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Ophelia VA 22530  
November 8, 2001

Dr. Robert Croonenberghs  
VDH, Shellfish Sanitation Division  
1500 E. Main St.  
Richmond VA 23219

Dear Dr. Croonenberghs:

I am writing this letter requesting a response to what I perceive as a major inconsistency within the Virginia Department of Health.

As a retired scientist and an oyster gardener, I have investigated the reasons and methodology behind the shellfish restrictions on the Little Wicomico River, where I live. The White Stone office has been most cooperative, and I have been impressed with their efficiency and their concern. I understand the reasons for the extremely strict standards, namely 14 MPN/100 ml. I have tried to explain to local watermen why their oyster grounds are restricted on the basis of very few high bacterial analyses (due to a flock of birds just prior to sampling?) within the 30 month sampling interval. I applaud VDH's efforts to utilize emerging DNA technology to identify the source(s) of the bacteria. It is my understanding that wildlife is the most likely vector, especially raccoons and birds.

The inconsistency exists because VDH continues to permit the land application of sewage sludge in counties where oysters are harvested. EPA requires that Class B sludge contains less than two million CFU per gram of dry solids. It is my understanding that VDH does not analyze the sludge, but simply accepts the contractor/wastewater facility analyses. EPA actually relaxed their 1993 rules in 1999 in several ways with regard to the levels of bacteria in sludge, and with respect to the timing and method of analysis and certification. Irrespective of the actual, and unknown, levels of bacteria in the sludge spread on our land, I am certain you will agree with me that it is immense. At 2 million CFU/gram a 20 ton truck would contain in excess of a trillion CFU. There is absolutely no

doubt that the land application of Class B sludge imports huge numbers of pathogens to our soils. That is an uncontestable fact.

The issue, of course, is whether or not the pathogens from sludge enter our waterways. I submit that we can be absolutely certain that some pathogens from the sludge do enter our waterways and contribute to shellfish restrictions. There are many vectors. If the sludge is properly incorporated into the soil by plowing, it is likely that runoff and erosion by wind will be minimal. Likewise, if the 100 foot standoff is enforced, it is likely that most bacteria which might enter the groundwater will die before the groundwater can enter the waterways. Even if the probability of contamination by these processes is low, the certainty of contamination is high because of the huge numbers of microbes involved and the vagaries of the weather. But more important, the very same vectors thought to be responsible for the naturally high bacterial levels observed in the headwaters of all our waterways ASSURE that contamination of our waterways by bacteria from sludge will take place. Every farmer knows "birds follow the plow." In this county the birds are often gulls.

The Division of Shellfish Sanitation works hard to protect the public health from bacterial infection. Another branch of the same agency knowingly permits huge numbers of bacteria to be imported into the county and disseminated in a manner that virtually assures increased contamination of some of our waterways. Restricted oyster grounds prevent oystermen from pursuing their chosen profession. Farmers, on the other hand, can always buy fertilizer and continue to pursue their livelihood. I look forward to your explanation for this inconsistency, as well as to responses from other responsible officials.

Yours sincerely,

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cc: Health Commissioner, VDH; White Stone Office, VDH; Gov. Gilmore; Del. Pollard; Sen. Chichester; Northumberland County Board of Supervisors; Doug Jenkins; Lake Cowart; Calvin Keyser.