Amy Cronin, Secretary
Standards Council
National Fire Protection Association
1 Batterymarch Park
Quincy, Massachusetts 02169

July 9, 2012

Re: NFPA 150 Standard on Fire and Life Safety in Animal Housing Facilities
Appeal of Technical Committee Amendment

Secretary Cronin:

The undersigned organizations hereby submit this appeal[1] of the recent June 14, 2012 decision of the National Fire Protection Association (NFPA) Technical Committee to amend its 150 Standard for Fire and Life Safety in Animal Housing Facilities by requiring the installation of sprinkler and smoke control systems in animal housing facilities for Category B animals. These organizations – or their members – own and operate the overwhelming majority of animal housing facilities in the United States that produce or contribute to the production of the livestock and poultry in the United States. These farmers and ranchers are committed to the practice of good animal husbandry, the welfare of the animals in their care, and they take great pride in providing this country with abundant, safe, affordable, and high quality meat, milk and eggs. No one feels the loss of their animals more acutely than them, and no one understands the devastating implications of major fires on their operations. No one has more incentive than they do to protect the health and safety of their animals and in the process their businesses and livelihoods. These producers will be directly affected and harmed by the amended NFPA 150 standard.

The adoption of the amended NFPA standard for livestock and poultry operations would result in enormous costs and significant technical and operational disruptions, with what appears to be little actual or observable benefit to the welfare, health, and safety of the animals. Should NFPA fail to engage fully and properly with agricultural producers like those represented by our organizations, NFPA will be violating its own and other applicable standards for process and will damage the credibility of the NFPA standards setting process for the agricultural community as a whole. For these and other reasons discussed in more detail below we encourage the Standards Council to revoke and remand the amendment to the NFPA 150 standard back to the Technical Committee. The provision merits further investigation, development and work with the agricultural community on reducing and properly managing the risk of fire in animal housing facilities, and we would be happy to engage with the Technical Committee in that work.

The National Pork Producers Council (NPPC) is an association of 43 state pork producer organizations and the voice in Washington for the nation's 67,000 pork producers. The U.S. pork industry represents a significant value-added activity in the agriculture economy and the overall U.S. economy. Nationwide, more than 67,000 pork producers marketed more than 110

[1] In addition to this appeal, on July 2, 2012, the undersigned organizations filed notice of their intent to appeal and requested an opportunity to present this appeal, in person, before the Standard Council during its scheduled meeting over August 7 through August 9, 2012 when this appeal will be heard.

million hogs in 2005, and those animals provided total gross receipts of $15 billion. Overall, an estimated $20.7 billion of personal income and $34.5 billion of gross national product are supported by the U.S. hog industry.

The U.S. Poultry & Egg Association (USPOULTRY) is the world's largest poultry organization, whose membership includes producers of broilers, turkeys, ducks, eggs and breeding stock, as well as allied companies. The Association focuses on research, education and technical services, as well as communications to keep members of the poultry industry current on important issues.

The United Egg Producers (UEP) is a farmer cooperative representing over 80 percent of egg operations nationwide. Our industry is important to national, state, and local economies, supplying approximately 245 eggs per year to each of the nation's 300 million people. The industry produces 77 Billion eggs per year, with nearly 100,000 jobs and nearly $15 Billion demand in the U.S. economy. Most of our producer members own their flocks and do not contract production as is the practice in other sectors of the poultry industry. Most egg production operations are integrated from the point of production through the final marketing of the eggs.

The National Chicken Council (NCC) is a nonprofit member organization representing companies that produce and process over 95 percent of the broiler/fryer chickens marketed in the United States. NCC promotes the production, marketing, and consumption of safe, wholesome, and nutritious chicken products both domestically and internationally. NCC serves as an advocate on behalf of its members with regard to the development and implementation of federal and state programs and regulations that affect the chicken industry.

