



Appendix W / AERMOD Proposed Revisions

NACAA Emissions and Modeling Committee Call

U.S. EPA / OAQPS / Air Quality Modeling Group

Tuesday, December 5, 2023



Guideline / AERMOD Revision Rule

- EPA is proposing to revise the scientific formulation in the AERMOD Modeling System and to make minor revisions to the *Guideline on Air Quality Models* (Published as Appendix W to 40 CFR Part 51).
 - Only adding formulation options to the model system...
 - ...not removing any existing option or imposing any new requirements.
 - Incorporation of COARE algorithms into AERMET for use in overwater marine boundary layer environments
 - Proposed addition of a new Tier 3 detailed screening technique for NO₂ (GRSM)
 - Proposed addition of RLINE as mobile source type
 - Refinement to the recommendations regarding the determination of an appropriate background concentration for NAAQS implementation modeling, including new draft guidance.
 - “Draft Guidance on Developing Background Concentrations for Use in Modeling Demonstrations” details the EPA-recommended framework of considering the representativeness of relevant emissions, air quality monitoring, and pre-existing air quality modeling to appropriately represent background concentration for cumulative impact analyses
 - “Appendix A” to Appendix W shifting to “Addendum A” due to new Federal Register requirements
- Full proposed rule title is, “Guideline on Air Quality Models; Enhancements to the AERMOD Dispersion Modeling System,” and announces the 13th Conference on Air Quality Modeling.
 - <https://www.epa.gov/scram/2023-appendix-w-proposed-rule>
 - Comment period runs through **December 22nd**



AERMOD Modeling System (v23132)

- The most significant aspect of the proposed rule is updates to the AERMOD Modeling System
 - The AERMOD Modeling System includes the AERMAP and AERMET data preprocessors and the AERMOD dispersion model
- As noted on the last slide, we are only adding new regulatory options and are not taking anything away or altering how applicants and state/local permitting agencies can currently use the modeling system for regulatory compliance demonstrations.
- All proposed regulatory updates are proposed as “beta options”
 - Will become “non-default regulatory options” in the final rule
 - Can currently be used in regulatory applications only with formal Section 3.2 alternative model approval
- Additionally, we added several new “alpha options” and numerous bug fixes to AERMOD (v23132), but these additions do not need to be promulgated and are not formally part of the proposed action.
- The AERMOD Modeling System v23132 release on October 23rd is the current version of the model and should now be used in all regulatory applications unless a determination is made that v22112 is equivalent / updates in v23132 do not affect an application that was already in process.
 - <https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models#aermod>



13th Conference on Air Quality Modeling

- Per Section 320 of the Clean Air Act (CAA), the EPA is to conduct triennial air quality modeling conferences:
 - “Not later than six months after August 7, 1977, and at least every three years thereafter, the Administrator shall conduct a conference on air quality modeling. In conducting such conference, special attention shall be given to appropriate modeling necessary for carrying out part C of subchapter I (relating to prevention of significant deterioration of air quality)”
- The 13th Modeling Conference was held November 14 – 15, 2023
 - <https://www.epa.gov/scram/13th-conference-air-quality-modeling>
 - In-person only conference - EPA RTP, NC
 - Presentations are available through the Conference website (*clickable links in final agenda*):
https://gaftp.epa.gov/Air/aqmg/SCRAM/conferences/2023_13th_Conference_On_Air_Quality_Modeling/Thirteenth_Modeling_Conference-Final_Agenda.pdf
 - Transcripts are processing and will be posted on SCRAM and in the Rule Docket ([ID No. EPA-OAQ-2022-0872](#))
- In addition to satisfying the CAA Section 320 statutory requirement to have a triennial modeling conference, the 13th Modeling Conference served as the public hearing for the AERMOD/Appendix W Revision Rule.



Steps to Finalize *Guideline* / AERMOD Rule

- The public comment period for the proposed rule runs through **December 22nd**.
- After the holidays, we will be working on the Response to Comments package and the final version of the rule (Winter / Spring 2024).
- There will be a determination of significance for the final rule by OMB (Spring 2024).
 - Hoping that it will remain a non-significant rule, but the schedule will be adjusted if determined otherwise
- The goal is for the final rule publication with a corresponding 24XXX release version of the AERMOD Modeling System and final version of the Background Concentration Guidance as soon as possible thereafter (Mid/late Summer 2024).
 - Trying to avoid getting too close to the presidential elections and potential of having unnecessary delays based on administrative review by the next administration.
- A final note on the rule, this will be only the second time since 2005 that EPA has made regulatory revisions to either the *Guideline* or the AERMOD Modeling System.
 - The last regulatory revisions were in 2015 (proposal) – 2016-17 (final).
 - In the 2017 revisions, we made substantial and foundational changes based on experience gained and changes to the NAAQS landscape in that decade since initial AERMOD promulgation (2005).
 - Overall, our current action fits within EPA's commitment to focus on more frequent regulatory updates (3-5 years)
 - Expect this round of regulatory updates can become a model for future regulatory updates.



Questions

- Questions from the NACAA Permitting & NSR Committee?