

October 27, 2015

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U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Attn: Docket ID No. EPA-HQ-OAR-2015-0310

Dear Sir/Madam:

On behalf of the National Association of Clean Air Agencies (NACAA), thank you for this opportunity to comment on EPA's proposed revisions to the *Guideline on Air Quality Models* (40 C.F.R. Part 51, Appendix W) that were published in the *Federal Register* on July 29, 2015 (80 Fed. Reg. 45,340). NACAA is a national, non-partisan, non-profit association of air pollution control agencies in 40 states, the District of Columbia, four territories and 116 metropolitan areas. The air quality professionals in our member agencies have vast experience dedicated to improving air quality in the United States. These comments are based upon that experience. The views expressed in this testimony do not necessarily represent the positions of every state and local air pollution control agency in the country.

NACAA appreciates the extensive effort that EPA has undertaken in developing its recommended revisions to the *Guideline*. Most of the proposed changes are, we believe, welcome improvements. The numerous editorial revisions and reorganization of the information contained in the *Guideline* make it much easier to read and will improve clarity for both air regulators and the regulated community.

The proposed revisions to the *Guideline* include codifying a number of enhancements to EPA's AERMOD near-field dispersion modeling system to improve the model's performance in its regulatory applications. These comments do not address each proposed AERMOD enhancement individually. In general, NACAA is supportive of the proposed changes and believes they have been adequately vetted by the modeling community. Thus, we believe EPA is on sound footing to recommend these updates to the regulatory default version of AERMOD. We encourage EPA to continue working with state and local air agencies to evaluate the modeling system on an ongoing basis and to develop improvements for future versions of the model and updates to the *Guideline*. NACAA also supports EPA's proposal to replace the CALINE3 family of models with AERMOD as the preferred model for mobile source modeling for carbon monoxide (CO), particulate matter (PM) and lead. This change is both practical and sensible, as CALINE3 requires meteorological

input data that are no longer supported, and for the other reasons set forth in the proposal's preamble.

Despite our overall favorable impression of EPA's proposal, there are several key elements that concern us, and the remainder of these comments will focus on those concerns.

1. Proposed Approach for Addressing Single-Source Impacts on Ozone and Secondary PM_{2.5}

EPA proposes to recommend in the *Guideline* a new, "two-tiered" demonstration approach for addressing single-source impacts on ozone and secondary PM_{2.5}. The appropriate tier for a given application would depend on whether "existing technical information," such as previously conducted photochemical grid modeling, is available and sufficient for evaluating a source's secondary pollution impacts. Where such information is available, it would be used in combination with "other supportive information and analysis" to estimate the source's secondary impacts. The second tier, to be used where existing technical information is deemed insufficient to estimate secondary impacts from a particular source, would require the use of photochemical grid modeling to address those impacts. Photochemical grid models provide a complete characterization of emissions, meteorology, chemistry and other effects.

Critically, EPA has explained in the proposal's preamble, and elaborated in memoranda available in the rulemaking docket, that implementation of the first tier would be tied to a new, not-yet-proposed demonstration tool for ozone and secondary PM_{2.5} called a Model Emissions Rate for Precursors (MERP). A MERP would represent a level of emissions of precursors that is not expected to contribute significantly to concentrations of ozone or secondarily-formed PM_{2.5}. Thus, if a source's precursor emissions are below the applicable MERPs, no additional analysis would be necessary. EPA has stated that it intends to pursue a separate rulemaking to establish a technical basis and new values for ozone and PM_{2.5} Significant Impact Levels (SILs) and to introduce MERPs for ozone and secondary PM_{2.5} precursors. More recently, the agency has indicated that it intends to introduce the MERPs in a guidance document before completing that rulemaking.

NACAA cannot fully assess EPA's proposal for addressing single-source impacts on ozone and secondary PM_{2.5} until the MERPs are established. The burden that the proposed two-tier analysis would impose on state and local agencies is directly tied to the MERPs. If a source's precursor emissions are above the MERPs, and "existing technical information" is otherwise deemed insufficient to evaluate its secondary emissions impacts, the second-tier photochemical grid modeling requirement will be triggered. Photochemical grid models are resource-intensive and require special expertise and training for agency staff. Anytime such an analysis is required, state and local agencies must be able to supply consultants with a large amount of data for their base case analyses. Because it is so resource-intensive, NACAA believes photochemical grid modeling should be reserved for the largest-emitting sources. Compounding the problem, we believe the proposed *Guideline* text – which is silent on the issue of MERPs – is unduly vague as to when "existing technical information" may be deemed sufficient for employing a first-tier assessment (thus avoiding the photochemical grid modeling requirement). EPA should provide additional guidance on this issue.

