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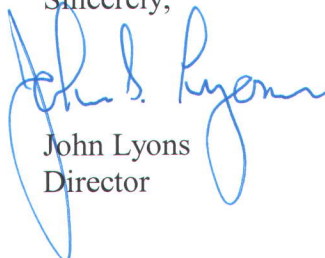
Docket ID # EPA-HQ-OAR-2006-0922  
Air and Radiation Docket and Information Center  
Environmental Protection Agency  
Mail Code: 6102T  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

Dear Sir/Madam:

The Kentucky Division for Air Quality respectfully submits comments on U.S. EPA's proposed rule to revise the Nitrogen Dioxide National Ambient Air Quality Standard as published in the Federal Register on July 15, 2009.

Thank you for this opportunity to comment on the proposed regulation. If you have any questions or concerns regarding our comments, please contact me at 502-564-3999.

Sincerely,



John Lyons  
Director

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**National Ambient Air Quality Standards for Nitrogen Dioxide**  
**July 15, 2009 Federal Register**  
**74 FR 34404**

On behalf of the Commonwealth of Kentucky, the Division for Air Quality respectfully submits the following comments in response to the July 15, 2009, Federal Register that proposes to revise the national ambient air quality standards (NAAQS) for nitrogen dioxide (NO<sub>2</sub>). In addition to the proposed revision to the NO<sub>2</sub> NAAQS, ambient air monitoring regulations are modified to require the development and operation of a near-roadway NO<sub>2</sub> monitoring network. In light of the current budget crisis, the Commonwealth of Kentucky cannot support and provide funding to develop and operate the proposed near-roadway NO<sub>2</sub> monitoring network. The necessary man-hours and recurring costs of maintaining the proposed network are not feasible.

**Economic Burden**

At present, 40 CFR 58, Appendix D, cites no minimum monitoring requirements for NO<sub>2</sub>, other than the requirement for EPA Regional Administrator approval before removing any existing monitors, and that any ongoing monitoring have at least one monitor sited to measure the maximum concentration of NO<sub>2</sub> in that area. Currently, the Division for Air Quality operates a network of five NO<sub>2</sub> monitors statewide, each representing neighborhood or larger spatial scales, or "area-wide" monitoring. This network is expensive and requires many man-hours to maintain.

In the new NO<sub>2</sub> NAAQS proposal, Section III.B.2. *Network Design, Proposed Changes*, EPA proposes a two-tier network design to monitor ambient NO<sub>2</sub> concentrations. The first tier would include monitoring in areas of expected maximum 1-hour concentrations (i.e., near-roadway monitoring), and the second tier would monitor to characterize areas with the highest expected NO<sub>2</sub> concentrations at the neighborhood or larger spatial scales, or "area-wide" monitoring. In order to meet the first tier requirement, this proposal would increase the size of the Division's NO<sub>2</sub> network. Based on 2007 census data, the EPA has suggested that Kentucky will need two additional monitors to satisfy this requirement. However, considering that the Division's plan for establishing the new NO<sub>2</sub> monitoring sites will be submitted to the EPA by July 1, 2011, more current census data should be available at that time, and will most likely indicate the need for more than two additional monitors in the Commonwealth.

This increase in NO<sub>2</sub> monitors will cause substantial economic burden to the Division. First, the Division will have to purchase the required additional NO<sub>2</sub> analyzers, which are expensive. Second, the operation of an FRM or FEM NO<sub>2</sub> analyzer requires a temperature-controlled environment. Therefore, the Division will have to purchase shelters to house the instruments. The shelters will incur ongoing utility costs, as well as costs for security and potential land-use rental fees. Third, to properly operate the NO<sub>2</sub> monitors, as well as obtain the required hourly data, the Division will also have to purchase the following: data acquisition systems including computers & data loggers, GPT calibrators and zero-air sources, and gas cylinders.

