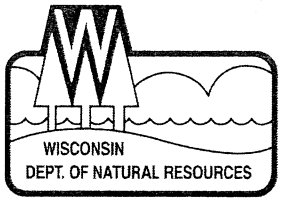
State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
101 S. Webster Street
Box 7921
Madison WI 53707-7921

Scott Walker, Governor
Cathy Stepp, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



July 22, 2013

Mr. James Thurman
Office of Air Quality Planning & Standards
U.S. Environmental Protection Agency (EPA)
Research Triangle Park, NC 27711

Subject: Draft Modeling Technical Assistance Document (TAD) for the 2010 Sulfur Dioxide (SO_2) National Ambient Air Quality Standard (NAAQS)

Dear Mr. Thurman:

The Wisconsin Department of Natural Resources (WDNR) hereby submits comments on the draft SO_2 NAAQS Designations Modeling TAD dated May 2013. The WDNR supports the U.S. EPA's effort to provide flexibility in characterizing ambient air quality in areas with significant SO_2 emission sources either through ambient monitoring or dispersion modeling, but please be aware of the interaction between the two disciplines. It is hard to know how resource intensive the designation analysis will be without the data requirements rule, so state and local agencies may have different ideas of when it is more cost-effective to model rather than monitor. In either option, dispersion modeling may be performed. State and local agencies might first model, then, if modeled exceedances are predicted, perform ambient monitoring. WDNR requests the following changes and clarifications.

Modeled Emission Rates

It is unclear when a facility will be able to model with allowable rates that have recently been approved. For example, if a facility has obtained a permit to switch to a low-sulfur fuel, their actual emissions for the three recent years will not be reflected in the inventory. The WDNR requests that EPA allow for representation of future conditions based on existing permit conditions.

The WDNR also requests clarification on the nature of the actual emissions modeled. The TAD implies that for the three-year inventory, up to three separate emission inputs can be used, representing one per year. The Gaussian plume algorithms, as well as the general field of regulatory dispersion modeling do not support such a detailed emission profile. The WDNR recommends that air agencies develop a representative emission scenario or scenarios to reflect reasonable worst-case conditions and then model using one of the existing temporal profiles available within AERMOD. The HOUREMIS keyword should not be used, as this could lead to "pairing" the specific meteorology to the specific emission rate. The U.S. EPA does not accept such pairing of a modeled concentration with monitored background in traditional regulatory (i.e. PSD) modeling and the same statistical and scientific protocols should still apply.

Intermittent Emission Units

The WDNR disagrees with the inclusion of intermittent units when modeling actual emissions. If the unit operated for less than 24 hours per year, and only for testing purposes, then the provisions of the March 1, 2011 U.S. EPA NO_2 / SO_2 guidance memo should apply for both the allowable emission and the actual emission scenario. The intermittently operating unit has an emission scenario that is not continuous or frequent enough to contribute significantly to the annual distribution of maximum daily one-hour concentrations.

Meteorological Data for Modeling

The WDNR disagrees that the most recent three year period of meteorological data must be used in the dispersion modeling. The basis for Gaussian plume regulatory dispersion modeling is to statistically determine the concentrations for the combination of emissions and meteorology. The regulatory dispersion models are not the proper tool to examine the matching (pairing) of specific meteorology to specific emission profiles. If air agencies have existing processed data sets (either on-site or 5-year National Weather Service data) that have been created under the most recent programs and U.S. EPA guidance, then these data sets should be used in the designation modeling.

Stack Heights for Modeling

For the purposes of designation modeling, the statistical and scientific protocols that provide the most representative impacts should apply. The WDNR recommends that actual stack heights be used for designation modeling to provide the most representative ground level concentrations. The Good Engineering Practice (GEP) stack height regulations are a regulatory tool put in place so facilities would have to examine emission controls rather than purely physical stack changes. It is known that if GEP stack heights are lower than actual stack heights that the modeled concentrations may not be representative.

Included Facilities

The WDNR requests clarification as to the facilities to include in the dispersion modeling of a specified area. While the threshold rule will identify the main facilities, in many cases other smaller facilities will be in the area. Should an air agency elect to model this area, it should be made clear that the focus of the designation modeling is to examine the overall air quality and not to identify modeled exceedances along the fence line of small facilities. Geographically limited exceedances should be addressed during the infrastructure phase or even via permitting.

Regional Consistency

The WDNR recommends that the U.S. EPA clarify the approval process for selecting the approach used for facilities near state and local agency boundaries. The TAD in its current form does not lay out any distinct criteria for who decides whether to model or monitor, leaving the state and local agencies open to inconsistencies around their borders. If the regional offices are meant to have ultimate oversight of the process, it should be clearly indicated that the regional offices will be determining and/or approving whether modeling or monitoring will be used for facilities near state and local agency boundaries.

Additionally, the WDNR requests that the U.S. EPA modeling and monitoring staff work together with state and local agency modeling and monitoring staff on agency specific approaches. This may be best done by redrafting the TADS into one SO_2 Implementation Plan that encourages better communication between the groups.

Timing

The WDNR requests that the timing of the final designations be the same for either the modeling or the monitoring approach. At this time, the modeling approach requires the demonstration of compliance with the 1-hour SO_2 standard significantly earlier than the timing associated with the monitoring approach. This should be changed such that a state or local agency can demonstrate compliance in a similar timeframe regardless of the method used. Since it will take three years of monitored data to obtain a design value, the modeling timeframes should be brought in line with those proposed for monitoring.

Thank you for the opportunity to comment on the Draft SO_2 NAAQS Designations Modeling Technical Assistance Document. Please feel free to contact John Roth of my staff at (608) 267-0805 or John.Roth@Wisconsin.gov if you have any questions concerning these comments.

Sincerely,

Bart Sponseller
Bureau of Air Management Director
Wisconsin Department of Natural Resources