NACAA believes that it is premature for EPA to add this recommended approach for assessing single-source ozone and secondary PM_{2.5} impacts to the *Guideline*. State and local agencies must have the opportunity to review and provide input on the proposed MERPs before these *Guideline* provisions are finalized.

2. Status of CALPUFF

EPA is proposing to remove the CALPUFF modeling system as an EPA-preferred model for long-range transport, citing “concerns about the management and maintenance of the model code given the frequent change in ownership of the model code since promulgation in the previous version of the *Guideline*.” If this proposal is implemented, there will *no* preferred model for assessment of Class I ambient impacts of a new or modified source for distances beyond 50 kilometers in Prevention of Significant Deterioration (PSD) permitting. EPA recommends a screening approach under which a long-range Class I PSD increment analysis would only be necessary if an initial screening analysis indicates there may be significant ambient impacts at or about 50 kilometers from the source. The appropriate modeling approach, in such cases, would have to be established on a case-by-case basis in consultation with the permit reviewing authority, the appropriate EPA Regional Office, and the relevant Federal Land Manager(s). EPA has indicated that it believes these instances would be very rare. This proposed change to the *Guideline* would not affect EPA’s recommendation in the 2005 Guidelines for Best Available Retrofit Technology (BART) Determinations to use CALPUFF in the BART determination process under the Regional Haze Regulations.

NACAA recommends that CALPUFF be retained as a preferred model, for at least three reasons. First, we believe that the model should be assessed based on its scientific merit, without regard to EPA’s relationship with any particular consulting firm. The issues with model ownership and maintenance should be addressed separately from this rulemaking. Second, many state and local agencies do not agree with EPA’s assumption that Class I long-range transport analyses will be required only rarely after application of the proposed screening analysis. Finally, NACAA believes that the *Guideline* and the Regional Haze Rules should remain consistent in specifying CALPUFF as the preferred long-range transport model for both permitting applications and BART determinations.

3. Prognostic Meteorological Data

EPA proposes to allow the use of prognostic meteorological data in AERMOD modeling where there is no representative National Weather Service or comparable meteorological data available and the collection of site-specific data is cost-prohibitive or infeasible. In the proposed Section 8.4.5 of the *Guideline*, EPA provides guidance on the use of its Mesoscale Model Interface Program (MMIF), which was developed to read prognostic data produced by two meteorological models, the Weather Research and Forecasting (WRF) model and Mesoscale Model 5 (MM5). MMIF processes prognostic datasets from WRF and MM5 to create data for input into AERMET and AERMOD, as well as other dispersion models.

NACAA supports including a prognostic meteorological data alternative in the *Guideline*. We are concerned, however, that EPA's proposal does not include guidance on how the meteorological models themselves should be run and how their output should be evaluated. We recommend that EPA provide detailed recommendations in the *Guideline* on how the WRF and MM5 meteorological models should be run and what the requisite "operational evaluation" of the modeling data should entail, so that permitting authorities can adequately review and evaluate WRF and MM5 modeling exercises.

4. Status of the EPA Model Clearinghouse

EPA proposes to codify in the *Guideline* its practice of requiring Regional Offices to consult and coordinate with the Model Clearinghouse on all approvals of alternative models or techniques. NACAA agrees that regional consistency is very important, but many state and local agencies are concerned that this process can get bogged down and does not work efficiently. If this requirement is codified in the *Guideline*, EPA must ensure that the Model Clearinghouse releases its approvals in a timely manner.

Again, NACAA appreciates this opportunity to comment on the proposed revisions to the *Guideline*. Please do not hesitate to contact us, or Karen Mongoven of NACAA, if you have any questions or would like additional information.

Sincerely,



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Co-Chair
NACAA Emissions &
Modeling Committee



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