

June 11, 2012

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EPA Docket Center (EPA/DC)  
Environmental Protection Agency, Mail Code 6102T,  
1200 Pennsylvania Ave., NW  
Washington, DC 20460,  
Attention Docket ID Number EPA-HQ-OAR-2010-0960

Dear Sir/Madam:

On behalf of the National Association of Clean Air Agencies (NACAA), thank you for this opportunity to comment on the draft Emissions Estimating Methodologies (EEMs) for estimating air emissions from animal feeding operations (AFOs), entitled “Development of Emissions Estimating Methodologies for Broiler Animal Feeding Operations” and “Development of Emissions Estimating Methodologies for Lagoons and Basins at Swine and Dairy Animal Feeding Operations,” as published in the *Federal Register* on March 13, 2012 (77 *Federal Register* 14716). NACAA is a national, nonpartisan, non-profit association of air pollution control agencies in 45 states, the District of Columbia and four territories and 116 local air pollution control agencies. The air quality professionals in our member agencies have vast experience dedicated to improving air quality in the U.S. The comments we offer are based upon that experience. The views expressed in these comments do not necessarily represent the positions of every state and local air pollution control agency in the country.

We commend EPA for releasing the draft EEMs for public comment, thus fulfilling one of the important provisions in the consent agreement (CA) that EPA and many AFOs entered into seven years ago (70 *Federal Register* 4958). However, we have ongoing concerns about the EEMs, due in part to issues we raised at the outset of the CA regarding the structure of the agreement, the collection methods and failure to involve state and local air agencies in the monitoring study or development of the EEMs.<sup>1</sup> These concerns are outlined in the appendix to this letter. We urge EPA to expeditiously address these concerns and move forward to finalize reliable, consistent EEMs as quickly as possible. This is especially important for large AFOs that exceed Clean Air Act regulatory thresholds. To that end, we recommend that EPA work closely with state and local agencies to chart a path forward to ensure that those AFOs that are exceeding emissions standards submit the appropriate permit applications without further delay.

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<sup>1</sup> NACAA’s letters to EPA describing these concerns are posted at <http://www.4cleanair.org/TopicDetails.asp?parent=1#positions-Agriculture>.

EPA released the NAEMS monitoring data on January 13, 2011. Since the EEMs developed by EPA would be crucial for air regulatory purposes, and since state and local air agencies are partners with EPA in implementing the Clean Air Act, on June 29, 2011, we wrote EPA requesting NACAA participation in the development of the EEMs. We never received a formal response to the letter. Our understanding is that EPA asked the Science Advisory Board to form an expert panel in order to provide stakeholder input on the EEMs. We commend the effort to obtain an independent scientific review, but as the agencies responsible for implementing the air permit programs, we believe EPA should have also explicitly involved state and local air agencies.

In summary, it has been seven years since EPA agreed to waive enforcement of the Clean Air Act with respect to farms that participated in the CA. The monitoring study – NAEMS – that grew out of the CA has been completed. While we have had ongoing concerns since the outset, we think the release of the EEMs is a first step in an ongoing process for improving the manner in which the emissions from AFOs are characterized. Ultimately, we believe EPA should develop process-based, whole-farm system methodologies as recommended by the National Academy of Sciences a decade ago. If EPA fails to develop process-based, whole farm EEMs, it will be much harder to understand animal agricultural systems (and technologies) that minimize air emissions.

The goal of the CA and NAEMS was to establish accurate, defensible EEMs and to recognize that there are some AFOs that clearly fall within the scope of regulation by the Clean Air Act and need to take the required steps under the Clean Air Act. Similarly, there are AFOs that clearly are so small that their air emissions fall below regulatory thresholds. We look forward to working closely with EPA to chart a path forward to ensure that those AFOs that are exceeding emissions standards submit the appropriate permit applications without further delay.

Thank you for the opportunity to provide comment. If you have any questions, please feel free to contact us or Amy Royden-Bloom, Senior Staff Associate, at 202-624-7864.

Sincerely,



Shelley Schneider  
Nebraska  
Co-Chair  
NACAA Agriculture Committee



Merlyn Hough  
Lane County, Oregon  
Co-Chair  
NACAA Agriculture Committee



David Thornton  
Minnesota  
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NACAA Emissions and Modeling Committee



James Hodina  
Linn County, Iowa  
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Encl.