The National Council of Farmer Cooperatives (NCFC) has been the voice of America's farmer cooperatives since 1929. Its members are regional and national farmer cooperatives, which are in turn composed of over 2,500 local farmer cooperatives across the country. NCFC members also include 21 state and regional councils of cooperatives. NCFC's farmer cooperative members are engaged in every stage of food production and the entire agricultural system, from the inputs that make farming possible to processing or manufacture of wholesale and retail food and consumer products. NCFC values farmer ownership and control in the production and distribution chain, the economic viability of farmers and the businesses they own, and vibrant rural communities.

The National Turkey Federation is the national advocate for all segments of the turkey industry, providing services and conducting activities which increase demand for its members' products by protecting and enhancing their ability to profitably provide wholesome, high-quality, nutritious products.

The American Farm Bureau Federation (Farm Bureau) is the country's largest general farm organization with more than 6.2 million member families nationwide who grow, produce and raise the food, fiber and energy sources that feed, clothe and fuel the U.S. and the world. With farms and ranches in all 50 states as well as Puerto Rico, Farm Bureau represents producers of every size and scale of operation

The National Milk Producers Federation (NMPF), based in Arlington, VA, develops and carries out policies that advance the well-being of dairy producers and the cooperatives they own, some of whom have also separately signed on to this appeal. The members of NMPF's 31 cooperatives, a number of whom are also directly appealing the amended NFPA 150 standard, produce the majority of the U.S. milk supply, making NMPF the voice of more than 32,000 dairy producers on Capitol Hill and with government agencies.

The National Cattlemen's Beef Association (NCBA) is the marketing organization and trade association for America's cattle farmers and ranchers. With offices in Denver and Washington, D.C., NCBA is a consumer-focused, producer-directed organization representing the largest segment of the nation's food and fiber industry. NCBA represents tens of thousands of America's farmers, ranchers and cattlemen who provide much of the nation's supply of food. Its members are proud of their tradition as stewards and conservators of America's land, and good neighbors to their communities.

The farms and ranches owned by the members of these organizations include the overwhelming majority of those that meet the definition of both NFPA Class 1 Facilities, such as livestock, poultry and dairy barns, and the corresponding Category B animal housing facility as defined by NFPA 150. They seek to appeal the decision to amend the NFPA 150 standard and focus on the following five major areas of concern:

I. The failure to properly and fully meet applicable NFPA and American National Standards Institute (ANSI) due process standards in several critical areas;
II. The lack of an applicable, substantively rigorous documented record of fire issues at livestock and poultry operations capable of supporting the decision to call for the sector-wide adoption of sprinklers;
III. The estimated billions of dollars for the installation and maintenance costs of these sprinkler systems, and the fact that these costs are not balanced by any meaningful fire risk management benefits for the animals and the producers' operations;
IV. The apparent physical and technical impracticability, for significant majorities of livestock and poultry producers, of complying with the amended NFPA 150; and
V. The tremendous risk of real harm to the health and biosecurity of their animals, particularly in light of the corresponding NFPA 25 inspection standards.

Background on Action

NFPA 150 defines two classes of animals:

> **6.3.1.1. Category A**. Category A animals shall include any of the following types of animals:
> **(1)** Animal(s) that pose a potential risk to the health or safety of rescuers or the general public
> **(2)** Animal(s) that cannot be removed without potential risk to the health and welfare of the animal or other animals
> **(3)** Animal(s) that are impossible or impractical to move
> **(4)** Animal(s) that are not mobile or within a mobile enclosure.

6.3.1.2 Category B. Category B animals shall include all animals not in Category A, as specified in 6.3.1.1.

On June 14, 2012 at the NFPA Association Technical Meeting, NFPA's Technical Committee adopted a floor motion, by an apparent vote of 126-46, to amend the NFPA 150 standard. This expands the requirement for sprinkler and smoke control systems in animal housing facilities from just those holding Category A animals, to also include facilities housing Category B animals which includes every single facility that houses an animal. This substantial expansion, therefore covers far more animal housing facilities than had been previously covered, including expanding NFPA 150 to cover nearly every single livestock farm in the United States.

