North Dakota	1	6	2	0	0	0
Ohio	10	51	29	1	0	1
Oklahoma	1	13	5	0	0	0
South Carolina	1	28	0 ^d	1	2	0 ^d
South Dakota	0	0 ^c	16	0	0 ^c	0
Texas	41	58	72	0	2	3
Utah	0	0 ^c	1	0	0 ^c	0
Vermont	0	0	1	0	0	0
Virginia	0	0	1	0	0	0
West Virginia	0	21	23	0	0	0
Wisconsin	4	121	59	0	3	0
Wyoming	0	32	23	0	0	0
TOTAL	72	409	396	4	12	18

^a For the period January 2010 through mid-2012 (exact date varies by state).

^b State had no licensed meat slaughter plants during the indicated period.

^c State did not respond to request for enforcement records.

^d State refused to send enforcement records.

As with federal districts, it is difficult to compare enforcement between states as the number of slaughter plants under inspection and the number of animals slaughtered at those establishments varies considerably. Nevertheless, it is concerning that several states could supply no records whatsoever regarding humane slaughter enforcement for the three-year period.

In general, state inspection personnel appear far less likely than federal inspectors to suspend a plant—or even to write up a Noncompliance Record—for an observed humane violation.⁵² In one case a Texas inspector noted on an internal memorandum that “some of the animals have 2 or 3 holes to the skull,” yet he failed to write an NR or to issue a suspension.⁵³ And in another example from Texas, it was noted on a weekly meeting memorandum that kill floor employees were “cutting and skinning animals after the throats were cut” but while the animals were seen still moving.⁵⁴ This serious humane violation was treated in the same manner as “trash all over the plant, especially in the restrooms and break rooms,” which was noted on the same memorandum. Again, no official enforcement action was taken. However, federal directives identify both of these violations (i.e., multiple stunning attempts and conscious animals on the bleed rail) as “egregious,” indicating that a suspension of plant operations is called for.

Of 805 violations cited at state inspected plants during the period 2007 through 2012, AWI classified approximately 250 as being egregious in nature. However, only 30 (or 12 percent) of these egregious violations resulted in a suspension,⁵⁵ indicating that the enforcement of humane slaughter regulations at plants inspected by state departments of agriculture (with oversight from USDA) is extremely lenient and inconsistent.

In addition to enforcement actions, AWI requested that states provide HATS data, indicating the amount of time inspection personnel spent on humane activities.⁵⁶ HATS data cannot be easily compared between states without information regarding the number of animals slaughtered,

⁵² For the year 2009, federal inspectors suspended 17 percent of plants committing humane violations, while state inspectors suspended four percent of plants cited. Exhibit A, at 8.

⁵³ Establishment TXM564, Jan. 12, 2012.

⁵⁴ Hamilton Meat Co. (establishment number not given), July 5, 2011.

⁵⁵ For examples of egregious incidents which did not result in suspension, *see* Exhibit A, at 16-17.

⁵⁶ The following states provided HATS data: Arizona, Georgia, Illinois, Kansas, Maine, Montana, North Carolina, North Dakota, Ohio, Oklahoma, South Dakota, Utah, Vermont, Virginia, and West Virginia. South Carolina offered to provide data for a significant fee.

which was made available by only one state (Maine). However, from the data provided, it appears that inspectors in some states spend significantly more time on humane activities than in other states.⁵⁷

Repeated humane violations at individual plants was again identified as a significant enforcement problem. In its 2010 report, AWI noted that one Ohio plant was cited for humane violations 10 times between January 2007 and May 2009, and a Wisconsin plant was cited 34 times and suspended twice between May 2007 and January 2009.⁵⁸ The percentage of plants with multiple violations for the years 2010 through 2012 remained essentially unchanged from the previous period (Figure 3). In the most recent review, one Texas plant⁵⁹ was cited a total of 21 times between June 2010 and June 2012. Other examples of repeated violations include a North Carolina plant⁶⁰ cited 17 times within a two-year period; a West Virginia plant⁶¹ cited 15 times within a two-year period, and an Illinois plant⁶² cited 12 times within an 18-month period.

Figure 3. Violations per State Plant^a			
# Noncompliance Records	2002-2004 % Plants	2007-2009 % Plants	2010-2012 % Plants
1	63.9	54.3	59.3
2	25.0	21.5	18.1
3	5.6	16.9	16.5
4-5	5.6	5.1	2.1
6+	0	2.3	3.3

^a Of plants with one or more violation during the indicated period.

