BIOSOLIDS EXPERT PANEL

Environment Subcommittee

Meeting Minutes

Date: January 23, 2008

Location: Albemarle County Dept. of Fire Rescue, 25 Mill Creek Drive, Charlottesville, VA

Panel Members Present:

- **Dr. Alan Rubin**, consultant (principal Envirostrategies, LLC)
- **Barry Dunkley**, City of Danville
- **Karen Pallansch**, Alexandria Sanitation Authority
- **Henry Staudinger**, Citizen representative
- **Dr. Robert Hale**, Virginia Institute of Marine Science
- **Dr. Howard Kator**, Virginia Institute of Marine Science
- **Dr. W. Lee Daniels**, Virginia Tech Department of Crop and Soil Environmental Sciences
- **Scott P. Johnson**, Virginia Department of Agriculture and Consumer Services
- **Dr. Ralph O. Allen**, University of Virginia School of Medicine
- **Dr. Greg Evanylo**, Virginia Tech Department of Crop and Soil Environmental Sciences
- **Anita Tuttle sat in for Russ Baxter**, Virginia Department of Conservation and Recreation

Supporting staff present:

- **Jeff Corbin**, Office of the Secretary of Natural Resources
- **Angela Neilan**, Virginia Department of Environmental Quality
- **Ann Regn,** Virginia Department of Environmental Quality
- **Neil Zahradka**, Virginia Department of Environmental Quality
- **Christina Wood,** Virginia Department of Environmental Quality
- **Robert Hicks,** Virginia Department of Health

Introduction

Assistant Secretary of Natural Resources Jeff Corbin brought the meeting to order at 9:15 a.m.

Mr. Corbin requested that anyone still in possession of one of the “Sludge Diet” DVDs please return it to him as soon as possible.

Mike Newman of the Virginia Institute of Marine Science made a presentation on Ecological Risk Assessment, focusing on the methodologies used to perform an ecological risk assessment. The PowerPoint presentation will be placed on the Expert Panel Website.

Minutes

The panel voted to approve the minutes from the December 11, 2007 Environmental Workgroup meeting.

10:30 a.m. – Angela Neilan (Facilitator) read through a threaded conversation summary of the previous Expert Panel Meetings. Neil Zahradka then passed out copies of the updated draft letter that the Panel is writing to the Biosolids Generators requesting voluntary submittal of sludge composition data. The goal is to obtain additional data to what is routinely submitted.

Jeff Corbin posed the question – What three things would you like to see in the Biosolids Program, i.e. what needs to be changed or addressed?

Dr. Alan Rubin

- Apply biosolids based on agronomic rates limited by phosphorus. (Consider solubility, transport to waters, erodibility) Use most recent ecological model for agronomic rates.
- Apply the most stringent rules for Biosolids Nutrient Management Plans (NMP) vs. manure and fertilizer NMPs. May provide relief to citizens with concerns by limiting frequency of application, and how many times sites visited.
- Include Biosolids in an Environmental Management System (EMS) plan - will also give some relief to citizens – address human health and environmental issues.

Barry Dunkley

- The program needs to better address odors.
- The program needs to better address complaints, provide for further investigation.
- Further study of the human health implications of Biosolids application.
    - How to better quantify health issues - people complain it is hurting their health, is it hurting their health?
    - Incorporate an EMS.

Karen Pallansch

- There needs to be strong enforcement.
- When evaluating the Permit applications in depth – determine site specific needs, based on soils, or access roads, does it need increased buffers etc. Eliminate the perception that the applications are just “rubberstamped”.
- Addressing Dr. Rubin’s recommendation of an EMS, Ms. Pallansch discussed Alexandria Sanitation Authority’s participation in the National Biosolids Partnership (NBP) as a generator. The Authority has developed an EMS which has been certified. Every 5 years the Authority must undergo a 3rd party audit for recertification. The Generator is required to perform community outreach and the citizens are involved in the audits. In addition to ensuring that the sludge has been treated properly and the equipment is functioning properly, implementing an EMS shows goodwill on the part of the generator and helps to instill confidence in the community.

Henry Staudinger

- Identify and eliminate buffers for pollution sensitive sites - movement of water, erosion or loss to the air – this has the most impact on citizens.
- Limit nitrogen and phosphorus loading based on crop growth needs.
- Provide meaningful enforcement.

Dr. Ralph Allen

- NMP should incorporate all areas of site management – runoff, aerosols, etc.
- Consistent enforcement of standards and practices.
- A better mechanism to get the public involved early on to alleviate public distrust of the DEQ. He has seen where there is an ad in the paper for a public meeting and the only ones that show up are DEQ and University employees. Most people don't read the newspaper to see if there will be a public hearing
- Addressing EMS minimal requirements - are you just barely meeting compliance or are you going above and beyond?

Dr. Greg Evanylo

- EMS needs to be promoted.
- The regulation needs to allow for site specific modifications for sensitive areas vs. one site fits all.
- Have more inspectors; conduct more inspections to ensure that the regulations are being followed.
    - Evaluate physical site.
    - Evaluate implementation of the NMP, look at calculations - nitrogen, phosphorus and lime application rates, crops, etc.

