COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Division of Water Quality Programs
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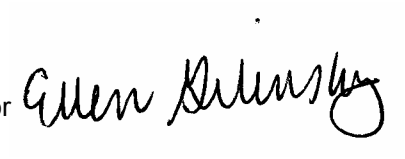
SUBJECT: Guidance Memo No. 06-2005
Biosecurity Procedures for Poultry Farm Visits

TO: Regional Directors

FROM: Ellen Gilinsky, Ph.D., Director 

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COPIES: Regional Water Permit Managers, Regional Water Compliance Managers, OWPP Staff

Summary: This guidance is intended to update and replace the "Biosecurity Strategy for Poultry Inspections" attached to guidance memo 00-2018 "Implementation of the VPA General Permit Regulations for Poultry Waste Management". A revision to the guidance was made in order to clarify the minimum procedures, defer to the recommendations of the state veterinarian if additional measures are necessary, and add additional detail regarding Virkon disinfectant. This guidance applies to all DEQ staff visiting poultry farms.

Electronic Copy:

An electronic copy of this guidance in PDF format is available for staff internally on DEQNET, and for the general public on DEQ's website at: http://www.deq.virginia.gov/water.

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DISCLAIMER

This document is provided as guidance and, as such, sets forth standard operating procedures for the agency. However, it does not mandate any particular method nor does it prohibit any particular method for the analysis of data, establishment of a wasteload allocation, or establishment of a permit limit. If alternative proposals are made, such proposals should be reviewed and accepted or denied based on their technical adequacy and compliance with appropriate laws and regulations.

Biosecurity Procedures for Poultry Farm Visits

I. GOALS

DEQ seeks to minimize the risk of disease transfer between poultry operations by utilizing biosecurity principles, while still achieving the goals of § *62.1-44.17:1.1* of the Code of Virginia and *9 VAC 25-630-10 et seq.* (Virginia Pollution Abatement (VPA) General Permit Regulation for Poultry Waste Management). This strategy will establish guidelines to follow when conducting inspections or other DEQ business on poultry farms. This includes all DEQ staff (e.g. AFO inspectors, tank inspectors, PREP responders, water quality monitoring, etc.) The three main components of biosecurity and the Disease Prevention Measures recommended by the Virginia Poultry Federation (VPF) Poultry Health Committee were used in establishing these guidelines.

II. WHAT IS BIOSECURITY?

Biosecurity as it pertains to poultry farm farms is the protection of poultry flocks from any type of infectious agent, whether viral, bacterial, fungal, or parasitic in nature. Due to the number of birds confined in one place, and the speed at which many infectious agents travel through flocks, outbreaks may have catastrophic results for poultry growers and processors. Biosecurity has three major components: 1) Isolation, 2) Traffic Control, and 3) Sanitation.

Isolation refers to the confinement of animals within a controlled environment. Buildings or fences keep birds in, as well as keep other animals (including humans) out.

Traffic Control includes inter-farm as well as intra-farm vehicle patterns.

Sanitation is the disinfection of materials, people, and equipment entering the farm as well as on the farm.

III. GUIDELINES

A. ADVANCE NOTICE

Whenever possible, annual inspections should be scheduled in advance, preferably 48 hours prior. This will allow the poultry grower to be present to answer inspection questions, and will ensure that the grower has some control over traffic onto the farm and proper sanitation. Complaint driven inspections and other unscheduled inspections or visits should involve a telephone call to the poultry grower, whenever possible.

B. DISINFECTION

Disinfection is very important in controlling disease-causing organisms. A brief description of disinfectant types and some brand names is found in Attachment A. DEQ staff should use a broad spectrum disinfectant (e.g. Virkon) or phenolic disinfectants whenever possible, due to their ability to retain more activity in the presence of organic material than iodine- or chlorine-containing disinfectants. DEQ staff will be expected to do the following:

1) All vehicle tires must be disinfected before entering farms or DEQ staff must meet the poultry grower at the entrance and ride in the grower's vehicle while conducting the inspection. If the grower's vehicle is routinely used to transport farm staff working with poultry or poultry waste, the use of disposable coveralls by DEQ staff riding in these vehicles may be warranted.
2) Rubber boots that have been disinfected or plastic disposable boots shall be used on the farm while conducting inspections.
3) Farms may have coveralls, plastic disposable boots, etc. that are provided for visitor use. DEQ staff should respect a grower's request to wear provided clothing.
4) Disposable boots and provided clothing should be placed in any provided receptacles when leaving the farm.

C. SUSCEPTIBILITY TO DISEASE

DEQ has been informed by the poultry industry that certain types of poultry operations are more susceptible to disease transfer than others. The following is a general ranking of types of poultry operations, from most at risk to least at risk:

- Turkey breeder
- Chicken breeder
- Turkey growout
- Chicken growout

When devising an inspection strategy, regional offices should attempt to visit the most susceptible operations earlier in the week. Another option is to assign one inspector to handle these susceptible types of operations, depending on manpower.

