



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

November 19th, 2021

Mr. George Bridgers
U. S. Environmental Protection Agency
Office of Air Quality Planning and Standards
AQAD - Air Quality Modeling Group
109 TW Alexander Drive
Room C431B - Mail Drop C439-01
Research Triangle Park, NC 27711

Re: Indiana's Comments Concerning the
Revised DRAFT Guidance for Ozone and
Fine Particulate Matter Permit Modeling

Dear Mr. Bridgers:

The Indiana Department of Environmental Management, Office of Air Quality (IDEM-OAQ) appreciates the opportunity to comment on the revised "DRAFT Guidance for Ozone and Fine Particulate Matter Permit Modeling", released September 20th, 2021. IDEM-OAQ understands U.S. EPA requests comments must be received on or before November 19th, 2021. IDEM-OAQ provides the following comments for U.S. EPA consideration.

Significant Impact Levels for Ozone and PM_{2.5}, Page 16: IDEM believes the U.S. EPA recommendation for the significant impact level (SIL) for annual PM_{2.5} of 0.2 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) is too low and should remain at the 0.3 $\mu\text{g}/\text{m}^3$ level. The 0.3 $\mu\text{g}/\text{m}^3$ level remains as the regulatory threshold, as listed in 40 CFR 51.165(b)(2). IDEM has reviewed previous PSD modeling analyses and would point out that a lower SIL for annual PM_{2.5} can cause unnecessary regulatory burdens on sources and states and does not lend any added value to protection of the fine particulate air quality standard. If a source has modeled concentrations exceeding the lower 0.2 $\mu\text{g}/\text{m}^3$ SIL value yet below the regulatory level of 0.3 $\mu\text{g}/\text{m}^3$, it would require unnecessary data collection for source inventories and additional modeling that would not extend significant impact areas much beyond a source's significant impact area with the SIL at 0.3 $\mu\text{g}/\text{m}^3$. The state exercises its right to retain the discretion under 40 CFR 51.165(b)(2) to determine on a case-by-case basis whether an impact between 0.2



$\mu\text{g}/\text{m}^3$ and $0.3 \mu\text{g}/\text{m}^3$ will cause or contribute to a violation of the annual $\text{PM}_{2.5}$ NAAQS. This will be exercised for any primary and secondary pollutant analyses that will be conducted within the state of Indiana.

Assessing Secondary $\text{PM}_{2.5}$ Impacts, Pages 73-75: IDEM questions the approach for a proposed source causing or contributing to an increment violation from its secondary impacts. The guidance states, "If the applicant can demonstrate to the satisfaction of the permitting authority that significant impacts attributable to the source do not occur at the location and time of any modeled violation, the proposed source or modification generally may be considered to not cause or contribute to an increment violation" (pages 74-75 of the guidance). How can the location and timing of secondary impacts be accurately determined in order to establish an increment violation through the secondary analysis? If there is an increment violation, but the proposed source has shown that it is not culpable with direct $\text{PM}_{2.5}$ emissions, could that source be culpable for secondary impacts from their precursor pollutant emissions? IDEM does not think this would be the case and requests that U.S. EPA provide further explanation on this issue with applicable examples to demonstrate the practicality of this approach.

In addition, the guidance suggests a proposed source can obtain emission offsets or reductions either internally or from another existing source. IDEM fails to see how practical it would be for a source to ask an existing nearby source to obtain offsets or request a source to reduce their emissions. The existing sources have already undergone appropriate permitting and modeling and would not have demonstrated any NAAQS or PSD increment violations. IDEM believes this approach can jeopardize previous permitting and modeling conducted for the inventory sources.

Significant Emission Rates for Ozone and $\text{PM}_{2.5}$, Page 10: U.S. EPA has put great emphasis on the significant emission rates (SERs) and SILs in order to demonstrate allowable emission increases from a major emission source or modification would not cause or contribute to any ozone and fine particulate matter National Ambient Air Quality Standards (NAAQS) or Prevention of Significant Deterioration (PSD) increment violations. The SERs, as established by 40 CFR, 52.21(b)(23) and addressed in Appendix S to Part 51, Section 10.1; and SILs, as established in 75 FR 64864 and U.S. EPA – New Source Review guidance documents, mandates significance thresholds that dictate whether a source is a major emission source and would threaten or exceed existing health standards. The provisions of 40 CFR 52.21(m)(1) in essence detail the requirement for an ambient air quality analysis for sources with significant emissions increases. The Clean Air Act, PSD rules and associated guidance address major sources of criteria pollutant emissions and have guided the permitting process for several decades. Indiana and other states have promulgated and finalized state rules to address their emission sources for major source determinations based on these existing rules and guidance over this time.

