

September 30, 2016

U.S. Environmental Protection Agency
New Source Review (NSR) Permitting
Attention: SILguidance@epa.gov

Re: Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program

The Northeast States for Coordinated Air Use Management (NESCAUM) offer the following comments on the U.S. Environmental Protection Agency's (EPA's) draft *Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program* revised August 18, 2016 (hereinafter, the "revised draft guidance"). NESCAUM is the regional association of air pollution control agencies representing Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont.

NESCAUM thanks the EPA for its efforts to develop significant impact levels (SILs) for ozone and fine particles (PM_{2.5}) and to provide draft guidance on their use. NESCAUM also thanks the EPA for the opportunity to comment on the draft guidance.

Significant Impact Levels for NAAQS and PSD increments

Background

The revised draft guidance discusses recommended SIL values for the PM_{2.5} National Ambient Air Quality Standard (NAAQS) and Prevention of Significant Deterioration (PSD) increments and recommended SIL values for the ozone NAAQS. It provides separate sections and tables for "SILs for NAAQS" and "SILs for PSD Increment." Although this approach is consistent with how the SILs for other criteria pollutants were originally promulgated and intended, the practical implication is that one set of SILs apply to Class II areas, where the NAAQS and PSD increments apply, and another set of SILs apply to Class I areas, where the NAAQS and a more stringent set of PSD increments apply. NESCAUM feels that the wording and structure of the revised draft guidance could be confusing to some readers, particularly those who are not familiar with the historical development of the SILs.

Comment 1

NESCAUM suggests that the discussion of recommended PM_{2.5} and ozone SIL values be restructured around “Class II areas” (where NAAQS and PSD increments apply) and “Class I areas” (where NAAQS apply equally as in Class II areas and a more stringent set of PSD increments apply) rather than “NAAQS” and “PSD increments.” NESCAUM also suggests that Tables 1 and 2 be replaced with a more concise table such as the one shown below:

Recommended SIL Values for Ozone and PM_{2.5}

Criteria Pollutant (averaging period)	Class II (NAAQS/PSD Increment)	Class I (PSD Increment)
Ozone (8-hour)	1.0 ppb (n/a for increment)	n/a
PM _{2.5} (24-hour)	1.2 µg/m ³ (same for increment)	0.27 µg/m ³
PM _{2.5} (annual)	0.2 µg/m ³ (same for increment)	0.05 µg/m ³

Comment 2

NESCAUM discovered a potential wording error that could cause confusion: a sentence near the bottom of page 3 reads “Since there are no PSD increments for ozone, the EPA has not developed SILs for ozone.” Should the EPA retain the current structure of the revised draft guidance, NESCAUM believes this sentence should read “Since there are no PSD increments for ozone, the EPA has not developed separate PSD increment SILs for ozone.” Should the EPA alter the wording structure that NESCAUM has identified, NESCAUM suggests that the sentence should read “Since there are no PSD increments for ozone, the EPA has not developed separate Class I area SILs for ozone.”

Proposed Appendix W revisions

Background

At the bottom of page 5 of the revised draft guidance, the EPA states, “The ozone SIL value recommended in the guidance is intended to complement the Appendix W updates by providing a threshold that may be used to determine whether an impact predicted by the chosen technique or model causes or contributes to a violation. With respect to PM_{2.5}, the EPA expects the final Appendix W revisions will include criteria and process steps for choosing single-source analytical techniques or models to assess concentrations of direct and secondarily-formed PM_{2.5}.”

Comment 3

NESCAUM urges the EPA to promulgate Appendix W prior to issuing guidance on SILs for ozone and PM_{2.5}.

Comment 4

NESCAUM feels that a lack of information and guidance still exists with respect to addressing ozone and PM_{2.5} formation and impact due to precursor emissions from single-sources (or localized groups of single-sources). Even given the proposed revisions to Appendix W to address single-source ozone and PM_{2.5} impacts, states and other agencies may lack the resources to perform the photochemical modeling that may be necessary to evaluate ozone and secondarily-formed PM_{2.5} against the SILs, NAAQS, and PSD increments.

