

The February 10, 2020, *DRAFT Guidance for Ozone and Fine Particulate Matter Permit Modeling* reflects, in part, a significant and concerning shift from the current post-2014 interim guidance (“Ozone and PM_{2.5} Permit Modeling Guidance” presentation, 2018 RSL Modelers’ Workshop, Boston, MA) for addressing single-source secondary air quality impacts in demonstrating PSD compliance with the O₃ NAAQS, PM_{2.5} NAAQS, and PM_{2.5} PSD increments. The interim guidance no longer contains the 2014 PM_{2.5} compliance demonstration assessment cases (Case 1 – Case 4) in favor of a condensed and more conservative 2-case compliance demonstration. The proposed 2020 *DRAFT Guidance* resurrects the 4-case compliance demonstration in a form that is much less conservative for Tier 1 (MERPs) and Tier 2 evaluations than the interim guidance. In the 2020 *DRAFT Guidance*, individual precursor pollutants are evaluated only if they are emitted in quantities that equal or exceed established PSD significant emission rates (SERs). This approach fails to address PM_{2.5}, as a whole, once the SER threshold for either primary PM_{2.5} or PM_{2.5} precursors is met or exceeded. Under the interim guidance, NO_x or SO₂ emissions less than the 40 tons SER would need to be evaluated if either precursor exceeded the SER, or if primary PM_{2.5} exceeded its 10 tons SER. Similarly, if primary PM_{2.5} emissions are below the SER (in Assessment Case #2 of the interim guidance), they are still evaluated along with NO_x and SO₂ emissions, as long as either of these precursors is at or above its SER.

It would be reasonable to expect that the changes proposed in the *DRAFT Guidance* should be accompanied by a technically sound rationale, but such rationale is not obvious within this document. Rather, the changes seem directly tied to achieving simplification of a regulatory framework at the expense of conservatism. By failing to evaluate lesser quantities of a precursor pollutant (below the SER), the process is simply made less conservative. This approach could artificially show that a project does not exceed the SIL for PM_{2.5} 24-hour and annual averaging periods, if one or more of the precursors are excluded from consideration because they fall below SER thresholds. However, it is possible that, if all precursors were included, modeled concentrations may indeed exceed SIL thresholds for PM_{2.5} averaging times and necessitate a cumulative analysis. Likewise, omission of precursors that fall below the SER thresholds could underestimate a source’s potential contribution to any modeled exceedances of the NAAQS. U.S. EPA’s proposed approach, which makes the process less conservative, goes counter to the intent of the *Guideline on Air Quality Models* (see *DRAFT Guidance*, page 14, Footnote 9), and what has been portrayed as the intent of the *DRAFT guidance*.

VOC, as a PM_{2.5} precursor, garners consideration only if “a state or the EPA may demonstrate that VOC emissions in a specific area are a significant contributor to that area’s ambient PM_{2.5} concentrations” or the state is “required to regulate VOC emissions as a PM_{2.5} precursor” (*DRAFT Guidance*). As important as organic carbon (VOC) can be to secondary PM_{2.5} formation, it should receive equal consideration in a Tier I MERPs analysis as that of NO_x and SO₂. Federal guidance should provide the means for a state that opts to regulate VOC as a PM_{2.5} precursor if a state so chooses to do so within this context. It would be appropriate and valuable for U.S. EPA to develop VOC MERPs specific to secondary PM_{2.5} formation.

Though state regulatory agencies can exercise discretionary authority, and implement measures and methodologies amenable to addressing precursors emitted at less than SERs, and/or routinely incorporating VOC in secondary PM_{2.5} evaluations, those decisions come with added burden – technically defending such practices to each and every PSD applicant and making them case-by-case specific in the administrative record of each permitting decision. Preserving those elements of the existing interim federal guidance that include evaluating precursors emitted at non-SER rates will assure continued conservatism in determining secondary pollutant impacts.

