



United States  
Department of  
Agriculture

Food Safety  
and Inspection  
Service

Office of Policy  
and Program  
Development

George Washington Carver Center  
5601 Sunnyside Ave. STOP 5271  
Beltsville, MD 20705-5271

MAY 25 2010

Hollis Cheek H.  
Techno Catch, LLC  
Hollis Cheek,  
2087 County Road 5257  
Kosciusko, MS 39090

Dear Mr. Cheek:

This letter is in response to your request for a no objection from the Food Safety and Inspection Service (FSIS) for the use of Techno Catch's Low Atmospheric Pressure (LAP) stunning/slaughter system (United States Patent Number 7,662,030 B2) to stun/slaughter poultry (broilers, roasters, mature chickens) at establishments operating under United States Department of Agriculture inspection.

You submitted results of low atmospheric pressure studies by Mississippi State University and Patent 7,662,030 in support of your request (Log Number 07-NT-0289). FSIS, Risk and Innovations Management Division (RIMD) has completed its review of the data and information that you submitted. We find no basis for concern regarding whether the new technology may affect:

1. inspection procedures,
2. the safety of Federal inspection program personnel,
3. adversely affect product safety, or
4. FSIS regulations.

Thus, establishments operating under federal inspection may use low atmospheric pressure stunning/slaughter to slaughter poultry, provided such use is consistent with good commercial practices.

There is no specific Federal humane handling and slaughter statutes for poultry as there is for livestock. However, under the Poultry Products Inspection Act (PPIA) and Agency regulations, live poultry are to be handled in a manner that is consistent with good commercial practices, which means they should be treated humanely. Under the PPIA, poultry products are more likely to be adulterated if, among other circumstances, they are produced from birds that have not been treated humanely. Such birds are more likely to be bruised or to die other than by slaughter. The submitted data and materials support that the Techno Catch's Low Atmospheric Pressure stunning/slaughter system can slaughter poultry consistent with good commercial practices (humanely).

This letter should not be considered as validation of the effectiveness of the LAP stunning/slaughter system in any particular official establishment. In addition, the use of this technology for slaughtering poultry, as described in your notification and the Patent, will need to be factored into the establishment's hazard analysis and if appropriate:

- a) incorporated into a Hazard Analysis and Critical Control Point (HACCP) plan or written Sanitation Standard Operating Procedures (Sanitation SOPs) or other prerequisite program,
- b) validated for its application, and /or
- c) verified on an "on-going" basis that the system is slaughtering poultry consistent with good commercial practices.

In the LAP stunning/slaughter system, poultry are placed into a chamber which is sealed. The pressure in the chamber is reduced at a continuous rate to a target decompression pressure and maintained at the decompression pressure for a period of time until a state of death is obtained. The birds are removed from the chamber and checked for signs of rigor. If not showing signs of rigor, the carcasses are placed on the processing line to be bled. Note: FSIS will condemn carcasses showing signs of an insufficient bleed if they are placed on the processing line.

It is our understanding that exsanguination of the carcasses is expected to be completed within 10 to 15 minutes of death, under normal operations. However, there may be mechanical breakdowns when the time could exceed 15 minutes. When this occurs, any carcass showing signs of rigor will not be placed on the processing line. Mechanical breakdowns and other disruptions in the slaughter and bleeding process should be addressed in the establishment's food safety program and/or Sanitation SOPs.

In addition, it is our understanding that (1) the rate of pressure reduction in the chamber, (2) the time it takes to reach the desired decompression pressure i.e. lapse time, (3) the target decompression pressure, and (4) the period of time the target decompression pressure is maintained may vary between establishments and the geographical location of the establishment. In the way of guidance, Patent 7,662,030 provides expected ranges for these operating parameters, for example:

- (a) the lapse time is typically expected to be from 30 to 120 seconds,
- (b) the most preferably decompression pressure is about 16% to 20% of atmospheric pressure, and
- (c) the preferable holding time at the decompression pressure is 15 to 60 seconds.

To be consistent with good commercial practices, the reduced atmospheric pressure and speed of decompression used by an establishment should result in minimal pain and distress to the birds during slaughter. Thus, the establishment needs to have a continuing program(s) (Prerequisite Program, Sanitation SOPs, or

HACCP) in place that verifies that the parameters they use are consistent with good commercial practices. Such may require a device such as a video camera in the chamber that allows direct observation of the birds during slaughter or an indirect method that correlates wing damage, inadequate bleed, and or rigor with minimal pain and distress, i.e. good commercial practices.

The establishment needs to discuss plans to use this irreversible stunning method with FSIS inspection program personnel (IPP) prior to its implementation. Training/orientation should be provided to FSIS IPP prior to implementation. In addition, establishment and FSIS employee safety need to be addressed in an establishment's program.

Future changes or revisions in Techco Catch's Low Atmospheric Pressure stunning/slaughter system or its application, for example to other types of poultry, should be submitted to RIMD as a revised notification in order for FSIS to review and evaluate the system. Such changes or revisions should not be implemented until FSIS issues a "no objection" letter.

As described in the Federal Register Notice Vol. 70, Number 201: Pages 60784-60786, dated October 19, 2005, FSIS will post a summary description of your new technology on the FSIS New Technology Web site. If you do not object within five (5) business days from the date that you receive this letter, the Agency will post the included description of the technology on the Web site. If you object to the description, you should state in writing that you object to the description, explain the basis for your objection (e.g., proprietary agreement, confidential commercial information, etc.), and provide an alternate description. FSIS will post the alternate description, unless the Agency concludes that the description does not fairly describe the technology. In such a case, FSIS will post the description that it prepared, and will notify you of its decision. FSIS intends to post the following summary description of your new technology:

Company Name	Summary of the Notification/Protocol
Yvonne Vizzier Thaxton, PhD Box 9665, 100 Poultry Science Build. Bully Blvd. Mississippi State, MS 39762  Techno Catch, LLC Hollis Cheek, 2087 County Road 5257 Kosciusko, MS 39090	Low Atmospheric Pressure (LAP) stunning/slaughter of poultry. (United States Patent Number 7,662,030 B2)

Mr. Cheek

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If you have further questions, please contact Robert D. Ragland (301) 504-0849 or e-mail [robert.ragland@fsis.usda.gov](mailto:robert.ragland@fsis.usda.gov).

Sincerely,

A handwritten signature in black ink that reads "John M. Hicks, Jr." with a stylized, cursive script.

John M. Hicks, Jr., Director  
Risk and Innovations Management Division  
Office of Policy and Program Development