The U.S. EPA's revised "DRAFT Guidance for Ozone and Fine Particulate Matter Permit Modeling" document completely disregards significant emission rate thresholds in attempting to address secondary pollutant development and air quality impacts. This disregard of established thresholds for pollutant emission rates below the significant threshold levels is inconsistent with CAA mandates, federal regulations and guidance. The fact that once emitted, secondary precursor emissions take time to photochemically react downwind to form fine particulate matter while direct fine particulate matter disperses very near the source demonstrates the disconnect with combining primary and secondary PM_{2.5} impacts. This extremely conservative approach adds to what Indiana would consider unnecessary analyses, especially when an emission source has direct allowable PM_{2.5} emissions below significant emission rates. Yet, U.S. EPA recommends conducting dispersion modeling to determine direct PM_{2.5} impacts when PM_{2.5} emissions are below significant emission rates and only one of the precursor pollutants of NO_x or SO₂ would be significant for a secondary pollutant analysis. Relying on the defined significant emission rates thresholds to determine the major or minor status of emissions from a source should be the determining factor for secondary pollutant impacts.

If U.S. EPA wishes to change permitting, compliance and air quality analysis requirements to include minor sources in PSD-type evaluations, it would be more appropriate to formally address the requirements in the Clean Air Act and existing PSD regulations in order to provide consistency among all states to appropriately address minor sources. These efforts go against U.S. EPA's stated goals to streamline the permitting and approval processes for states to meet statutory and regulatory permitting requirements. As such, Indiana and other states have a concern with regard to using additional resources and incurring cost burdens to address minor sources that states are not in a position to accommodate.

In a similar fashion, U.S. EPA has made recommendations for addressing environmental justice issues for proposed minor source permits throughout the country. U.S. EPA's recommendations, requests and suggested actions are far overreaching its permitting and modeling authority as provided through congressional actions by which the Clean Air Act and Amendments were developed. Existing CAA and PSD rules are disregarded in making source determinations for recommended analyses for sources with minor emissions. To address the added permitting, compliance and air dispersion modeling recommendations by U.S. EPA for addressing environmental justice areas, states would be required to commit substantial additional staffing and financial resources. This is time and effort that could be allocated to numerous other regulatory requirements. This burden to evaluate minor source impacts goes above and beyond what is typically conducted for a source that is permitted below major source threshold levels and constitutes additional strain on ever dwindling state resources. Indiana does not have the underlying state or federal authority to base permit, compliance, monitoring or modeling decisions on environmental justice considerations. Not only would this

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additional work be onerous and burdensome, but it would also be unfruitful in the decision-making process; not lending any added value to a permit that would be legally defensible under current federal and state permitting rules. For decades, Indiana has based its permitting decisions on existing federal and state regulations and mandates that are protective of all Indiana citizens in all areas of the state. This process is becoming increasingly more difficult as less resources, both staff and financial, are available. For U.S. EPA to add additional requirements for evaluating minor sources only weakens this effort even further.

IDEM-OAQ wishes to thank U.S. EPA for the opportunity to comment on the revised "DRAFT Guidance for Ozone and Fine Particulate Matter Permit Modeling" and looks forward to working with both the U.S. EPA - Region 5 Office and U.S. EPA Headquarters in the review and final approval of this document. If there are further questions, please contact me at (317) 232-8222 or by e-mail at mstuckey@idem.IN.gov or Mark Derf – Section Chief, Technical Support and Modeling Section, Air Programs Branch at (317) 233-5682 or by e-mail at mderf@idem.IN.gov.

Sincerely,



Matt Stuckey
Assistant Commissioner,
Office of Air Quality

MS/sd/md/mh

cc: Melissa Sheffer, U.S. EPA Region 5
Matt Stuckey, IDEM-OAQ
Scott Deloney, IDEM-OAQ
Mark Derf, IDEM-OAQ
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