Dr. Robert Hale

- We do not have enough data; we need to improve the knowledge base.
    - Provide appropriate funds to research the questions - from composition to effects.
- Better transparency – provide readily accessible web-based data of past and ongoing biosolids applications.
- Work to improve public trust.
    - Ready access to information on proposed, ongoing and past application sites. Have it on the web for immediate access. He acknowledged that man power is an issue.
    - Problem – response of the key agency; the single agency approach has failed us in the past. The wastewater engineers were not trained in human health issues. Best to have group involvement; include DEQ, VDH, citizen, county.
    - Problem – most research is funded by the generators or those with vested interest in biosolids.
        - Most generators analyze a narrow range of parameters.
        - Other researchers have limited access to study sites - Barry Dunkley suggested that farmers may be reluctant about granting access to the Biosolids applicators if the Regulation included conditions regarding further access for research.
        - Would like to see State agencies facilitate the acquisitions of biosolids samples for research.
        - Greg Evanylo suggested that VA Tech has Biosolids land application sites that could be used to collect data.

Dr. Howard Kator

- Work to eliminate the feeling that citizens have of "them against us."
- Address site specific concerns vs. one size fits all.
    - Special concerns in the coastal zones – water quality and biota. Needs to be looked at in terms of watersheds.
- We need more information about what is in the biosolids and we need access to biosolids for compositional analysis.
- Endotoxins – are they a health risk? We know that Endotoxins are very powerful stimulatory agents to all not only those with compromised immune systems.

Dr. Lee Daniels

- Provide explicit sole site restrictions.
- Include more language in the regulation on odor management and how it relates to buffers.
- Establish rules for restoration of mining sites – using a one time application of Biosolids at higher than agronomic rate.

Scott Johnson

- Track the biosolids in the same way that poultry litter is tracked – generator and analysis of the specific biosolids. Prevent damage to the soil.
- Application rates in regard to nitrogen and phosphorus.
- Require buffers to protect the environment, wells, environmentally sensitive areas and human health.

Anita Tuttle responded to comments regarding N & P application rates: the ratio of P:N in Biosolids is usually about 2:1, but crop need is about 1:3. The nutrient limits are based on N until the soil is supersaturated with P. Then we begin to limit by P. With this practice you may add up to 10X the amount of P needed. A general discussion ensued - with P based limits, will need much more agricultural land to apply on and N may need to be augmented. Must look at P in biosolids and in soil.

Alan Rubin added that the panel has the opportunity to make significant recommendations to the General Assembly. These issues overlap with CAFO, but the panel is only charged with looking at biosolids.

Ms. Neilan will consolidate the list of items and email it to the panel members.
Action Item: the Panel Members are to prioritize the items.

Mr. Dunkley asked that the list include the positive and negative impacts of each of the priorities with respect to the current operation of the program. Mr. Zahradka said that some of these things have already been done, some are in the process and some have been discussed internally. He suggested that DEQ make a presentation to the panel describing the DEQ Biosolids Program in regard to the VPA regulation. He passed out a handout with highlights of the regulation that regard to biosolids.

Citizen Comments

Kristin Farry, Ph.D., of Madison, VA is a local farmer struggling to support herself. As an engineer/scientist and decision maker in the farm community, she is aware that 100% safety can not be achieved. She does not want to be choked out of business by regulations. Dr. Farry has used the biosolids on her land and will provide access for researchers to come and sample her soil. Poultry litter is frightening; the chickens are given antibiotics from the day they are conceived. How many antibiotic resistant pathogens are they carrying? Concerned citizens lobbying against biosolids may be trying to put the safest option out of business. She believes in recycling. She would like to see a comparison made between Biosolids, animal manures and synthetic fertilizers, looking at many characteristics – bacteria content, nutrient content, contaminants, and green house gases produced. Consider the safety of production of the material as well as the land application of it, e.g. industrial disasters at fertilizer plants. Transparency helps everyone.

C.W. Williams, chairman of Biosolids Information Group. He traveled the state to talk to those who have been affected by Biosolids. EPA document states that bacteria of minor concern are opportunist pathogens that affect only debilitated or immunological compromised individuals. Dr. Steven Goldberg of Farmville wrote that Janet Buckholz' health is being affected by the airborne components of the biosolids, interactions of pathogens and irritants. Mr. Williams read a list of citizens who have been affected by the application of biosolids near their homes, whether property damage or health. Mr. Williams feels that if a farmer is willing to accept this "pollutant" on his land that the farmer should freely allow access to any inspector or local monitor. Do the landowners have training to manage the biosolids on the land? What training do the monitors have? What training will be provided to the landowner, the local monitors and to DEQ staff?

Mr. Williams later stated that citizen concerns include:

- Volatiles coming off of the biosolids
- Lack of monitoring and testing.
- Current buffers are not adequate because not everyone is healthy.
- Proper application of the biosolids.
- Lack of communication with the government.

The group broke at noon for lunch. Robert K. Bastian of EPA gave a lunchtime presentation on the history of the 503 Rule. The PowerPoint presentation will be placed on the Expert Panel Website.