Comment 5

The Appendix W proposal discusses the use of photochemical grid models as an approach to single-source and multi-source modeling of ozone impacts. Unlike modeling demonstrations for the other criteria pollutants, which use AERMOD and National Weather Service Automated Surface Observing System data from one station, photochemical models use a complex set of meteorological data that interpolates information from multiple stations in order to assess the component of ozone contributed by long-range transport. Developing complex meteorological datasets for photochemical modeling is a major undertaking. The EPA should provide more guidance on the development of photochemical model meteorology, or more preferable, establish a data warehouse from which to download photochemical modeling meteorology.

Justification of the use of SILs

Background

On page 3 of the revised draft guidance, the EPA states, “If a permitting authority chooses to use these or other SIL values on a case-by-case basis, it must justify the values and their use in the administrative record for the permitting action.”

Comment 6

NESCAUM urges the EPA to provide more explicit detail in the revised draft guidance regarding the type of justification needed. NESCAUM also urges the EPA to include hypothetical examples of such justification in the revised draft guidance.

Schedule for potentially binding rulemaking

Background

On page 3 of the revised draft guidance, the EPA states its intentions to “learn generally about permitting agencies’ experiences in applying SILs in particular PSD permitting decisions” and to “gather more specific information, including how often and in what types of settings the application of a SIL at the single-source assessment and cumulative assessment stages of the PSD air quality analysis has made a critical difference in whether a conclusion was reached that the proposed source will not cause or contribute to a NAAQS or PSD increment violation.” The EPA also states its intentions to “use this experience and information to assess, refine and, as appropriate, codify SIL values and specific applications of those values in a future, potentially binding rulemaking.”

Comment 7

NESCAUM appreciates and encourages these efforts. However, NESCAUM also encourages the EPA to provide a more explicit schedule for this potential rulemaking process. NESCAUM also suggests that the EPA provide a more detailed timeframe over which it intends to collect the data related to agencies’ experiences and other information as described above.

Ratio of 2:9 for 24-hr PM_{2.5} Class I PSD increment SIL

Background

On page 11 of the revised draft guidance, the EPA describes its methodology for deriving the Class I PSD increment SILs for PM_{2.5} using the ratios of the Class I to Class II PSD increments for PM_{2.5}. For the annual averaging period, the Class I PSD increment for PM_{2.5} is 1 and the Class II PSD increment is 4, resulting in a 1:4 ratio. Similarly, the 24-hour PM_{2.5} Class I PSD increment is 2 and the Class II PSD increment is 9, resulting in a ratio of 2:9.

Comment 8

In footnote 44 on page 11, the second sentence reads “For the annual PM_{2.5} NAAQS, the NAAQS SIL value is reduced by the ratio of 1:4, because the Class I PSD increment is 1 µg/m³ and the Class II PSD increment is 4 µg/m³.” However, the third sentence simply reads “The ratio of 2:9 is used for the 24-hour PM_{2.5} NAAQS.” To add clarification and avoid confusion, NESCAUM suggests that the EPA revise this sentence to “For the 24-hour PM_{2.5} NAAQS, the NAAQS SIL value is reduced by the ratio of 2:9, because the Class I PSD increment is 2 µg/m³ and the Class II PSD increment is 9 µg/m³.”

Summary Comment

As indicated in Comments 3, 4, 5, and 6, there are significant concerns with the use of photochemical grid modeling in the context of permitting individual sources. If photochemical grid modeling methodologies for permit review settings are not fully in place, the issuance of the SILs guidance is premature. Particular concerns are whether photochemical modeling approaches, and hence results, would be consistent among different projects and different state/tribal/local agencies and whether the results would be vulnerable to litigation. The EPA should confirm that it will provide the requisite guidance and technical support to perform defensible photochemical modeling analyses in the context of permitting actions for individual sources. Lastly, the EPA should address the impact of SILs guidance on non-attainment areas, which are not subject to PSD regulations.

Sincerely,

A handwritten signature in blue ink, appearing to read "Paul J. Miller".

Paul J. Miller
Deputy Director & Chief Scientist

cc: NESCAUM directors
NESCAUM Permit Modeling Committee
EPA Regions 1 & 2