⁵⁷ Average HATS per slaughter plant per month varied from a low of 1.1 hours for Virginia to a high of 14.7 hours for Utah.

⁵⁸ Exhibit A, at 15.

⁵⁹ Establishment TXM546.

⁶⁰ Establishment NCM318.

⁶¹ Establishment WVM31.

⁶² Establishment ILM60.

5.3 Types of Humane Violations at Federal and State Plants

AWI reviewed a total of 1,047 violations⁶³ in order to determine the types of humane noncompliances that are occurring and, if possible, the underlying cause(s). Each violation was placed into one or more of six categories that represent the main areas of handling and slaughter covered by the humane slaughter regulations. As shown in Figure 4 below, the most frequently cited violations at state plants, for the years 2007 through 2012, were (1) failure to provide feed and/or water, (2) ineffective stunning (multiple attempts), and (3) plant pens or grounds in a state of disrepair.

The most frequently cited violations at federal plants were (1) inhumane handling (e.g., improper handling of disabled animals, excessive use of force to drive animals, etc.), (2) pens or grounds in disrepair, and (3) failure to provide feed and/or water. While the state violations reviewed represent the entire universe of violations occurring at state plants during the indicated period, the federal violations included in the study represent only a convenience sample.⁶⁴ Approximately one-third of the state violations were of the type that could be classified as “egregious,” while one-half of the federal violations fit into this category; however the federal sample included a large proportion of noncompliances that resulted in suspension and was therefore biased toward more serious violations.

⁶³ The violations included 805 state noncompliances (30 of which resulted in plant suspension) and 242 federal noncompliances (118 of which resulted in plant suspension). This represented all state NRs, all state suspensions, and a sample of federal NRs and suspensions occurring during the period 2007 through 2012.

⁶⁴ Consequently, comparisons should not be drawn between the two samples. For example, it should not be concluded that inhumane handling occurs more frequently at federal than state plants, because the federal sample was biased in that it over-represented suspensions, many of which are issued for egregious inhumane handling incidents.

Figure 4. Humane Violations by Type			
Type of Violation	% of State Violations^a	% of Federal Violations^b	% of All Violations (State & Federal Combined)
Conscious animal on bleed rail	6.0	4.7	5.9
Failure to provide feed and/or water	36.0	19.7	33.9
Ineffective stunning	24.2	15.7	23.1
Inadequate space in pens for lying	3.1	1.6	2.9
Inhumane handling	7.0	29.9	10.0
Pens or grounds in disrepair	23.7	28.3	24.3

^a Based on all violations occurring at state plants 2007 through mid-2012.
^b Based on a convenience sample of violations occurring at federal plants 2007 through 2012.

6. Records Reviewed by AWI Demonstrate that the Requested Amendments are Necessary to Ensure the Humane Slaughter of Livestock and to Prevent Needless Suffering

Tens of thousands of incidents of inhumane handling at slaughter have been documented by food safety inspection personnel since passage of the HMSA, and countless other incidents have gone either unobserved or unreported. Yet, FSIS has made no attempt to amend the Act’s regulations to address some of the causes of these incidents and thereby prevent their occurrence. Random observation and reporting of inhumane animal treatment after the fact is not an efficient or effective way to execute the Act. Regulations that prevent inhumane handling and needless animal suffering are required.

In order to identify possible means of preventing inhumane handling at slaughter, AWI reviewed records associated with a total of 1,047 humane handling and slaughter violations occurring at state and federal establishments. Unfortunately, in many cases the portion of a record’s narrative describing the incident provided insufficient information to identify a possible cause. In some

cases, multiple factors appeared to be involved. Overall, however, AWI was able to identify at least one possible cause in approximately one-half of the 1,047 violations.

Based on the review, the most common causes of humane slaughter violations, not adequately addressed by current regulations, are:

- lack of employee training in humane handling;
- use of improper stunning device;
- improper placement of stun (often in connection with inadequate restraint);
- lack of backup stunning equipment; and
- lack of routine testing and maintenance of stunning equipment.

