

April 25, 2011

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VIA ELECTRONIC MAIL & U.S. MAIL

**Re: Shenandoah Valley Poultry Litter-to-Energy  
Watershed and Air Advisory Group**

Dear Mr. Weeks and Mr. Perkinson:

On behalf of the Southern Environmental Law Center and the Shenandoah Valley Network, we want to thank you for the opportunity to participate in the Shenandoah Valley Poultry Litter-to-Energy Watershed and Air Advisory Group. We are pleased that DEQ and DCR, as part of efforts to restore the Chesapeake Bay, are studying various options for net nutrient load reductions from the Shenandoah Valley. We also adopt and incorporate by reference the comments of the Chesapeake Bay Foundation<sup>1</sup> and the National Park Service.<sup>2</sup> We hope that DEQ and DCR will incorporate all suggestions – from the Park Service, the Bay Foundation, and those contained in this letter – into a revised Scope of Work.

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<sup>1</sup> Letter from Kristen Hughes Evans, Chesapeake Bay Foundation, to Richard Weeks, Department of Environmental Quality, and Russ Perkinson, Department of Conservation and Recreation, (April 20, 2011).

<sup>2</sup> Email from Jim Schaberl, National Park Service, to Richard Weeks, Department of Environmental Quality (April 21, 2011).

We have three overarching concerns with the Major Elements for Scope of Work (4/18/2011 Draft). First, we fear that the research project is currently geared too heavily toward supporting one particular outcome: building a 55-megawatt litter-to-energy incineration and power generation facility in the Valley. The draft begins by stating, “The purpose of this work plan is to guide research to determine the net environmental *benefit* of a major litter to energy project,” (emphasis added). Of course, this improperly assumes that the project will have a net positive result. A neutral focus would be to study “the net environmental *impacts* of a major litter to energy project,” thereby entertaining the possibility that research might point to an adverse environmental result. The impacts that are analyzed may be both positive and negative, but a purpose that is geared toward only considering the net environmental benefits of the project examines the issues from an incorrect starting point.

Second, and related to our first concern, the Scope of Work gives short shrift to alternatives beyond the poultry litter-to-energy incineration/generation proposal. Section IV of the Scope of Work states that the study will consider “alternative solutions,” but only one alternative is identified – subsidizing bulk transport of 75,000 tons of poultry litter out of the Bay watershed. Comparing the dominant alternative to only one option will not shed light on whether a waste-to-energy plant is cost-effective. Analyzing and comparing the costs of a broad array of alternatives – including but not limited to on-farm technologies, multiple or smaller centralized incinerators, improved land application/management methods for farmers, anaerobic digestion, gasification/thermal oxidation – will inform stakeholders of the true cost effectiveness of a large poultry litter-to-energy facility. Accordingly, the alternatives analysis must be dramatically expanded.

Third, as the name of this *ad hoc* committee suggests, watershed and air impacts are both of paramount importance. Unfortunately, the draft Scope of Work largely ignores air quality and public health concerns. This is a fatal omission. As was evident from the public and stakeholder comments at both group meetings (2/11/11 and 3/28/11), air pollution from a waste-to-energy facility is a significant worry for Valley residents. Air emissions *must* be considered at this stage of the analysis, just as economic impacts are being evaluated.

The urgency for reviewing air quality and public health impacts is exacerbated by two factors: (1) acid deposition concerns, as delineated by the National Park Service, along with other impacts to Shenandoah National Park and Skyline Drive; and (2) ongoing research into public health impacts directly linked to poultry litter-to-energy projects, particularly with regard to arsenic.

Shenandoah National Park is a treasured natural and cultural site, providing economic benefits to the larger region. Year after year, Shenandoah and the Skyline Drive rank among the Commonwealth’s top tourism destinations.<sup>3</sup> At the same time, Shenandoah has historically struggled with air quality problems linked to industrial

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<sup>3</sup> See Daniel J. Stynes, Michigan State University, “National Park Visitor Spending and Payroll Impacts, 2008,” at A-9, A-19, A-31 (Oct. 2009) (recording that non-local visitors to Shenandoah National Park injected more than \$58 million in 2008 into the local economy).

pollution. The *Frommer's Virginia* guidebook has warned vacationers against planning a summertime visit to Shenandoah, stating that “high ozone levels frequently create obscuring smog during the summer.”<sup>4</sup> The air pollution impacts of yet another major industrial facility on the Park and its resources must be assessed as a part of this study.

