Arkansas Environmental Federation

Industries for the Environment

July 2, 2015

Comments on ADEQ's NAAQS SIP/Minor NSR Permitting Guidance Document

AEF submits the following comments on the ADEQ document entitled "Developing the NAAQS SIP: A Look at Minor Stationary Source Permitting".

BACKGROUND INFORMATION

Under the Clean Air Act (CAA), state and local governments are primarily responsible for the prevention and control of air pollution. Air pollution is controlled by rules and guidelines issued by the U.S. EPA under the CAA. These rules and guidelines must be included in a state's implementation plan (SIP). SIPs contain a state's strategy for attaining and maintaining the National Ambient Air Quality Standards (NAAQS), which exist for carbon monoxide (CO), fine particulate matter (PM_{10} and $PM_{2.5}$), lead, nitrogen dioxide (NO_2), ozone, and sulfur dioxide (SO_2). SIPs may be revised at the impetus of EPA or at a state's instigation, always subject to EPA approval.

SIPs are concerned primarily with nonattainment, and states are required to estimate the emissions reductions required to attain the NAAQS and establish their own unique control program to achieve the necessary reductions. Due to the nonattainment focus of SIPs, all state regulations are focused first toward reducing pollution in known problem areas. For a SIP to be valid, its provisions must be supported by state enabling legislation and a regulatory framework that can be applied broadly. In developing SIPs, States are encouraged to take into consideration the social and economic impact of their strategies—including the impact on availability of fuels, energy, and employment—but are not required to do so. Over the decades since the CAA has been in place, Arkansas' air quality has been very good and there have been very few areas where the NAAQS has not been attained.[1] Therefore, Arkansas' SIPs have been relatively simple and have generally conformed to the minimum standards required by EPA. The last Arkansas SIP was approved by EPA in October 2000.[2] However, a more recent SIP submittal is still pending with EPA.

ADEQ is currently developing a SIP (or SIPs) for several outstanding NAAQS. The NAAQS SIPs to be developed include:

[1] The current exception is Crittenden County, which is part of the Memphis TN-AR-MS interstate area that is currently nonattainment for the 2008 ozone NAAQS.
[2] 65 FR 61103, October 16, 2000.

1. 2006 $PM_{2.5}$ – Update needed for minor New Source Review (NSR) only. The major NSR/PSD portion of the 2006 $PM_{2.5}$ SIP was completed in November 2014, following promulgation of updates to Regulations 18/19/26.
2. 2008 Ozone
3. 2008 Lead
4. 2010 SO_2 (1-hour NAAQS)
5. 2010 NO_2 (1-hour NAAQS)
6. 2012 $PM_{2.5}$ – These standards reduced the annual $PM_{2.5}$ NAAQS to 12 $\mu g/m^3$, down from 15.

The CAA requires states to submit SIPs that provide for the implementation, maintenance and enforcement of a new or revised NAAQS within 3 years following the promulgation of the new or revised NAAQS. ADEQ is past the 3-year deadline for submittal of the required SIPs, and the concern is that EPA will eventually take formal action against Arkansas.

As with past SIP submittals, Arkansas is currently in attainment with all of these standards (except for ozone in Crittenden County). Therefore, these "new" NAAQS SIPs do not necessarily require any additional control measures to "attain the NAAQS".

COMMENTS ON "DEVELOPING THE NAAQS SIP" DOCUMENT

One element of the SIP is the minor New Source Review (NSR) permitting program. ADEQ has an existing minor NSR program under Arkansas Regulation No. 19. The vast majority of Regulation No. 19 has been unchanged for many years, and was approved by EPA in the October 2000 SIP approval. As part of the SIP development process, ADEQ is considering when and if an air quality dispersion modeling analysis needs to be conducted as part of the Minor NSR permitting process.

Comment #1 - Purpose

In the Purpose section of the document, ADEQ makes the following statement:

Part of this duty is to ensure that construction of new stationary sources or modification of existing stationary sources, including construction or modification authorized via Minor new source review (NSR) permitting actions, do not cause or contribute to an exceedance of the national ambient air quality standards (NAAQS) or interfere with the maintenance of the NAAQS.