Other identified causes include the following: lack of proper equipment to move non-ambulatory animals; problems related to the use of captive bolt devices to stun mature hogs; inadequate stun-to-stick intervals in captive bolt and electric stunning; and problems in rendering insensibility with head-only electric stunning.

6.1 Lack of Employee Training in Humane Handling Results in Inhumane Slaughter

Instances of inhumane handling (e.g., excessive use of force in driving animals, dragging non-ambulatory animals, etc.) are among the most commonly cited inhumane slaughter violations. Examples from AWI's review of Noncompliance Records and Notices of Suspension are presented in Exhibit B. Two examples follow:

Inspector observed an establishment employee inexperienced with handling animals attempt to cut out one mature sow from a group of 3 in a pen. The employee was shouting and chasing the sows causing them to run around and around the pen. He sometimes slapped the sows on the back with the side of the electric prod even when the animals were moving forward.⁶⁵

Inspector observed that a hog had entered the alley leading to the stunner backwards while additional animals continued to enter facing forwards. An

⁶⁵ Establishment NC265, May 26, 2011.

employee placed an electric prod between the eyes of a forward facing animal to get him to back up. The same employee placed the electric prod under the tail (genital area) of the animal that was backward in the alley.⁶⁶

It is typically difficult to determine from the enforcement narrative whether the employee committed the inhumane act intentionally or as a result of insufficient knowledge of proper animal handling techniques. Either of these causes of the inhumane treatment of animals can be avoided by requiring training before the employee ever has contact with animals. The AMI animal handling guidelines recommend that slaughter establishments have “a documented training program for its employees or use of an outside training program to teach the principles of good animal handling.”⁶⁷ The World Organization for Animal Health (“OIE”), in its internationally recognized guidelines for slaughter, recommends that competence in animal handling be demonstrated through a current certificate from the inspection authority or from an independent body accredited by the inspection authority.⁶⁸ AWI requests that HMSA regulations are amended to require certification and/or training of industry workers in proper animal handling before commencing work and at regular intervals.

6.2 Use of Improper Stunning Device Results in Inhumane Slaughter

Many plants—particularly smaller ones—slaughter animals of a variety of breeds, ages, and sizes. Further, many plants use more than one type of stunning device. These factors require that employees performing stunning be able to choose the proper device, the proper caliber and ammunition if using a firearm, and the proper detonating charge if using a captive bolt. This doesn't always happen, as demonstrated by the two examples below and others presented in Exhibit C.

⁶⁶ Establishment M818, Aug. 6, 2012.

⁶⁷ T. Grandin, *Recommended Animal Handling Guidelines and Audit Guide: A Systematic Approach to Animal Welfare*, AMI Foundation, Aug. 2012, at 84, 97, 107, <http://www.animalhandling.org/ht/a/GetDocumentAction/i/80011>.

⁶⁸ World Organization for Animal Health, *Slaughter of Animals*, Terrestrial Animal Health Code, Chapter 7.5, 2012, at 7.5.1.2.

Stunner was unable to render a hog unconscious with 3 gunshot attempts. He was instructed to use a heavier load round which was successful. All 4 shots penetrated the skull in the correct location.⁶⁹

3 hogs were not rendered unconscious with the first shot. After this the owner decided to use a different firearm and ammunition, which was successful in stunning the remainder of the animals.⁷⁰

Current regulations⁷¹ note the issue but fail to require any action to prevent incidents of inhumane slaughter caused by it. Therefore, HMSA regulations should be amended to require that workers performing captive bolt and/or gunshot stunning be trained in proper usage of the devices and that guidelines be posted in the stunning area of a slaughter establishment regarding the appropriate device (if the plant uses multiple stunning devices) and the proper caliber of firearm and ammunition, and/or proper detonating charge, with regard to the kind, breed, size, age, and sex of the animal being stunned in order to produce insensibility.

6.3 Improper Placement of Stun Results in Inhumane Slaughter

Placement is critical to stunning success. Improper placement, often but not always in connection with inadequate restraint, can lead to the need to re-stun animals. Improper placement is one of the most frequent causes of humane slaughter violations involving multiple stunning attempts, as demonstrated by the examples below (additional examples presented in Exhibit D).