Prior to its floor vote, the NFPA Technical Committee on Animal Housing Facilities also considered the amendment. In that action, following a submission that focused on the damage caused by a number of fires at horse stables, the Technical Committee on Animal Housing Facilities unanimously rejected (with one member abstaining) the proposal stating the need to seek "public input on the recommendation to require sprinklers for both Category A and B animals."

It is our understanding that following the June 14, 2012 floor approval by the full NFPA Technical Committee, two actions took place. First, the amendment was referred back to the Technical Committee on Animal Housing for further consideration. Second, a 20 day calendar for filing notice of the intent to appeal the June 14, 2012 Technical Committee approval to the NFPA Standard Council began running, with the deadline for filing notice of the intent to appeal expiring on July 4, 2012. NFPA staff has indicated to us a deadline of July 9, 2012 for filing this actual written appeal, which will be addressed at the Standards Council meeting on August 7th through 9th, 2012.

Farmers and Ranchers and Fire

Farmers and ranchers can only succeed in their chosen life's work and as business people if their cattle, pigs, chickens, turkeys and other livestock are healthy and productive. No one has more incentive than a farmer or rancher to ensure that effective, sensible fire safety measures and procedures are in place on their operations. Farmers and ranchers and their families invest a great deal of themselves into raising and maintaining their animals, and they love to see them thrive. No one feels their loss due to accident, operational errors, disease or fire more acutely than them. Furthermore, put simply, fire is very bad for business. When animals perish, the meat, milk, or egg production from them ceases, customers become dissatisfied and must look for other suppliers, and businesses and livelihoods that have taken many decades and often many generations to build are put at risk. This hard reality helps ensure that the health, welfare and safety of our members' herds or flocks, including protecting them from the risk of fire, is always foremost in their minds.

This reality has implications, we feel, for how NFPA should best work with farmers and ranchers. It bears stating the obvious; most every member of the undersigned organizations has been engaged in raising and caring for animals, and sustaining, growing and caring for successful agricultural businesses. It is highly disconcerting for many producers when outside parties come to them and say that "you are not raising your animals or managing your businesses correctly and we are going to dictate to you how to do it right." Unfortunately, if NFPA does adopt this new

fire sprinkler standard, given the lack of open and constructive engagement with farmers and ranchers to this point, it is almost unavoidable that farmers and ranchers will be highly offended by your actions. This is not to say that farmers' and ranchers' fire risk management strategies and programs cannot be improved. Fires do happen, and animals are lost, and it is likely that fire safety practices can be improved in many instances. The fact is that producers are generally very open to learning from experienced professionals such as those in the fire protection industry about how they can do better and be more successful. Were NFPA to approach producers' with open minds about their operations, an offer to share your expertise to see if fire risk management might improve their animal husbandry practices, and a willingness to learn from the producers themselves, something very positive and useful could be the result.

We ask that you bring this perspective to the issues we discuss below.

Discussion of Six Major Concerns

I. The amendment process to this point has failed to meet proper and applicable NFPA and American National Standards Institute (ANSI) due process standards in at least six of seven critical areas.

The essential principal of due process is fairness. In order to satisfy the basic elements of due process, an entity must be given adequate notice and an opportunity to be heard. It is not a guarantee of an outcome, but instead a basic requirement that a proceeding be conducted in a fundamentally fair manner. While satisfying these elements is always important, from our perspective it is critical in this particular instance that NFPA exert special efforts to meet these requirements. These sprinkler measures would be pervasive in their applicability, have major and daunting technical problems for the entire sector that are as yet not properly understood or resolved, involve staggering costs in the billions of dollars, entail significant ancillary but direct health and welfare risks to the animals, and are clearly novel to animal agriculture sector. Looked at from the perspective of national policy, NFPA is considering an action that could have enormous negative effects on more than half of the Nation's food production system that is helping to feed a half a billion people or more today and will be called upon to help feed approximately a billion or more people by 2050. Only through an exceptionally well-informed and thoughtful process can NFPA be sure that it has adopted the correct standard in this instance. As a matter of fairness and good policy-making, there simply are **no** acceptable reasons for short-cuts or half measures in due process.

