

From: [Ashley N Ullstrom](#)
To: [Jackson, Tricia](#)
Cc: [Bruce W Moore](#); [David J Long](#)
Subject: AEP Comments - Minor NSR Permitting Guidance Document
Date: Thursday, July 02, 2015 3:40:04 PM

Ms. Jackson,

AEP-Southwestern Electric Power Company appreciates this opportunity to comment on the draft Minor NSR Permitting Guidance Document. Dave Long of AEP Service Corporation has provided the following comments and concerns regarding issues covered in this document on behalf of AEP-SWEPCO:

We note the apparent heavy reliance on modeling in the Draft Document. We recognize that in some cases a predictive model may be the only tool available to attempt to evaluate the impacts from a prospective project, but our experience with air quality models suggests that, especially for small sources, modeling may not be a reliable means of analyzing impacts.

AEP has a long history of working in the air quality modeling community, working with Gaussian, Lagrangian, and Eulerian models. In addition we participate in various forums where current air quality modeling issues are discussed and ideas exchanged. Based on our participation in these forums, we are aware of significant concerns about the ability of the current USEPA preferred model AERMOD to accurately predict ambient impacts. We would reference several studies published by the Indiana Department of Environmental Management, with the most recent version available on their web site at http://www.in.gov/idem/airquality/files/modeling_aermod_case_study.pdf. In addition, our experience suggests that other than for broad indications of average air quality, the use of regional models for determining impacts of individual small sources is probably not going to be useful to the agency.

As a final concern, our long experience in using air quality models suggests that without careful examination of the inputs being used, especially the mixing height values calculated in the meteorology preprocessor, unrealistic results may occur that can needlessly penalize new or existing sources. The problems we have observed are somewhat random in nature, but result in very low mixing heights that can cause unrealistic concentrations for periods of one to several hours. Smaller sources are more likely to be impacted by this issue since they may have cooler discharges coming from low levels that would not be able to penetrate out of the mixed layer being simulated by the model.

We would recommend that ADEQ undertake a study of the performance of any model they would propose to use and compare its performance to air quality monitoring in various areas around the state. Depending on the outcome of this work, the model may prove itself capable for some pollutant and meteorology combinations and not others. Such a study could also demonstrate that the model does work well in the meteorologic regimes and terrain conditions present in Arkansas. Releasing the results of the study to USEPA and the broader modeling community would be useful in showing both the strengths and weaknesses of the suggested tools that ADEQ is considering for use in these analyses. Should this study show that modeling is not good approach, ADEQ should

consider enhancing the ambient monitoring available in areas where growth is expected to allow a better evaluation of current ambient conditions can be made and compared to the emissions density present in the region that is impacting the monitor.

If you have any questions regarding these comments, please don't hesitate to contact me.

Thank You,

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