While performing slaughter operations the inspector observed plant personnel shoot 3 pigs, out of the 13 pigs slaughtered, 2 or more times with the 22 mag. An employee shot the first pig 3 times, and slaughter was halted while a manager discussed the proper place to shoot pigs with the worker. Slaughter was stopped a second time after the next pig was shot twice while the manager again showed the worker the proper place to shoot pigs. A third pig was not stunned properly, and

⁶⁹ Establishment IL145, March 8, 2010.

⁷⁰ Establishment IL171, Aug. 19, 2010.

⁷¹ 9 C.F.R. § 313.15(b)(2); 313.16(b)(2).

slaughter was halted again. Once again, manager showed the employee how to place the shot.⁷²

Inspector observed plant employee discharge a .22 caliber rifle into the left center of the forehead of a veal calf. The calf immediately went down, but within approx. 10 seconds, the calf stood up on all four legs and started to walk around the knock box. The inspector observed a tremendous amount of blood coming from the left nostril of the calf, but no vocalization was heard. The inspector in charge immediately instructed the owner to lower the knock box and fire the second round. The second shot was discharged and the calf immediately fell to the ground. Later the inspector inspected the calf's head and found two bullet holes. The first bullet hole was approximately 3 inches to the left of the middle of the forehead and the second bullet hole was placed in the middle of the head.⁷³

Proper placement of the stun should be covered in the training of all employees with stunning duties. In addition, visual guidelines for captive bolt and firearms stunning, such as those offered by AMI,⁷⁴ should be posted in the stunning area of every slaughter establishment using one or both of these methods. The guidelines should address all species of animals slaughtered at the establishment. AWI requests that FSIS amend HMSA regulations to incorporate this requirement.

6.4 Lack of Backup Stunning Equipment Results in Inhumane Slaughter

Lack of an immediately available, proper functioning backup stunning device has been identified as the cause of a number of egregious humane slaughter violations. In some cases, animals have died slowly from exsanguination because no backup device was available when the sole stunning device failed. See two examples below (and others in Exhibit E):

A heifer was standing very calmly in the knock box. Plant employee proceeded to discharge a .22 caliber rifle into the center of the cow's forehead. The cow did not

⁷² Establishment KS125, Oct. 30, 2008.

⁷³ Establishment NC318, Jan. 12, 2012.

⁷⁴ T. Grandin, *Recommended Animal Handling Guidelines and Audit Guide: A Systematic Approach to Animal Welfare*, AMI Foundation, Aug. 2012, at 20.

go down. A second shot from the .22 rifle was discharged into the forehead. The cow, once again, did not go down. Both shots to the forehead did not penetrate the skull and one of the bullets was found lying on the floor near the viscera table. Inspector asked the employee to get the backup rifle. Employee stated that the plant did not have one.⁷⁵

Inspector noticed an employee attempting to stun an animal improperly with a stun gun. The employee stunned the animal twice and the animal was still conscious. A rifle was not present at the time to provide immediate stunning. Animal was still conscious at the time the throat was slit.⁷⁶

OIE recommends backup stunning devices be “available for immediate use if the primary method of stunning fails.”⁷⁷ Moreover, in other instances, disabled animals in holding areas have suffered for an extended period of time because no portable stunning device was available for use outside the stunning area of the plant. Therefore, HMSA regulations should be amended to require at least one backup stunning device to be available at all times in the stunning area and at least one portable stunning device to be available at all times for use in the unloading and holding areas of the plant.

6.5 Lack of Routine Testing and Maintenance of Stunning Equipment Results in Inhumane Slaughter

Malfunctioning stunning equipment is a very common cause of humane slaughter violations. While current regulations require that equipment shall be/must be “maintained in good repair,”⁷⁸ this is clearly insufficient to prevent incidents of inhumane slaughter, as demonstrated by the examples below (and others presented in Exhibit F).

⁷⁵ Establishment NC318, Feb. 2, 2012.

⁷⁶ Establishment TX98, Feb. 24, 2010.

⁷⁷ World Organization for Animal Health, *Slaughter of Animals*, Terrestrial Animal Health Code, Chapter 7.5, 2012, at 7.5.7.1g.

⁷⁸ 9 C.F.R. § 313.5(b)(3); 313.15(b)(1)(ii); 313.16(b)(1)(ii); 313.30(b)(2).