We recognize that we are not telling the NFPA something that it does not already fully understand as a matter of general policy. NFPA's "Guide for the Conduct of Participants in the NFPA Codes and Standards Development Process" states that "[p]articipants should encourage full participation in the Codes and Standards Development Process by *all interested persons*, and they should encourage and facilitate the full and open dissemination of *all* information necessary to enable full and fair consideration of *all points of view*." Only when all interested and affected parties are present and can participate will NFPA be able to properly judge the proposed changes and develop the best possible fire safety standards. Additionally, NFPA recognizes in its "Introduction to the BFPA Codes and Standards Process" that due process and fairness are of upmost importance throughout the codes and standard development process.

Finally, Step 4 of the NFPA standards development process includes the ability of stakeholders and other interested parties to appeal decisions to, amongst other reasons, assure that "all NFPA rules have been followed and that due process and fairness have been upheld throughout the standards development process."[2] This isn't surprising, because in order to develop the best standards possible, NFPA must have all the relevant and important information before it. And, as this appeal will demonstrate, when vital information is lacking, the NFPA is at risk of developing inappropriate standards.

Furthermore, NFPA is a member of ANSI and plays leadership roles in that organization. As expected, NFPA's due process standards mirrors ANSI's, which state that it means "any person (organization, company, government agency, individual, etc.) with a direct and material interest has a right to participate by: a) expressing a position and its basis, b) having that position considered, and c) having the right to appeal. Due process allows for equity and fair play."[3] ANSI establishes seven minimum acceptable due process requirements for the development of consensus: openness, lack of dominance, balance, coordination and harmonization, notification, consideration of views and objections, consensus vote, and appeals. The NFPA process on this amendment to date has failed with respect to the notification standard, which in turn and by and large means that the minimum elements dealing with openness, consideration of views, and balance could not be met. Lastly, we have serious issues with the schedule of this appeals process itself.

Notification—None of the national animal agricultural organizations were aware of the multi-year process in which the NFPA 150 Technical Committee was engaged on this matter, and it was only a few days before the June 2012 Association Technical Meeting in Las Vegas before the first of us learned of the motion to be entertained there. The ANSI standard says that "standards activity shall be announced in suitable media as appropriate to demonstrate an opportunity for participation by all directly and materially affected persons" We are unaware of any suitable notification having been given in the print or electronic media commonly read by members of the animal agriculture community. Neither was there any direct outreach to any of the national agricultural organizations.

As a result, it is clear that the farmers and ranchers who operate and maintain livestock housing facilities were neither informed of the NFPA's action nor provided an opportunity to participate. While a 2011 meeting of the NFPA 150 Technical Committee included a representative from the Rhode Island Farm Bureau, and the comments offered by the farm bureau representative appear to have been thoughtful and accurate, there is no way that person could fully and properly represent wide-ranging and complicated fire management interests of the producers in the states where animal agricultural production takes place.

Openness and Consideration of Views—One of the results of the lack of notification was to make it impossible for this process to effectively conform to the "openness" element of the ANSI due process standard ("Participation shall be open to all persons who are directly and materially affected by the activity in question."). Similarly, the lack of notification means that there was no effective mechanism for the consideration of animal agriculture's views, as they

[2] See generally www.nfpa.org/ Step 4: Council Appeals and Issuance of Standard

[3] See "ANSI Essential Requirements: Due process requirements for American National Standards," January, 2012, page 2. Each of the subsequent references to the ANSI due process standards are found in this same document and location.

could not participate ("Prompt consideration shall be given to the written views and objections of all participants…"). While we have learned that this process, including the voting at the June 2012 Association Technical Meeting, was open to non-NFPA members, this openness is meaningless if essentially the entire body of the stakeholders most affected by the decision has no idea that the process is underway.