As for public health impacts, a commentary by scientists at Johns Hopkins University recognized that “[m]anagement of the increasing volume of poultry wastes is now being recognized as a serious challenge,” and identified biomass energy plants fueled by poultry waste as one possible option currently in development.<sup>5</sup> However, the commentary cautioned that “there is reason to be concerned that these new solutions ... may well increase human exposures to arsenic ... through air emissions from waste-to-energy plants ....”<sup>6</sup> The presence of arsenic in poultry litter presents a significant public health problem, which is why the Johns Hopkins authors concluded that there is “real urgency for a thorough examination” of burning poultry waste.<sup>7</sup> Air emissions of arsenic compounds must be evaluated as part of this research to properly inform the public policy discussion.

Leaving review of air quality impacts for the Maximum Achievable Control Technology (MACT) and New Source Review (NSR) permitting processes for a manure-to-energy facility would prevent all alternatives from being considered on a level playing field, with positive and negative impacts reviewed comprehensively and holistically. Moreover, failure to address air quality and public health impacts in this study will not only result in a flawed alternatives analysis, but will also risk eroding public confidence in the impartiality of the study itself.

In addition to the major concerns described above, we also wish to highlight other necessary changes to the Scope of Work:

- Section II is drafted to determine “net nutrient load reduction levels to Chesapeake Bay,” but air deposition of nitrogen compounds emitted from a major poultry litter-to-energy project are considered only in isolation, in Section V. To get an accurate assessment of “net” nutrient load levels, air deposition into the Bay watershed should be considered in tandem with waste removal. We recommend adding a cross-reference in Section II to clarify that the net nutrient load assessment will incorporate the air deposition analysis from Section V.
- The air deposition analysis in Section V should specifically require air modeling using EPA preferred or recommended models. Because the siting of an incineration plant could greatly affect the modeling analysis, three potential plant locations within the Shenandoah Valley should be modeled.

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<sup>4</sup> *Frommer's Virginia*, at 144 (7<sup>th</sup> Ed. 2004).

<sup>5</sup> Keeve E. Nachman, *et al.*, “Arsenic: A Roadblock to Potential Animal Waste Management Solutions,” *Environmental Health Perspectives*, Vol. 113, No. 9, at 1123 (Sept. 2005).

<sup>6</sup> *Id.*

<sup>7</sup> *Id.*

- The title of Section II states that it will consider “potential new load from replacing land application [of poultry waste] with commercial fertilizers.” However, the text of Section II does not describe how additional commercial fertilizers being imported into the Valley will be evaluated. A detailed description is needed. Application of commercial fertilizers will likely have some adverse impact on the Bay watershed, even if it is assumed that most of the commercial fertilizers will be applied at correct agronomical rates.
- Section II must also assess the impact of poultry litter into the watershed *before* it is transported to a waste-to-energy facility. That is, poultry litter destined to be combusted in a centralized station will have to be maintained and managed on the farm prior to trucking to an off-site incineration/generation station. During this period, while awaiting transport, some portion of the poultry litter will likely wash into the Bay watershed. An analysis of the pollution impact during the on-farm management period is therefore required.
- There is no evidence that any fossil-fuel fired generation would be retired or displaced as a direct consequence of constructing a new, 55-megawatt poultry waste-to-energy facility. As a result, it should not be assumed that a new incineration/generation facility would offset any pollution from other existing sources. Rather, air emissions should be treated as an additional pollution load into the airshed.
- As explained in comments from the Chesapeake Bay Foundation, the study should analyze whether the proposed poultry litter-to-energy incineration facility would be able to meet MACT standards for poultry litter feedstock energy generating units.

In conclusion, we emphasize that we are not opposing any alternative. What we seek is the best possible study. We recognize that this is no easy task, as the impacts to be evaluated are diverse. That said, the current Scope of Work contains significant flaws that cannot be ignored. As such, we cannot support the study at this time. We respectfully request that the *ad hoc* group reconvene and that work continue on improving the study document.

Sincerely,



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 Angela Navarro  
 Southern Environmental Law Center



Kate Wofford  
 Megan Gallagher  
 Shenandoah Valley Network