Facility was unable to render multiple animals unconscious with a single stun. Most cattle were rendered unconscious after multiple attempts. Facility uses a captive bolt which appears to be malfunctioning consistently.⁷⁹

The first 5 of 7 animals had to be re-stunned. 4 of the 5 re-stunned steers were knocked using the captive bolt device twice while on the floor of the knock box. One of the 5 was re-stunned 3 times and never achieved an unconscious state before being bled.... After the captive bolt device was cleaned the following two animals were successfully stunned.⁸⁰

There is currently no specific requirement that plants conduct routine equipment testing and maintenance. Noncompliance Records have documented that some plants have gone months without cleaning stunning devices that are used on a daily basis. AMI guidelines “strongly recommend” daily measuring of bolt velocity for captive bolt stunners used as a primary method of stunning.⁸¹ AMI also recommends a verified maintenance program where a mechanic signs off each day that he/she has tested and cleaned the stunners. “If a plant shoots a captive bolt on a particular day, it has to be taken apart and cleaned. If a gun is not shot for a week, it should be cleaned weekly even if not used. If a gun is used, it must be taken apart and cleaned at the end of the shift.”⁸² AMI guidelines also recommend a minimum cleaning schedule for electric stunners (electrodes) of once daily.⁸³ HMSA regulations should be amended to be consistent with this standard.

6.6 Lack of Humane Handling Plans by Establishments Results in Inhumane Slaughter

At present, slaughter plants are often required or strongly recommended to prepare a comprehensive, written humane handling plan *only after* the occurrence of one or more

⁷⁹ Establishment MN789, Oct. 6, 2010.

⁸⁰ Establishment WI174, June 30, 2008.

⁸¹ T. Grandin, *Recommended Animal Handling Guidelines and Audit Guide: A Systematic Approach to Animal Welfare*, AMI Foundation, Aug. 2012, at 21.

⁸² *Id.*

⁸³ *Id.*, at 27.

egregious humane violations. Although FSIS encouraged all plants to take a systematic approach to animal welfare eight years ago,⁸⁴ as of last summer, only 35 percent of federally inspected plants had a robust written approach to humane handling.⁸⁵ While nearly all federal plants classified as “large” had a robust written plan, 89 percent of “very small” federal plants—arguably the plants most in need of humane improvements—lacked such a plan.⁸⁶ The situation is likely far worse at the state level. Only two states supplied AWI with records of humane handling verification visits, and just one of those indicate on its form whether the plant being reviewed uses a proactive approach to humane handling. In that case (the state of West Virginia), none of 11 inspected plants had implemented a systematic approach at the time of the review.⁸⁷ FSIS’ current tactic is to gradually increase the number of plants with a plan;⁸⁸ however, this will allow future inhumane slaughter violations to occur that otherwise could be prevented.

As previously noted, AMS requires that a systematic approach to humane handling be used by all contractors and subcontractors participating in federal nutrition assistance programs,⁸⁹ and its 2013 update extended this requirement to cover formation of an animal handling and welfare steering committee and certification of individuals facilitating a contractor’s training program.⁹⁰ However, the impact of this initiative is limited by the fact that only approximately 70 U.S. beef, pork, and lamb suppliers,⁹¹ among a total of 2,800 government inspected slaughter

⁸⁴ 69 FR 54625, Sept. 9, 2004.

⁸⁵ USDA, FSIS (L. Davis), “Systematic Approach to Humane Handling One Year Later” (powerpoint presentation), Oct. 17, 2012, at slide 5.

⁸⁶ *Id.* As a result of having fewer available resources, small and very small plants are less likely than larger plants to have well maintained equipment, a structural design that facilitates humane animal handling, an animal welfare quality assurance program that includes internal and/or external audits, and the ability to respond quickly to emergency situations.

⁸⁷ Illinois and West Virginia sent records of humane handling verification visits, although AWI had not specifically requested these forms. West Virginia’s form included an entry for systematic approach to humane handling.

⁸⁸ FSIS has set a goal of 50 percent of plants with a robust humane handling plan by FY 2016. USDA, FSIS, *Strategic Plan FY 2011-2016*, no date, at 16. http://www.fsis.usda.gov/PDF/Strategic_Plan_2011-2016.pdf.

⁸⁹ USDA, AMS, “Technical Requirements Schedule—Animal Handling and Welfare 2010 (TRS-AHW-2010),” effective date May 2010.

