



Avian Influenza Daily Digest

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Article Summary

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Abstract: On the basis of the extensive testing of the Sanitec Industries, Inc. waste management system by the North Carolina State University, the authors of this Editorial strongly recommend the immediate implementation of the Sanitec medical waste disinfection system throughout the United States to prevent the potential pandemic of the Avian Flu viral infection. The Sanitec system first shreds the infected matter and then adds high-pressure high temperature steam. The shredded material is then moved through an auger where six industrial microwave ovens cook the material from the inside out, exposing the waste to heat of more than 212°F for up to 75 minutes. According to experts, heating H5N1 infected tissue between 131 - 145°F is sufficient to render the virus harmless. Each Sanitec unit can process over 100 tons per week of bio hazardous waste including birds infected with Avian Flu.

“The test at North Carolina State University confirmed for federal and state officials what thousands of hospitals and health care facilities across the country already know, that the Sanitec system is an effective and environmentally friendly solution to the problem of disposing of bio hazardous waste,” said Russell Firestone, Executive Vice President of Sanitec Industries, Inc. (www.sanitecindustries.com). Designed to exceed the requirements of an H5N1 outbreak within a large scale poultry plant, the March 15th test, the results of which were released, involved processing tissue samples infused with Salmonella bacteria and a type of bacterial spore related to Anthrax along with over 2,000 lbs. of turkey carcasses. “In the event of a foreign animal disease outbreak in livestock or poultry, it will be critical to respond quickly and in a bio-secure manner. Often this is accomplished using depopulation and disposal as the primary means of disease control and eradication,” according to Dr. Bethany Grohs, a veterinarian with the U.S. Environmental Protection Agency’s Office of Emergency Management. “Sanitec’s self-contained, mobile system for carcass disposal is an important tool to have in the emergency response tool kit. Sanitec’s mobile system can be brought on-site, thus reducing the risk of disease spread via animal transport and a self-contained system reduces the risk of environmental contamination,” said Dr. Grohs, who responded to the 2001 outbreak of Foot-and-Mouth Disease in the United Kingdom as well as the U.S. Capitol Hill Anthrax Incident. “We were honored to have so many federal, local, and private sector experts involved with this crucial test and look forward to working closely with them as they take measures to control an expected outbreak,” said Jim Harkess, President of Sanitec Industries, Inc.

Key words: Avian Flu, livestock, poultry, H5N1 outbreak, North Carolina State University, Animal and Poultry Waste Management Center, Dr. Mark Cosby, Sanitec Industries Inc., Microwave Healthcare Waste Disinfection System,

I. INTRODUCTION

In a recent report by Elise Labott, Deirdre Walsh and Bob Franken, they made the following comments on October 7, 2005 that were posted on the CNN.com web site. America's top health official says the world is "woefully unprepared" to respond to a pandemic, a problem made more urgent by concerns that the current Avian Flu virus could spread into a global health crisis.

"The world is woefully unprepared," Mike Leavitt, the U.S. Secretary of Health and Human Services, told CNN. "You'd think that it would be a matter of constant concern to us. And we're now as a civilization rallying to say, What can we do to better prepare?" Leavitt made his comments as health experts from around the world gathered in Washington D.C. (USA) to discuss the possibility of a flu pandemic.¹

The distinguished authors of this Editorial believe that Sanitec Industries Inc. [Sun Valley, CA, USA] have a solution to this potential pandemic that must be instituted immediately. The leaders of this courageous company had the courage to test the efficacy of their medical waste management system in a comprehensive study instituted by the North Carolina State University Animal and Poultry Waste Management Center. On the basis of their revolutionary waste management study, the authors of this Editorial believe that the Sanitec System must be available throughout the United States immediately to stop this potential pandemic of Avian Flu.

II. RELIABLE DISPOSAL OF POULTRY INFECTED WITH AVIAN FLU VIRUS

On May 8, 2006, the gifted writer and Corporate Communication Consultant, Adam Dubitsky, [Washington, D.C.(USA), adamdubitsky "at" yahoo.com] wrote an exciting news release that a mobile medical waste disinfection system passes crucial Avian Flu containment and disposal tests.² In his report he described the testing of North Carolina State University Animal and Poultry Waste Management Center in crucial tests on the containment of Avian Flu in poultry (Fig.1.).



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Designed to exceed the requirements of an H5N1 outbreak within a large scale poultry plant, the March 15th test, the results of which were released, involved processing tissue samples infused with Salmonella bacteria and a type of bacterial spore related to Anthrax along with over 2,000 lbs. of turkey carcasses (Fig. 2).



“In the event of a foreign animal disease outbreak in livestock or poultry it will be critical to respond quickly and in a bio-secure manner. Often this is accomplished using depopulation and disposal as the primary means of disease control and eradication,” according to Dr. Bethany Grohs, a veterinarian with the U.S. Environmental Protection Agency’s Office of Emergency Management. “Sanitec's self-contained, mobile system for carcass disposal is an important tool to have in the emergency response tool kit. Sanitec’s mobile system can be brought on-site, thus reducing the risk of disease spread via animal transport and a self-contained system reduces the risk of environmental contamination,” said Dr. Grohs, who responded to the 2001 outbreak of Foot-and-Mouth Disease in the United Kingdom as well as the U.S. Capitol Hill Anthrax Incident.

Unlike incineration, which merely transforms biohazard material into other dangerous waste products, Sanitec Industries are the only self-contained disposal units that utilize a patented microwave disinfection system that eliminates bacterial and viral pathogens.

“Sanitec is a fascinating weapon in our arsenal against an Avian influenza outbreak,” said Ed Krisiunas, a medical waste disposal expert and microbiologist who helped design and oversee the test.