Furthermore, much of the internal documents prepared for the NFPA's deliberations, and therefore necessary to the effective participation in the NFPA 150 amendment process (as well as in this appeal), simply are not open to stakeholder review. For instance, in preparing this appeal we learned that the NFPA staff prepared and issued a report in June presenting what appears to be a narrow snapshot of fire incidents in animal agriculture. But that report is only available to NFPA members and cannot be reviewed by us or any other NFPA non-member. This lack of openness means that we cannot provide you with comments or views on this record. Lastly, when we made our initial phone calls to the NFPA national office to seek information about this process, we were told that unless we were current, dues paying, NFPA members we would not be able to speak with technical staff about the matter. Fortunately, we persisted and found staff contact information that didn't involve going through the switchboard. That staff, when contacted, was more than willing to share information with us and provide assistance in understanding the complex NFPA rules and procedures. But certainly, the initial reaction we received from the NFPA front office was deeply troubling and automatically raises concerns about the openness of this process.

Balance—ANSI's standard says that "Participants from diverse interest categories shall be sought with the objective of achieving balance. If a consensus body lacks balance in accordance with the historical criteria for balance, and no specific alternative formulation of balance was approved by the ANSI Executive Standards Council, outreach to achieve balance shall be undertaken." It is our understanding that NFPA conducted no active outreach to any of the national animal agriculture organizations or their producer members in the major agricultural states. Certainly, the composition of the Technical Committee itself reflects a total lack of balance, lacking participants from commercially sized animal agriculture facilities. Instead the committee is made up of fire safety professionals, engineers, consultants, advocates, equipment and materials manufacturers, installers, inspectors, academics, medical and research lab operators, insurance specialists, marshals, and equestrian center operators. We do not mean to imply that the committee make-up led it to an incorrect decision, as the opposite is what occurred. The committee appears to have had a very thoughtful consideration of the merits and demerits of requiring sprinklers in animal houses and properly tabled the proposal for further study and fact finding. The point is, this lack of balance resulting from the failure to conduct outreach to the major animal agricultural interests prevented the NFPA 150 Technical Committee from being able to gather an even more accurate, extensive base of information, data and analysis that animal agriculture would have provided had it been involved. Without that record, the NFPA Association Technical Meeting did not have before it all of the relevant facts and analysis that could help ensure their vote on the floor was as informed as possible.

Appeals—ANSI calls for "an identifiable, realistic, and readily available appeals mechanism" and that procedural appeals "include whether a technical issue was afforded due process." We note and object to the fact that we are forced to submit to you this appeal without knowing the outcome of the final procedural disposition of this matter. This process is illogical and confusing and simply not conducive to thoughtful consideration of the matters before you.

The NFPA procedures require notice of an intent (NOI) to appeal, if any, within 20 days of the outcome of the floor vote of the Annual Technical Meeting. In this instance, that appeal needed to be sent to you, the Standards Council, on or before July 4, 2012 (a national holiday). Yet the floor vote does not really represent an appealable decision until the applicable technical committee approves or disapproves of the amendment. We also understand that, according to the NFPA procedures, should the NFPA 150 Technical Committee vote to disapprove the amendment, the NFPA members would have 20 days from that date to file their appeal with you. But should the NFPA 150 vote to approve the amendment, our NOI has to have already been submitted by July 4, 2012 and our appeals document by July 9, 2012. Yet, to our knowledge, the NFPA 150 Technical Committee's voting procedure has not yet even completed as of today (July 9, 2012), and so we do not really know at this point whether our appeal is even needed! Of course, above and beyond all of this is the highly problematic situation where our organizations have been aware of these developments for only approximately 30 days and are now having to engage with NFPA at the last minute with an incomplete record. This is unacceptable.

II. The NFPA does not have an applicable, substantively rigorous documented record of fire issues at livestock and poultry operations capable of supporting the decision to call for the sector-wide adoption of sprinklers.