⁹⁰ USDA, AMS, “Technical Requirements Schedule—Animal Handling and Welfare 2013 (TRS-AHW-2013),” effective date July 2013.

⁹¹ See “AMS Approved Boneless Beef/Pork/Lamb Supplier/Contractor Listing,” as of Apr. 25, 2013. <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5097797>.

establishments,⁹² participate in the programs. Moreover, it is likely that a majority of these establishments are among the 35 percent of establishments⁹³ that have already implemented a systematic approach to animal handling and welfare.

OIE recommends that every slaughter plant implement a humane handling plan.

Each slaughterhouse should have a dedicated plan for animal welfare. The purpose of such plan should be to maintain a good level of animal welfare at all stages of the handling of animals until they are killed. The plan should contain standard operating procedures for each step of animal handling as to ensure that animal welfare is properly implemented based on relevant indicators. It also should include specific corrective actions in case of specific risks, like power failures or other circumstances that could negatively affect the welfare of animals.⁹⁴

AWI requests that FSIS amend HMSA regulations to require that all slaughter establishments inspected under the Act demonstrate a systematic approach to animal welfare by developing, implementing, and maintaining a comprehensive, written humane handling plan based on current regulations as well as the requested amendments included in this petition.

7. Proposed Regulation

9 C.F.R. Part 313 – Humane Slaughter of Livestock

313.2 Handling of livestock

(f) Stunning methods approved in ~~§313.30~~ Part 313 shall be effectively applied to animals prior to their being shackled, hoisted, thrown, cast, or cut.

⁹² See USDA, National Agricultural Statistics Service, *Livestock Slaughter: 2012 Summary*, Apr. 2013, at 62.

⁹³ See USDA, FSIS (L. Davis), “Systematic Approach to Humane Handling One Year Later” (powerpoint presentation), Oct. 17, 2012, at slide 5.

⁹⁴ World Organization for Animal Health, *Slaughter of Animals*, Terrestrial Animal Health Code, Chapter 7.5, 2012, at 7.5.2.1.

(g) If more than one stunning method is used at an establishment, guidelines shall be posted in the stunning area regarding the appropriate stunning device with regard to kind, breed, size, age, and sex of the animal to produce the desired results.

(h) At least one loaded backup stunning device shall be available in the stunning area at all times. This device shall be checked and cleaned at least weekly, and the routine maintenance recorded.

(i) A secondary stunning device, and backup, shall be available at the bleeding station at all times. These devices should be checked and cleaned at least weekly, and the routine maintenance recorded.

(j) At least one loaded portable stunning device shall be available at all times for use in pens, ramps, driveways, and unloading areas. This device shall be checked and cleaned at least weekly, and the routine maintenance recorded.

(k) All establishment personnel working with live animals shall be trained in humane handling procedures prior to first coming in contact with any animal and at least every six months thereafter. This training shall be recorded, and the record shall be available to inspection personnel.

313.3 Humane handling plan

(a) Every establishment that slaughters animals covered by this part shall conduct an analysis of potential risks to the wellbeing of animals during the slaughter process.

(1) Every establishment shall develop and implement a written humane handling plan to cover each risk identified in §313.3(a). The plan shall reflect a systematic approach to humane handling and should include the following:

(i) Routine training of personnel in humane handling procedures;

(ii) Maintenance of pens, ramps, and driveways to prevent animal injuries, slips and falls;

(iii) Methods of unloading, moving, and driving animals to avoid excitement and discomfort;

(iv) Measures for inclement weather;

(v) Means of supplying water to all animals in holding pens, and feed if held longer than 24 hours;

(vi) Maximum pen stocking density to allow sufficient room for animals held overnight to lie down;

(vii) Methods of handling disabled and suspect animals;

(viii) Choice of proper stunning device with regard to kind, breed, size, age, and sex of the animal, and the training of personnel in proper use of the device(s);

(ix) Methods of proper restraint for effective stunning;

(x) Means of determining sensibility in animals and the training or personnel in determining sensibility;

(xi) Routine maintenance and testing of stunning equipment to prevent equipment malfunction;

(xii) Maintenance of back-up stunning devices for use in the stunning area and in holding areas of the plant; and

(xiii) Appropriate response to equipment malfunction and stunning failure.

(b) The humane handling plan shall be dated and signed upon initial acceptance by FSIS officials and upon any modification.