## Appendix to NACAA Comments

- It appears that the 75% completeness criteria for the validity of hourly and daily data was usually not satisfied, resulting in the exclusion of a large amount of data that could have been useful for development of the emission estimation methodologies. What was the basis for the 75% completeness criteria? A lower completeness criteria threshold (e.g. 50%) should be considered so there will be more valid data available for development of the emission estimation methodologies.
- Because of the limited amount of valid data available from the NAEMS sites, emissions data from other studies that were submitted to EPA should be reevaluated to determine if these data can augment the NAEMS data or be used to confirm the general trends that result from the draft emission estimation methodologies.
- It appears that some information on feed composition was collected during the study but this information was not provided to EPA and/or was not used to develop the emissions estimating methodologies. Efforts should be made to determine the cases when such information should be considered proprietary and non-proprietary. When appropriate, non-proprietary information on feed composition should be considered in the emissions estimating methodologies since it has been established that feed composition can significantly affect overall emissions (e.g. the protein content of feed will affect nitrogen and sulfur excretion, which will affect NH<sub>3</sub> and H<sub>2</sub>S emissions). If this information is not included in the emission estimation methodologies, facilities may not be able to receive appropriate credit for reducing emissions through dietary changes.
- It is unclear why the VOC sampling performed at California broiler sites in accordance with the NAEMS procedures was not used for the Draft Development of Emissions-Estimating Methodologies. A more in-depth explanation of why the California Broiler Site VOC data were excluded would be helpful to determine if any of the data may be potentially useful to supplement or validate the draft VOC emission estimation methodology for broiler houses. Non-inclusion of the California VOC data further reduces an already limited data set.
- Were any procedures used to correct the Method 25A VOC measurements reported as propane in the Kentucky broiler site report to estimate total VOC mass? If yes, what were these procedures? If this was not done, then the Draft Development of Emissions-Estimating Methodologies for Broiler Operations report needs to clearly state that the values used to develop the VOC estimates are non-methane hydrocarbon measurements reported as propane. In addition, any comparisons of the VOC measurements at the California broiler site (CA1B) and the Kentucky broiler site (KY1B) (such as in Table 4-3 of the Draft Development of Emissions-Estimating Methodologies for Broiler Operations) need to be checked to make sure that the masses of the VOCs are being expressed on the same basis (e.g. estimated total VOC mass or NMHC as propane, methane, etc.) for the comparison to be meaningful.
- Given the differences in the diets fed on dairy and swine AFOs; other operational, geographic and climactic differences and the limited number of AFOs tested, is it appropriate to combine the information gathered for these operations to develop a single emissions estimating methodology for lagoons and basins at swine and dairy feeding operations?

- For the Draft Development of Emissions-Estimating Methodologies for lagoons and basins at swine and dairy feeding operations, many variables that are expected to have an effect on ammonia emissions (e.g. lagoon loading, pH, depth of liquid, depth of sludge) were not included. Are there any plans to refine the draft emissions estimating methodologies to include these variables?
- Different types of manure handling systems (flush, scrape, etc.) and the presence or absence of solid separation will affect the loading and concentration of lagoons and should be considered in the development of emissions-estimating methodologies. If there is insufficient information from the NAEMS sites to include this parameter, other studies should be considered to determine if they can provide useful information.
- Given the very limited amount of valid data that were obtained from a small number of dairy sites and the large amount of operational variability among different dairies, it appears that it will be extremely challenging to develop of emission estimating methodologies that will effectively predict emissions from the various manure storage systems at dairies using just the data set from the NAEMS.
- In terms of dairy (or swine) manure storage systems, many key variables understood by producers, were either neglected or substituted by poor surrogates in the draft EEM development. These include surface pH; total “precursor” input (whether nitrogen or sulfur or other essential parameter) and other appropriate surrogate measure such as milk urea nitrogen (MUN) ; and the degree of surface agitation, to name some of the obvious ones.
- No VOC data was provided through NAEMS on dairy and swine manure storages;
- If one considers ammonia as an example, additional key data, especially for dairy operations, is missing or confounded. For example:
  - how much nitrogen (e.g., TAN) going into the manure storages is confounded by using “design” animal population which does not represent actual animal populations contributing to manure storages;
  - surface pH of the manure storages was not consistently recorded;
  - the difference between long-term storage (used extensively in the south and west of the U.S.) and short-term storages emptied periodically is not considered, rather they are lumped together which is inappropriate;
  - how nitrogen in the liquid phase of some manure storages will be lost as ammonia, when that liquid is used as flush water for dairy barns or is agitated prior to manure storage during solids separation and prior to land application;
  - the basic biological differences between animal species (e.g., swine and dairy) and the confounding effects, which are inevitably produced, if you combine data simply because data is lacking during hot summer months (combining dairy and swine, does not provide producers any confidence that the EEMs are based on good science);
  - the surface condition of the manure storage facilities, which are usually dependent on the type of animal bedding used, is a very important variable in predicting fluxes from manure storage facilities. This information is only confounded by the poor variable choice of “number of inlets”;
  - and lastly, one cannot neglect the periods of agitation immediately prior to land application, which was the case for at least one of the dairy “lagoon” sites.