In so far as the NFPA 150 Technical Committee deliberations are concerned, the focus appears to have been primarily on the record of risk to horse stables[4]. Indeed, the "Report on Comments" presents three specific examples that call for the need for more vigilance within the horse racing industry, two separate incidents in 2009 at stables in Chesapeake City, Maryland and Lebanon, Ohio, which resulted in the tragic loss of two humans and 50 animals. The substantiation further explores a May 10, 2010 fire that broke out at a racetrack stable where 40 animals were seemingly saved because of the presence of fire sprinklers. While that record may indicate a need to consider the use of sprinklers for horse barns and stables, what it fails to do is justify the need for the same standard to be applied to the nation's supply of livestock and poultry raised for food.

Yet, by its nature and express wording, the amended NFPA 150 will indeed cover not just horse stables but also swine and dairy barns, cattle feedlots, and poultry housing without any evidence of the necessity of undertaking those actions. These operations, raising livestock and poultry for food purposes, are not unsurprisingly, operated in a much different fashion than a horse stable. As explained more fully below, by failing to narrowly tailor the amended NFPA 150 language to just cover horse stables and other facilities that actually remain at risk, the amended standard not only imposes substantial costs with little evidence of actually addressing a real risk but it also imposes a requirement that risks causing substantial harm to the health and biosecurity of these farm animals, and that in much of the country will be difficult to achieve due to the scarcity of water resources.

This was a situation that the Technical Committee on Animal Housing Facilities obviously understood, as it clearly stated in its initial rejection of the NFPA 150 Amendment that the Committee needed to seek public input, in the form of further data and information on its need, prior to making a final decision. We fully agree with the sentiment expressed by the Technical Committee on Animal Housing Facilities, and are eager to work with the NFPA, its

[4] June 15, 2012 Memorandum from Tracy Golinveaux

Technical Committees and the Standards Council on fully exploring the options for reducing and eliminating the risk of fire in animal housing facilities.

As we noted above, NFPA issued a report in June 2012 (Structure Fires in Barns, by Ben Evarts) almost 12 months after the NFPA 150 Technical Committee had completed its Report on Comments and voted on its recommendations. That report is not available to non-NFPA members and so it is impossible at this time to properly review and comment on it. We note with some concern, though, that as a matter of due process and NFPA procedures for the consideration of amendments, the timing of this report is irregular. We would ask the Standards Council that if the report is going to somehow figure into your deliberations that we be given a copy and a fair and sufficient amount of time to review and assess it and prepare comments for your consideration.

Among the signatories to this appeal, the egg producers have been able to prepare a good, preliminary start of a record of fire incidents at layer facilities in the US. Their data indicates that significant fire incidents involving laying hens are exceedingly rare in light of the number of laying hens in production over the analysis period and the number of egg laying farms across the US.

The egg laying hen data were gathered from one of the primary property insurance companies working with egg producers. Approximately 65% of the egg-laying hens in the US are insured by this firm, and so their dataset is reasonably representative of the egg laying industry as a whole. The data are from 2000 to the present. From this data, we estimate that for the industry as a whole there were approximately 45 incidents over that period, or about four hen house fires a year. More than half of these fire incidents did not result in any bird fatalities, and of those incidents that did, they involved the loss of about .01% of the 12 billion hens and pullets under management over this period. This is in an industry that is managing several thousand hen houses at some 240 locations and at which 290 million layers and more than 700 million pullets are being housed at any one time.

We do not yet have comparable figures for the other species. It is our hope and intention to be able to present to you at your meeting in August additional fire incident data from other species as there simply was not the time to do so before this appeal was to be filed. Fires at animal agriculture facilities clearly are happening, but not all of these involve animal houses and not all of the animal house fires involve animal fatalities. But based on the anecdotal and expert opinions and views we have gathered, we do not expect the number or relative effects of fire to be all that different from that reported for the egg industry. There are literally hundreds of thousands of animal houses in this country, and billions of animals of various ages and stages of production being managed at any one time at these farms and ranches. Fire happens, but it appears to be rare and involves only a very small fraction of the animals and houses. This should not be surprising, for as we noted above no one feels the loss of these animals more acutely, or has as much incentive and reason to keep fire from happening, than the producer.