(1) Every establishment shall reassess the adequacy of the humane handling plan at least annually and whenever any changes occur that could affect the analysis of animal welfare risks or alter the humane handling plan.

(c) The humane handling plan and all records required by this part shall be available for official review and copying.

313.5 Chemical – carbon dioxide

(b)(1)(iii) Flow of animals into and through the carbon dioxide chamber is dependent on one operator. The operation or stoppage of the conveyor is entirely dependent upon this operator. It is

necessary that he be skilled, attentive, and aware of his responsibility. Over-dosages and death of animals can be brought about by carelessness of this individual. All establishment personnel operating carbon dioxide stunning equipment shall receive training in the proper usage, testing, and maintenance of the equipment, as well as in signs of insensibility in animals stunned by carbon dioxide. This training shall be recorded, and the record shall be available to inspection personnel.

313.15 Mechanical – captive bolt

(b)(1)(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 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. They must be test fired and cleaned on each slaughter day that the device is in use, and at least weekly when the device is not in use. Equipment maintenance and testing shall be recorded.

(b)(1)(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. All establishment personnel operating captive bolt stunning equipment shall receive training in the proper usage, testing, and maintenance of the equipment, as well as in proper placement of the captive bolt and signs of insensibility in animals stunned by captive bolt. This training shall be recorded, and the record shall be available to inspection personnel.

(b)(1)(v) Guidelines shall be posted in the stunning area regarding the appropriate detonating charge and proper placement of the captive bolt for all species of animals slaughtered at the establishment.

313.16 Mechanical – gunshot

(b)(1)(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. They must be cleaned on each slaughter day that the device is in use, or as recommended by the manufacturer, and at least weekly when the device is not in use. Equipment maintenance shall be recorded. 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.

(b)(1)(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. All establishment personnel discharging firearms shall receive training in the proper usage and maintenance of the equipment, as well as in proper placement of the gunshot and signs of insensibility in animals stunned by gunshot. This training shall be recorded, and the record shall be available to inspection personnel.

(b)(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.~~ Guidelines shall be posted in the stunning area regarding the appropriate caliber of firearm and ammunition and proper placement of the gunshot with regard to kind, breed, size, age, and sex of the animal to produce insensibility.

313.30 Electrical – stunning or slaughtering with electric current

(b)(1) It is necessary that the operator of electric current application equipment be skilled, attentive, and aware of his or her responsibility. All establishment personnel operating this equipment shall receive training in the proper usage, testing, and maintenance of the equipment.

as well as in signs of insensibility in animals stunned by electric current. This training shall be recorded, and the record shall be available to inspection personnel.

(b)(2) All equipment used to apply and control the electrical current shall be maintained in good repair, and all indicators, instruments, and measuring devices shall be available for inspection by Program inspectors during the operation and at other times. Electrical current equipment shall be tested according to manufacturer's instructions at the beginning of each day that the device will be in use. Equipment testing shall be recorded.

8. Conclusion

Nearly 35 years have passed since USDA last amended its regulations to make slaughter more humane. During that interval tens of thousands of incidents of inhumane handling at slaughter have been observed and documented by inspection personnel at federal and state slaughter establishments. AWI analyzed a sample of more than 1,000 of these incidents to identify the most common causes of inhumane slaughter. This review showed that the most frequent causes of inhumane incidents, not being adequately addressed by current regulations, are: lack of worker training in humane animal handling techniques; lack of backup stunning device; use of inappropriate stunning device; improper shot placement; and lack of routine testing and maintenance of stunning equipment.

AWI's review also showed that repeat violations by individual slaughter establishments is a serious enforcement problem. At present, USDA considers the development and implementation of a written plan for handling and slaughtering animals to be at the discretion of the slaughter plant. Humane handling plans are not required until *after* one or more egregious incidents have occurred, if at all. Moreover, the type of plant least likely to have a humane handling plan is typically the most in need of one.

Regulations of the Humane Methods of Slaughter Act should be amended to require all establishments to develop a humane handling plan, and further amended to address some of the most frequent causes of inhumane handling and slaughter incidents. These changes will significantly reduce the needless suffering experienced by animals at slaughter in the United States, and will also make the slaughter process safer for industry workers and inspection

personnel and bring about improvement of products and economics in slaughtering operations, as intended by the Humane Methods of Slaughter Act.