D. DISEASE POSITIVE OPERATIONS

Disease positive operations may be identified with a sign posted at the entrance, but this does not always occur. Often only the grower and/or integrator know of disease problems. DEQ inspectors should contact growers or integrators affiliated with growers prior to regularly scheduled inspections. Only essential visits should occur on these operations. Depending upon the nature of the disease, it may be appropriate to delay on-site inspections until the farm is free of disease, and instead requesting an off-site meeting with the operator and/or having copies of required records mailed to the regional DEQ office for review. If it is necessary to visit a disease-positive farm, the visit should be scheduled last and preferably at the end of the work week. The same inspector should never visit a disease-free farm after visiting a disease-positive farm on the same day.

E. VEHICLE CLEANLINESS

DEQ vehicles entering poultry farms should be kept clean at all times. If it is necessary to visit a disease positive farm, the vehicle should be cleaned and disinfected as soon as possible after leaving the production area of the farm.

F. COMMUNICATION

DEQ staff should remain in contact with the VPF or Delmarva Poultry Industry, Inc. (DPI), and commercial poultry integrators to advise them of any questionable disease situations encountered on farms. DEQ will receive updates on disease positive farms from the VPF, DPI and/or commercial poultry processors.

G. POULTRY HOUSES

It is not necessary for DEQ staff to enter poultry houses to conduct inspections under the poultry waste management regulation. This protects flocks of birds from potential disease transfer, and reduces the possibility that staff might cause a catastrophic disease outbreak.

H. ADDITIONAL BIOSECURITY MEASURES

Upon recommendation by the Virginia State Veterinarian, DEQ will modify the biosecurity measures outlined in this strategy as necessary to respond to specific animal disease threats. Modifications will conform to recommendations outlined by the State Veterinarian.

IV. SUMMARY

DEQ staff will strive to follow these guidelines when scheduling and performing visits. Lines of communication among poultry growers, poultry processors, VPF, DPI, State Veterinarian's office, and DEQ must be kept open to protect against catastrophic disease outbreak. DEQ staff will follow these guidelines or biosecurity procedures in place on the farm visited, whichever is more protective.

ATTACHMENT A: DISINFECTANTS

Virkon

If disinfection of non-disposable boots or vehicle tires is performed, DEQ staff will typically use at least a 1% solution of Virkon when visiting poultry farms. While Virkon and Virkon-S have the same chemical composition, the *S* version is intended for veterinary and animal livestock use. However, Virkon (without the S) is manufactured under more strenuous production controls with additional quality assurance testing intended to make it marketable for broader human applications. Virkon is also available in a tablet form that minimizes the health risks due to exposure to the dust produced when mixing Virkon-S. Use of the tablet form has been recently adopted by many regional DEQ offices.

Other Disinfectants

The following list of additional disinfectants is adapted from various Cooperative Extension documents and a list of USDA approved disinfectants for use on avian influenza. Disinfectants can be placed into the following classes based on chemical composition:

Phenols, Hypochlorites (chlorine), Iodophors (iodine), Quaternary ammonium, Formaldehyde gas, Formaldehyde powder, Alkali (lye), Chlorhexidine (Nolvasan)

The most commonly used disinfectants are the phenols, iodophors, hypochlorites, and quaternary ammonium. Disinfectants are more effective at warmer temperatures.

Phenols. Phenols are coal-tar derivatives. They have a characteristic pine-tar odor and turn milky in water. Phenols are effective antibacterial agents, and they are also effective against fungi and many viruses. They also retain more activity in the presence of organic material than iodine- or chlorine-containing disinfectants. In commercial poultry operations, phenols are used for egg dipping, hatchery and equipment sanitation, and footbaths. Examples of the phenol class include: 1 Stroke Environ, Advantage 256, Bacto-Phene, Gil-Phene-Plus, LpH, Lysol, Pine-Sol, Tek-Trol.

Iodophors. Iodine compounds are available as iodophors, which are combinations of elemental iodine and a substance that makes the iodine soluble in water. They are good disinfectants, but they do not work well in the presence of organic material -- that is, on dirty surfaces. Iodophors are effective against bacteria, fungi, and many viruses. In hatcheries, iodine is used on equipment and walls and for water disinfection. Iodine is the least toxic of the disinfectants discussed here, but it can stain clothing and some surfaces. Examples of the iodophor class include: Betadine, Iodet, Iofec, Isodyne, Lifex-1, Losan, Tamed Iodine, and Weladol.

Hypochlorites. Chlorine compounds are good disinfectants on clean surfaces, but they do not work well on dirty surfaces. Chlorine is effective against bacteria and many viruses. These compounds are also much more active in warm water than in cold water. Chlorine solutions are somewhat irritating to skin and are corrosive to metal. They are relatively inexpensive. Examples of the hypochlorite class include: Clorox, Chloramine-T, and Halazone.

Quaternary Ammonium. Quaternary ammonium compounds are generally odorless, colorless, non-irritating, and deodorizing. They also have some detergent action, and they are good disinfectants. However, they are inactivated in the presence of some soaps or soap residues. Their antibacterial activity is reduced in the presence of organic material. Quaternary ammonium compounds are effective against bacteria and somewhat effective against fungi and viruses. These compounds are use widely in commercial hatcheries. Examples of the quaternary ammonium class include: Roccal, Germex, Hi-Lethol, Quat, San-O-Fec, Warden and Zephiran.