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October 2, 2015

Docket APHIS-2015-0058
Regulatory Analysis and Development, PPD
APHIS, USDA
Station 3A-03.8
4700 River Road Unit 118
Riverdale, MD 20737-1238

Submitted via www.regulations.gov

RE: Environmental Assessment: High Pathogenicity Avian Influenza Control in Commercial Poultry Operations—A National Approach (Docket APHIS-2015-0058)

To Whom It May Concern:

The Animal Welfare Institute (AWI) appreciates the opportunity to comment on the July 2015 Environmental Assessment: High Pathogenicity Avian Influenza Control in Commercial Poultry Operations—A National Approach (hereafter referred to as "the EA"). Since its founding in 1951, AWI has been dedicated to alleviating suffering inflicted on animals by people, and continually works to improve conditions for the billions of animals raised and slaughtered each year for food in the United States. Consequently, AWI is very concerned about the impact on animal welfare of both avian influenza and the methods used to control it.

After review of the EA, AWI opposes the Finding of No Significant Impact, as discussed below.

Humaneness of the Methods Used to Kill Birds Impacts the Human Environment

The EA presents two possible methods of killing birds—carbon dioxide (for caged hens) and water-based foam (for floor-reared birds, including meat chickens, turkeys, and ducks).[1] The impact of these methods on the human environment, including effects on worker health and air and water quality, are very briefly addressed in the EA.[2] While the suffering of animals in itself is not considered an environmental impact, the perception of animal suffering by humans most certainly is. In fact, the potential psychological impact of killing and disposing of large numbers of birds is acknowledged by the EA.[3] Numerous public opinion surveys have documented consumer concern for the welfare of animals raised for food and the desire that they be treated

[1] EA at p. 26.
[2] EA at pp. 26-27, 31.
[3] "The sights and odors from a large number of carcasses can be emotionally upsetting to humans because human sympathies and compassion are invoked." EA at p. 31. "The general public is likely to be impacted if pictures of dead poultry permeate the public media." EA at p. 32.

humanely.[4] Therefore, the manner in which birds are killed has the potential to impact not only the producers and depopulation workers directly involved, but the American public as well.

Water-Based Foam is NOT a Method of Humane Euthanasia

AWI recognizes that the purpose of mass depopulation differs from euthanasia. However, this does not suggest that animal welfare concerns should not be addressed in depopulation, or that the manner of killing may be characterized as "humane" when it is not. The EA states that carbon dioxide and water-based foam are "humane" but offers no substantiation or source for this determination.[5] In fact, this position is contradicted by the American Veterinary Medical Association, which "currently considers that destruction of poultry using water-based foam is a method of mass depopulation and not a form of euthanasia."[6] Moreover, water-based foam is not recognized as a method of killing animals for disease control purposes by the World Organization for Animal Health ("OIE").[7]

Research into the impact of water-based foam on the welfare of birds is limited to a few studies[8] conducted by faculty and students at the University of Delaware, which has an obvious conflict of interest on the subject, given that it holds a patent on the method and device.[9] Water-based foam is not considered a method of humane euthanasia because the action is via airway obstruction, which is inherently stressful.[10] A.B.M. Raj, who has conducted research into methods of euthanasia and depopulation, notes "occlusion of the trachea would be equivalent to death by drowning or suffocation, which are not recognized as humane killing methods under European legislation governing the welfare of animals at the time of slaughter or killing, or under the World Organisation for Animal Health (OIE) guidelines on the killing of animals for disease control purposes."[11] He concludes that water-based foam is unlikely to be an acceptable method of killing poultry in the United Kingdom on animal welfare grounds.[12] In addition to the manner of death being stressful, the time to death in some species may be excessive. For

[4] See AWI, Consumer perceptions of farm animal welfare, Aug. 2015, https://awionline.org/sites/default/files/uploads/documents/fa-consumer_perceptionsoffarmwelfare_-112511.pdf.
[5] EA at p. 6.
[6] AVMA, Poultry depopulation (policy statement), (no date).
[7] OIE, Killing of animals for disease control purposes, Terrestrial Animal Health Code, Chapter 7.6, July 2015.
[8] Rankin MK (2010), Comparison of water based foam and inert gas emergency depopulation methods of turkeys (Master's thesis), Univ. of Delaware, 62 pp; Benson ER et al. (2009), Use of water-based foam to depopulate ducks and other species, Poultry Science, 88, 904-910; Benson E et al. (2007), Foam-based mass emergency depopulation of floor-reared meat-type poultry operations, Poultry Science, 86:219-224.
[9] Methods and devices for depopulating avian species, US 7435166 B2, https://www.google.com/patents/US7435166.
[10] AVMA, Poultry depopulation (policy statement), (no date). See also Raj ABM, Smith C, and Hickman, G (2008), Novel method for killing poultry in houses with dry foam created using nitrogen, Veterinary Record, 162, 722-723.
[11] Ibid.
[12] Ibid.