For example, after noting an increasing in the incidence of explosions and flash fires at deep pit barns (animal housing facilities where the manure passes through slots in the floor and is stored in deep pits under the barns) the U.S. Pork industry conducted a scientific and literature review to identify the cause of the problem and suggest best management practices designed to

eliminate it. The report, issued December 21, 2009 by the National Pork Board[5], found that "methane was the only one of the three combustible gases that was reported as being measured at concentrations high enough to combust. Additionally, the lower explosive limit for both Hydrogen Sulfide and Phosphine are far above the toxic level of these gases for both swine and humans. As such, animal death would occur before either Hydrogen Sulfide or Phosphine reaches combustible levels within swine facilities." Indeed, the report also found that "the majority of the reported flash fires and explosions were noted to have occurred during periods when pit-fans were not being operated" and that "many of the reported flash fires and explosions have been reported to have occurred when no animals were in the barns and ventilation was at minimal levels." It went on to suggest common sense best management practices at deep pit barns, including to continue to operate ventilation fans even when animals were not present.

The fact is, though, that NFPA has not itself considered this kind of record in its deliberations over amendments to NFPA 150, and that must be done. Certainly, at a minimum this data indicates that more detailed information must be gathered, assessed and analyzed before any decision is made to require sprinklers in these houses, particularly in light of their significant costs and ancillary problems that could be expected from their operation. Requiring fire sprinklers in these facilities may be entirely the wrong course of action.

III. The installation and maintenance of these sprinkler systems could easily entail billions of dollars in costs, and these costs are not balanced by sufficient fire risk management benefits for the animals and the producers' operations.

Our review of the popular and commercial literature about fire sprinklers reveals there is widespread disagreement as to the capital and installation costs for sprinkler systems.[6] Costs per square foot for the simpler residential wet systems seem to range from $.50 to $5 or $6. Costs for commercial wet systems are apparently higher on average than for the residential systems. More expensive yet are the more complex dry systems, and the popular literature discusses them being generally twice the cost of the wet systems, and significantly more expensive to maintain. More expensive yet are dry systems where there are no public water supplies, and relatively low flow well water systems, which require the possible installation of new wells, new pumps, new water storage and fire ponds, etc. We assume that the simple capital and installation costs for a dry system's hardware ranging could range $5 to $10 per square foot or higher. This excludes the major costs for water supply development, pumping and storage, which we don't estimate here.

Using this cost figure and using simple rough estimates of the square footage requirements for the housing of the laying hens, broiler chickens, turkeys, lactating dairy cows, and finishing swine, in production at any one time, it is possible to create a **very** rough estimate of at least some of the costs for an industry-wide dry system. (Beef cattle are not included here as the vast majority of beef cattle are finished in open lots, although the trend in the Corn Belt is to raise these animals in covered facilities and there would be real costs for these producers as well.) This rough estimate will be vastly lower than the actual, given the excluded water

[5] "Literature Review – Deep Pit Swine Facilities Flash Fires and Explosions: Sources, Occurrences, Factors and Management" Robert Burns, PhD, P.E., Lara Moody, P.E., Ross Muhlbauer December 21, 2009

[6] See for example http://www.finehomebuilding.com/item/16704/getting-on-board-with-fire-sprinklers, and also http://en.wikipedia.org/wiki/Fire_sprinkler_system.

development, pumping and storage costs, given that we exclude ongoing maintenance costs, the fact that costs for housed beef cattle are not included, and the fact that we exclude here the much larger (by a factor of two to three times or more) number of animals being raised to replace the mature animals when they reach the end of their production life, as most of these replacement animals are housed as well. Using just this more limited cost figure and applying it to just the mature animals and using standard per animal square footage figures, we estimate that these basic, industry wide installation costs would range from $13 to $26 billion. The actual costs, taking into account the excluded costs noted above would appear to increase this figure by a factor of ten more (fire officials in Iowa have told us that in their state alone they estimated the cost to Iowa producers to be tens of billions or more)

IV. For significant majorities of livestock and poultry producers, compliance with the amended NFPA 150 is highly impractical.