The phrase "do not cause or contribute to an exceedance of the NAAQS" is not a requirement of an approvable Minor NSR program within a SIP (see 40 CFR 51.160(a)), and should not be used in the Minor NSR context. This phrase implies a site-specific, quantitative determination of the ambient air quality impact from proposed stationary source construction or modification (i.e., dispersion modeling). It is a requirement of the major NSR/PSD permitting program (see 40 CFR 51.165(b)), but not minor NSR. The Minor NSR program must only insure that construction or modification does not cause "interference with attainment or maintenance" of the NAAQS. "Attainment" and "maintenance" specifically refer to

the attainment/nonattainment determination process, which is based on monitored air quality concentrations in the area.

The NAAQS Implementation White Paper provided to ADEQ in November 2012 provides an in-depth evaluation of the NAAQS in relation to stationary source permitting. A copy of this White Paper is enclosed with these comments.

Comment #2 – Enhanced Planning Measures and Approaches

AEF supports the ADEQ's use of measures outside of the stationary source permitting process to evaluate the potential for future nonattainment. For example, the pollutant with monitored concentrations closest to the NAAQS in Arkansas is $PM_{2.5}$, and the emissions inventory data shared by ADEQ during the stakeholder process showed that the overwhelming majority of $PM_{2.5}$ emissions are from non-stationary sources, such as wildfires, prescribed burning, and on-road/off-road mobile sources. If $PM_{2.5}$ nonattainment were to occur in Arkansas, emission reductions from these non-stationary sources would have to be an important element in any nonattainment SIP. Given the emission inventory data, reducing or even eliminating $PM_{2.5}$ emissions from stationary sources would be unlikely to have any measurable impact on $PM_{2.5}$ attainment.

Comment #3 – Minor NSR NAAQS Evaluation Flowchart

In January 2014, AEF, EEAA, and other industry representatives met with ADEQ and EPA Region 6 (via a videoconference). A copy of the PowerPoint presentation from this meeting is enclosed.

The purpose of the January 2014 meeting was to discuss NAAQS reviews and modeling for minor NSR under the Arkansas infrastructure SIP. During the meeting, it was explained that the "NAAQS review" for many types of minor NSR under the Arkansas regulations occurs on a programmatic basis, and thus case-by-case NAAQS reviews are not required in these instances. The role of modeling in the NAAQS reviews was also discussed.

Figure 1 shows the various levels of Arkansas NSR permitting and describes how the NAAQS review is satisfied for each type. The EPA did not disagree with the explanation of how the Arkansas minor NSR program functions regarding NAAQS reviews. The second level of the Pyramid ("Reg. 19 and Reg. 26 non-PSD Initial Source Construction") right below "PSD Review" rises to the level of a case-by-case NAAQS review for minor NSR (but not necessarily modeling).

Given that the definition of "major source" under the CAA (and thus Reg. 26) is 100 tons per year (tpy) of a regulated pollutant, AEF recommends that ADEQ's NAAQS Evaluation Flowchart adopt an "SER" (as that term is used in the Flowchart) modeling threshold of 100 tpy or more of any single criteria pollutant, i.e. any pollutant with a NAAQS (except $PM_{2.5}$), calculated on a net emissions increase basis (defined as allowable-to-allowable). The recommended $PM_{2.5}$ threshold is 50 tpy due to existing $PM_{2.5}$ monitored background concentrations near the NAAQS in most areas of the state. The establishment of defined levels where modeling would be conducted would minimize use of a subjective determination that a new or modified source would