Finally, the revised NO<sub>2</sub> NAAQS has an additional requirement of meteorological data collection at the near-roadway sites. Specifically, Section III.B.2.a. states, “the EPA proposes to require three-dimensional anemometry, providing wind vector data in the horizontal and vertical planes, along with temperature and relative humidity measurements, at all required near-road monitoring sites.” Thus, for each new site, the Division will have to purchase the above-stated meteorological devices, as well as a tower or pole to mount them, and have a method to retrieve the data from the instruments. Altogether, the Division conservatively estimates a cost of \$100,000 to merely establish one new site. Unless the EPA offers 103 grant monies to operate this network, the Division will not be able to afford its implementation.

The NO<sub>2</sub> analyzer is the most complicated and time-consuming air monitoring instrument operated by the Division. The analyzers require daily oversight by Division personnel. The instruments require quality control precision checks and maintenance every two weeks, which requires staff time and travel to the sites. Calibrations are extremely time-consuming and frequent due to instrument drift. Additionally, the NO<sub>2</sub> analyzer requires frequent troubleshooting and repair work by the Division’s technical support staff, which also equates to travel time and time away from other instruments in the network needing attention. Quality assurance audits also require a large amount of staff time and travel for the NO<sub>2</sub> analyzers. Validation of NO<sub>2</sub> data is also a time-consuming task. Altogether, ongoing personnel costs, as well as the recurring costs of operating the NO<sub>2</sub> analyzers and quality-assuring the data, are tremendous.

Unfortunately, in the current economic climate, the Division is unable to hire any additional employees to operate this near-roadway NO<sub>2</sub> monitoring network. With that in mind, the Division will not sacrifice quality for quantity. In order to accommodate for this new NO<sub>2</sub> network, the Division will be forced to trim its existing air monitoring network. As mentioned previously, the Division already operates a network of five NO<sub>2</sub> instruments. The Division will have to look closely at these five sites and determine which, if any, can be shutdown, but still achieve the second-tier requirements of the new NAAQS. Additionally, the Division will consider reducing its PM<sub>2.5</sub> network in order to accommodate for the resource demands of the NO<sub>2</sub> roadway monitoring network.

#### **Design Criteria and Quality Assurance**

Section III.A. *Monitoring Methods* states that “any NO<sub>2</sub> FRM or FEM used for making primary NAAQS decisions must be capable of providing hourly-averaged concentration data.” The Division concurs with this proposal.

Section III.B.2.a. states that near-road NO<sub>2</sub> monitoring stations be sited so that the probe is no greater than 50 meters away from the outside edge of the traffic lane. In regard to this requirement, the Division has concerns that siting shelters so close to major roadways could significantly increase safety risks to Division personnel and equipment.

The Division concurs with the proposed changes to 40 CFR 58 Appendix A, Section 2.3.1.5.

### **Nonattainment Boundaries**

Section V.A *Designations* (74 FR 34450) states, "We intend to designate areas that do not show violations of the revised NO<sub>2</sub> NAAQS as "unclassifiable" since the existing area-wide monitoring network does not fully satisfy the near roadway oriented NO<sub>2</sub> monitoring requirements proposed in this notice. Because there are no monitors in the current NO<sub>2</sub> network that meet the proposed definition of "near-roadway," monitoring data that does not indicate a violation of the NAAQS would not provide a sufficient basis for concluding that an area is meeting the revised NO<sub>2</sub> NAAQS. Rather, an area-wide monitor may record concentrations that are below the revised NO<sub>2</sub> NAAQS because it is not sited where concentrations in the area are highest."

The Division is concerned with this designation process, should EPA decide to designate entire counties if a county contains a violating monitor. Previously, if an area-wide monitor recorded concentrations that were below a revised NAAQS, the area was determined to be in attainment. If EPA uses the approach that an area may monitor attainment, but a near-roadway monitor may monitor nonattainment, then the area designated should not be the entire county, but the narrowest area which encompasses the roadway. The Division does not believe that there are SIP control measures that could be taken to reduce emissions in this area. The obvious reason for higher concentrations near roadways would be vehicular traffic. States are preempted from implementing state control measures on vehicles. It would be unreasonable and unpopular to implement control requirements outside this narrow near-roadway nonattainment area in a location that monitors "concentrations below the revised NO<sub>2</sub> NAAQS." If additional control requirements were placed in the entire county (areas that are not proximate to the roadways), it is unclear how this would reduce emissions in the areas that monitor the high concentrations.