We also worry about the practicality of these systems, and the enormous installation and maintenance costs that those issues would generate. A large majority of the commercial animal agriculture operations today do not currently have sufficient water supply available to service an automatic sprinkler system, so the estimated cost of such a project would need to reflect the use of dry systems, with its multiple fire zone management approaches, the cost of the storage tanks and fire pumps, the digging and maintenance of additional wells, and fire ponds, and a number of other measures that that would be necessary to make such systems operable. We worry about the care and maintenance of the dry sprinkler systems themselves, and in particular we worry about the maintenance of these sprinkler heads in animal houses that have a considerable quantity of dust that requires frequent mechanical ventilation to manage.

V. The installation of fire sprinklers and their operation, maintenance and inspection creates significant, new, risks of harm to the health and biosecurity of livestock and poultry, particularly in light of the corresponding NFPA 25 inspection standards.

We have very practical concerns with the possibility of false alarms and the release of significant quantities of water onto the animals and equipment. False alarms resulting in sprinkler activation, or general malfunctions leading to leaking would introduce uncontrolled moisture into the houses, creating vectors of disease and infection (flies, bacteria, others) as well as the simple, greater physiological challenges for wet animals. Furthermore, a large proportion of these livestock and poultry operations are also strictly regulated under the federal Clean Water Act or similar state authorities by which they are held to a "zero water discharge" standard. They are designed to keep rain water away from our animals and their manure to prevent the movement of contaminated stormwater to rivers, streams and lakes. A sprinkler malfunction could lead to contaminated waters leaving the facilities and potentially exposing producers to serious Clean Water Act liabilities. Equipment would be damaged and maintenance costs will go up should these sprinklers be set off in false alarms.

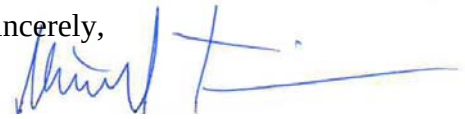
Perhaps, most significantly, are the biosecurity risks to these animals. Modern animal agriculture operations have developed and strictly follow biosecurity protocols to minimize the risk that diseases will be transmitted from flock to flock or herd to herd. The single largest such vector is human beings and their vehicles. These protocols commonly dictate who can enter the animal houses, how many days there must be between a visit to another flock or herd, whether they need to shower otherwise clean themselves before entry, and what they must wear. We

understand that the NFPA 25 requires quarterly inspections by a qualified official of these sprinkler systems, which would of course be located inside the animal houses. Normal biosecurity protocols require up to 72 hours between visits to herd or flocks. We also have questions as to the possible biosecurity risks created by the sprinkler water itself in the case of accidental release, and whether these risks would create the need to treat the sprinkler water.

For this and all the reasons cited above, we strongly urge NFPA not to adopt this fire sprinkler amendment to the NFPA 150, and to return to the course of action that the NFPA 150 Technical Committee wanted to adopt before the floor vote in Las Vegas last month; to seek more and in-depth information from livestock and poultry producers and other stakeholders, learn more about the costs and specific technical challenges involved in these measures, conduct the appropriate analysis and then make a decision. We stand ready to work with the NFPA 150 Technical Committee on this and encourage you to adopt this course of action.

Sincerely,

Sincerely,



Michael C. Formica
Chief Environmental Counsel
National Pork Producers Council
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On behalf of,

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US Poultry and Egg Association
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National Chicken Council
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National Cattlemen's Beef Association
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National Council of Farmer Cooperatives
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National Turkey Federation
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National Milk Producers Federation
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Dairy Farmers of America
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Select Milk Producers
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St. Albans Cooperative Creamery
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Northeast Dairy Farmers Cooperatives
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Cc: Thomas Vilsack, Secretary United States Department of Agriculture
Senator Deborah Stabenow, Chair, United States Senate Committee on Agriculture, Nutrition and Forestry
Congressman Frank Lucas, Chair, United States House of Representatives Committee on Agriculture
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Tracy Golinveaux, NFPA Staff
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