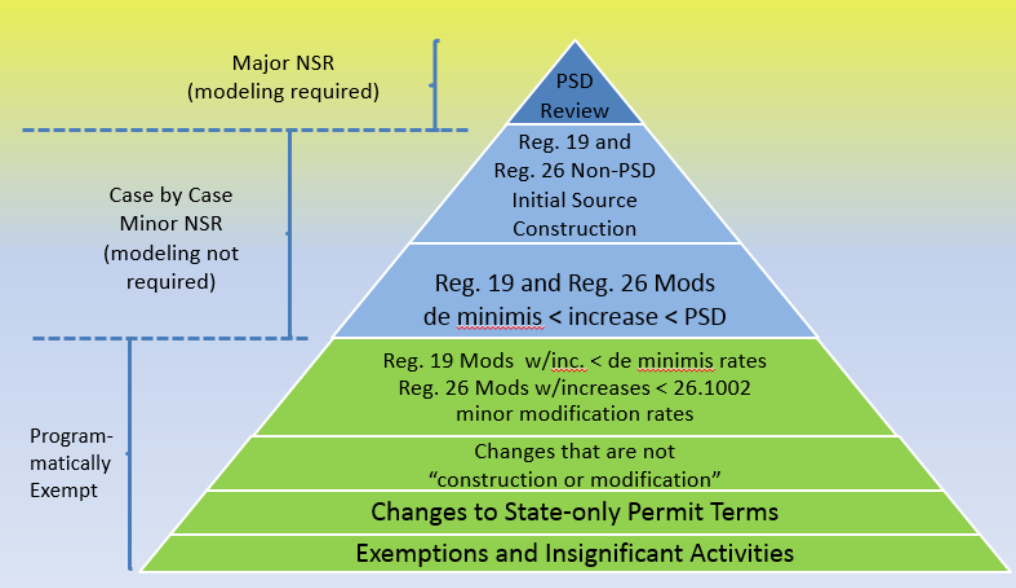

Figure 1. The Arkansas NSR NAAQS Review Pyramid

need a detailed NAAQS review. Emission increases at stationary sources below 100 tpy (or 50 tpy PM2.5) in attainment areas would generally be in the "noise level' of overall area emissions and would not be expected to interfere with maintenance or attainment of the NAAQS. The November 2012 White Paper provides citations to EPA statements in this same vein.

The net emissions increase would be the change in permit allowable emissions (on a pollutant-by-pollutant basis) as a result of the proposed construction or modification requiring a minor NSR permit decision. Only the pollutant(s) with a net emissions increase exceeding the modeling threshold would be subject to a dispersion modeling analysis. For example, if an existing source had facility-wide allowable NO_X emissions of 50 tpy and proposed construction or modification of equipment such that the post-project facility-wide NO_X emissions would exceed 150 tpy, then an NO_2 modeling analysis would be required. Note that the proposed modeling threshold will have no effect on existing PSD major stationary sources, since those large sources have emission increase thresholds much lower than 100 tpy (e.g., 40 tpy NO_X) that subject them to an air quality modeling analysis as part of the major NSR/PSD permit process.

In some cases, an increase of over 100 tpy may not warrant an air quality modeling analysis; for example, in very rural areas or areas where monitored concentrations are far below the NAAQS. AEF recommends that the Flowchart include another decision point for a qualitative analysis. In the event that the tpy thresholds are exceeded, ADEQ may still determine that modeling is not necessary based on an examination of the source type; emission parameters; the emissions increase from the proposed construction or modification relative to the overall emissions (from stationary sources, mobile sources, other anthropogenic sources, and biogenic sources) in this area; population growth and density, and

land use in the area; recent and historical ambient monitoring data and trends within this Air Quality Control Region; and meteorological data.

The resulting Flowchart would mean that a NAAQS modeling analysis would never be required if the emissions increases were below the tpy thresholds, but modeling would be required if the increases were above the thresholds unless ADEQ determined that its qualitative examination satisfied the NAAQS review.

AEF does not agree that historical modeling data should be used to identify possible issues with maintaining the NAAQS and/or be a factor in requiring future modeling. Historical NAAQS modeling completed or required by ADEQ was in many cases overly conservative and did not appropriately use the Minor NSR concept of "attainment or maintenance of the NAAQS".

CONCLUSION

AEF appreciates ADEQ's efforts in conducting the stakeholder process and in providing ample time and opportunity for stakeholder input. There are still many details to work out in the SIP process, and we look forward to continuing our partnership with ADEQ toward a timely, effective and approvable SIP submittal package.

Sincerely,

Charles M. Miller
Executive Director