“The Sanitec system effectively inactivated the bacterial pathogens and we have every reason to believe it would be effective against the H5N1 avian influenza. We were very pleased with the results,” said Dr. Mark Cosby, Chief Microbiologist with the North Carolina Department of Agriculture and Consumer Services who was involved with the microbiological assessment of the test samples (Fig. 3).



III. PERFORMANCE OF SANITEC INDUSTRIES, INC. SYSTEM

The Sanitec system first shreds the infected matter and then adds high-pressure high temperature steam (Fig. 4). The shredded material is then moved through an auger where six industrial microwaves ovens cook the material from the inside out, exposing the waste to heat of more than 212°F for up to 75 minutes. According to experts, heating H5N1 infected tissue between 131 - 145°F is sufficient to render the virus harmless. Each Sanitec unit can process over 100 tons per week of bio hazardous waste including birds infected with Avian Flu.

“We were honored to have so many federal, local, and private sector experts involved with this crucial test and look forward to working closely with them as they take measures to control an expected outbreak,” said Jim Harkess, President of Sanitec Industries, Inc.

“Among the advantages of the Sanitec system is that it is mobile, fully self-contained and transforms dangerous waste into harmless, unrecognizable matter that can be composted on site or disposed of in any municipal landfill without the need for further treatment or permitting,” said



Harkess. Currently, it is up to each state to decide how infected poultry is treated and disposed of. Microbiologists are concerned that disposal methods by European and Asian nations may only be a temporary solution. “We really don’t know what would happen to buried H5N1,” said Dr. Cosby. “Culling and burying infected animals leaves open the very real possibility that infected material could percolate into the water supply or be unearthed by rodents or other scavengers,” Dr. Cosby said.

In the case of an outbreak of Avian Flu in the US, “speed will be paramount,” said Dr. Cosby. “The Sanitec system is the only onsite processing system that is entirely emissions free and capable of doing highway speeds,” Cosby said. Most other disposal processes involve transporting highly pathogenic waste on public roads to off-site processing facilities.

IV. DISCUSSION

In a previous collective review, we described the Sanitec revolutionary waste management system.³ This system should be used in all medical centers in the world to prevent pollution of our planet from medical waste. The Sanitec® medical waste disposal system consists of the following seven components: (1) an all-weather steel enclosure of the waste management system, allowing it to be used inside or outside of the hospital center, (2) an automatic mechanical lift-and-load system that protects the workers from devastating back injuries, (3) a sophisticated

shredding system designed for medical waste, (4) a series of air filters including the High Efficiency Particulate Air (HEPA) filter, (5) microwave disinfection of the medical waste material, (6) a waste compactor or dumpster, and (7) an onboard microprocessor. It must be emphasized that this waste management system can be used either inside or outside the hospital. From start to finish, the Sanitec® Microwave Disinfection system is designed to provide process and engineering controls that assure complete disinfection and destruction, while minimizing the operator's exposure to risk. There are numerous technologic benefits to the Sanitec® systems, to include: environmental, operational, physical, disinfection efficiency as well as waste residue. Wastes treated through the Sanitec® system are thoroughly disinfected, unrecognizable, and reduced in volume by approximately 80% (saving valuable landfill space and reducing hauling requirements and costs). They are acceptable in any municipal solid waste program. Sanitec®'s Zero Pollution Advantage is augmented by a complete range of services, including installation, startup, testing, training, maintenance and repair, over the life of this system. The Sanitec® waste management system has essentially been designed to provide the best overall solution to the customer, when that customer actually looks at his/her total cost in dealing with the medical waste issue. The Sanitec® system is the right choice for healthcare and medical waste professionals around the world.

ACKNOWLEDGEMENT

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References:

¹. Official: World not ready for flu.

[http://edition.cnn.com/2005/WORLD/asiapcf?10/06/birdflu.wrap/](http://edition.cnn.com/2005/WORLD/asiapcf/10/06/birdflu.wrap/)

². Dubitsky A. Mobile medical waste disinfection system passes crucial avian flu containment and disposal test. News release, May 8, 2006.

³. Edlich RF, Borel L, Jensen HG, Winters KL, Long WB III, Gubler KD, Buschbacher RM, Becker DG, Chang DE, Korngold J, Chitwood WR Jr, Lin KY, Nichter LS, Berenson S, Britt LD, Tafel JA. Revolutionary advances in medical waste management. The Sanitec® system. J Long Term Eff Med Implants.2006;16(1):1-10.

LEGENDS FOR ILLUSTRATIONS:

Figure 1. A mobile Sanitec® system arrives at avian flu containment test site at North Carolina State University's sprawling Animal & Poultry Waste Management Center (Courtesy of Sanitec Industries, Inc. Sun Valley, CA (USA))

Figure 2. Sanitec system on site of test. Designed to exceed the requirements of an H5N1 outbreak within a large scale poultry plant, the March 15th test, involved processing tissue samples infused with Salmonella bacteria and a type of bacterial spore related to Anthrax along with over 2,000 lbs of turkey carcasses. (Courtesy of Sanitec Industries, Inc. Sun Valley, CA (USA))

Figure 3. "The Sanitec system effectively inactivated the bacterial pathogens and we have every reason to believe it would be effective against the H5N1 avian influenza. We were very pleased with the results," said Dr. Mark Cosby, Chief Microbiologist with the North Carolina Department of Agriculture and Consumer Services who was involved with the microbiological assessment of the test samples. (Courtesy of Sanitec Industries, Inc. Sun Valley, CA (USA))

Figure 4. Cut-away of truck-based Sanitec® Microwave Healthcare Waste Disinfection System™ Images courtesy of Sanitec Industries, Inc. Sun Valley, CA (USA)