example, research conducted by E.R. Benson et al. documented a maximum time to death of more than 10 minutes for ducks.[13]

Potentially More Humane Methods of Killing Have Not Been Considered

AWI does not support the use of methods that would reasonably be expected to cause significant pain and distress or result in prolonged times until death. Consistent with published methods of mass depopulation, death should occur within 5 minutes for at least 95% of the target population. In addition, any method used should cause minimal pain and distress. As noted in the prior section, water-based foam may not meet these criteria. The other method discussed in the EA, carbon dioxide inhalation, is known to be painful when exposed to mucosa.[14] Further, improper use of the gas can lead to a prolonged time until death.[15]

Given concerns about both of the depopulation methods proposed in the EA, it is imperative that APHIS consider other options that might offer a less stressful death for birds. One such method is dry foam containing nitrogen or other inert gases. The mode of action for gas-filled foam is anoxia, not occlusion of the airway.[16] Preliminary research with nitrogen-filled foam shows promise in decreasing the stress of deployment and the time required to deploy. A small preliminary study conducted in the laboratory by Raj et al. used dry foam filled with nitrogen and a control foam made with atmospheric air. Birds exposed to foam made with air remained alive and conscious for the duration of the test period, while birds exposed to foam containing only nitrogen died within seconds.[17] A subsequent pilot study by McKeegan et al. also documented positive findings for gas-filled foam. Mean time to loss of consciousness was 30 seconds in hens and 18 seconds in meat birds with nitrogen-filled foam, and 16 seconds in broilers, 1 second in ducks, and 15 seconds in turkeys exposed to carbon dioxide-filled foam.[18] According to the researchers, "these trials provide proof-of-principle that submersion in gas-filled, high expansion foam provides a rapid and highly effective method of euthanasia, which may have potential to provide humane emergency killing or routine depopulation."[19]

Design and Construction of Bird Housing Should Accommodate Animal Welfare

The killing of millions of sentient creatures using methods known to cause prolonged distress is a moral tragedy of immense proportions. The poultry industry is well aware that the need to depopulate birds occurs periodically; yet, it continues to design and construct massive buildings that confine tens of thousands of birds without consideration being given to how the animals

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[13] Benson ER et al. (2009), Use of water-based foam to depopulate ducks and other species, Poultry Science, 88, 904-910. See also Benson ER and Alphin RL (no date), How long does it take? (slide 7), Depopulation and In-house Composting, University of Delaware.
[14] AVMA, Guidelines for the euthanasia of animals: 2013 edition, p. 24.
[15] AVMA, Guidelines for the euthanasia of animals: 2013 edition, p. 26.
[16] McKeegan DEF et al. (2013), Physiological and behavioral responses of poultry exposed to gas-filled high expansion foam, Poultry Science, 92, 1145-1154.
[17] Raj ABM, Smith C, and Hickman, G (2008), Novel method for killing poultry in houses with dry foam created using nitrogen, Veterinary Record, 162, 722-723.
[18] McKeegan DEF et al. (2013), Physiological and behavioral responses of poultry exposed to gas-filled high expansion foam, Poultry Science, 92, 1145-1154.
[19] Ibid.

will be protected in emergency situations, or humanely killed if that is deemed necessary. The federal Animal Health Protection Act gives APHIS the authority to regulate animal husbandry practices that could lead to disease outbreaks.[20] AWI encourages APHIS to use this authority to require that all commercial production operations—intensive and extensive alike—be prepared to provide for the welfare of birds in the event of an outbreak.

In conclusion, AWI opposes the Finding of No Significant Impact on the basis that the killing methods identified in the EA have the potential to cause significant animal suffering, which in turn would significantly impact the human environment. In addition, potentially less stressful methods of depopulation have not been considered.

We thank you in advance for consideration of our comments. Please do not hesitate to contact us if we may be of any assistance to you in tackling this issue of great importance to the welfare of billions of birds raised for commercial purposes in the United States.

Dena Jones, MS
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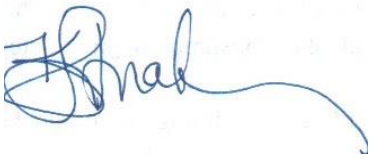

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[20] 7 U.S.C. § 8303.