

"Alteri, Sean (EEC)"  
<Sean.Alteri@ky.gov>

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To Group A-AND-R-DOCKET@EPA, Deirdre  
Murphy/RTP/USEPA/US@EPA

cc

bcc

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**Air Docket**  
**U.S. EPA**  
**Docket ID No. EPA-HQ-OAR-2006-0735**  
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**1200 Pennsylvania Avenue, NW**  
**Washington, DC 20460**

**National Ambient Air Quality Standards for Lead**  
**March 20, 2008 Federal Register**  
**73 FR 29184**

On behalf of the Commonwealth of Kentucky, the Division for Air Quality respectfully submits the following comments in response to the March 20, 2008, Federal Register that proposes to revise the national ambient air quality standards (NAAQS) for lead (Pb). In addition to the proposed revisions to the Pb NAAQS, ambient air monitoring regulations are modified to require the development and operation of a Pb ambient air monitoring network. In light of the current budget crisis, the Commonwealth of Kentucky has serious concerns about the rule. Kentucky cannot support and provide funding to develop and operate the proposed Pb monitoring network. The necessary man-hours and associated costs with sample analyses are a misuse of resources and are impractical. Additionally, if a monitoring network is established, exceedences of the NAAQS detected in the ambient air are highly unlikely. Considering that emission inventories for Pb emitting stationary sources are well established, it would be more prudent to spend the limited resources of the state and local agencies on controlling these sources rather than wasting them on monitoring. After reviewing the proposed rule, Kentucky offers the following comments.

### **Economic Burden**

Due to the range of the proposed NAAQS and the required number of Pb ambient air monitors associated with the different proposed levels, the actual number of Pb monitors in the final network design is not established in the final rule. Thus, an accurate cost analysis of the proposed monitoring could not be calculated. However, Section V.B. states that the “annual average reporting burden for the collection under 40 CFR Part 58 (averaged over the first 3 years of this ICR) for 150 respondents is estimated to increase by a total of 90,434 labor hours per year with an increase of \$6,599,653 per year.” This estimated cost is for only 150 respondents and only the costs associated with data reporting activities into EPA’s Air Quality System (AQS). The costs incurred by the procurement and sampling activities are not included in this estimate. Currently, Kentucky cannot provide the funding and manpower necessary to establish and operate the proposed Pb network.

If the final NAAQS is set at  $0.10 \mu\text{g}/\text{m}^3$ , a Pb ambient air monitor will be required to be located at the fence-line of every source that emits 200 kg (441 lbs) per year. If implemented, the proposed rule will require the deployment and operation of an additional 24 monitors in the Commonwealth of Kentucky based upon emissions data from the 2002 NEI database. If the final NAAQS is set at  $0.30 \mu\text{g}/\text{m}^3$ , the required number of source-oriented Pb monitors in Kentucky will be six (6) monitors. Again, Kentucky cannot provide the funding and manpower necessary to establish and operate the proposed Pb network, especially in light of our experiences with Pb monitoring. Kentucky has had a long history of Pb monitoring and does not have an area of nonattainment for Pb.

As stated in the preamble, Section V.A.2.e. *Quality Assurance*, further economic analysis is required to determine “whether a centrally run program managed by EPA and funded with State and Tribal Assistance Grant (STAG) funds would be a more efficient and preferred alternative than individual State-managed programs.” Until the economic analysis is performed, final rulemaking should not be published. Additionally, the amount of monies already held back from the STAG funds is excessive. This proposal will further diminish STAG funding for more essential programs.

Rather than creating an economic hardship by requiring States and Local agencies to develop and operate an extensive lead monitoring network, EPA should require known emitters of lead to monitor through a regulatory process. As explained in the preamble of the proposed rule (73 FR 29191), “the average maximum quarterly mean concentration for the time period 2003-2005 among source-oriented monitoring sites in the U.S. is  $0.48 \mu\text{g}/\text{m}^3$ , while the corresponding average for non source-oriented sites is  $0.03 \mu\text{g}/\text{m}^3$ .” Regulating known emitters of Pb would be a more prudent use of valuable resources.

However, if the EPA proceeds with revising the Pb NAAQS, Kentucky recommends that the final NAAQS be set at  $0.30 \mu\text{g}/\text{m}^3$ . As noted above and in the preamble of the proposed rule, the sample concentrations of lead among source-oriented monitoring will be significantly higher than non-source monitoring results. The sample results from source-oriented monitors will be characterized as “microscale” and will not represent air quality conditions on a “neighborhood scale.”

### **Setting the Pb NAAQS**

As stated in the preamble of proposed rule (73 FR 29188), “If EPA were to set unreasonable standards (e.g., standards that would recommend removal of all Pb from paint, dust, and soil,) States and Tribes may choose to opt out of the Title X Pb program and property owners may choose to ignore EPA’s advice believing it lacks credibility and practical value.” Likewise, if EPA were to set an unreasonable national ambient air quality standard (e.g., if EPA set the Pb NAAQS at a level of zero), States and Tribes would have cause to ignore future EPA advice and recommended revisions to other NAAQS, believing that the standards lack credibility and practical value.

Furthermore, as published in 71 FR 61145, the “CAA does not require the Administrator to establish a primary NAAQS at a zero-risk level or at a background concentration level.”

### **Waiver/Variance to Network Design Criteria**

As detailed in Appendix D to Part 58, the “Regional administrator may waive the requirement in paragraph 4.5 (a) for monitoring near Pb sources emitting less than 1000 kilograms if the State or, where appropriate, local agency can demonstrate (via historical monitoring data, modeling, or other means) that the Pb source will not contribute to a maximum Pb concentration in ambient air in excess of 50% of the NAAQS.” If the NAAQS is set to  $0.30 \mu\text{g}/\text{m}^3$ , the required number of monitors located in Kentucky will be six (6) monitors. The waiver provided could possibly eliminate the deployment and operation of four (4) of the monitors. Kentucky appreciates EPA providing a waiver mechanism. However, preparing and submitting a waiver demonstration will consume valuable and limited State ambient air monitoring resources.

### **Sampling Schedule**

Increasing the frequency of sampling from 1-in-6 to 1-in-3 day will create an economic burden and hardship on State monitoring agencies. Based on past monitoring results, the increased frequency will produce more data with insignificant value. Of course, the increased frequency doubles the cost of sampling, analyses, data handling, and other activities associated with Pb monitoring. As discussed previously, State air monitoring resources are not sufficient to establish and operate a Pb monitoring network. Any additional unfunded mandates for ambient air monitoring will exhaust available resources.

### **Nontainment Boundaries**

Kentucky recommends that lead nonattainment boundaries be defined by the scale of the violating monitor. Considering that the spatial scale for lead monitoring will be “microscale”, Kentucky does not support designating nonattainment areas based on MSA boundaries or even by county boundaries. By the same reasoning, Kentucky concurs with the language in Section VI.B.1. “In some instances, a boundary other than the county perimeter, that addresses areas impacted by specific sources of lead, may also be appropriate.” However, Kentucky is concerned with prior language that explains “if the relevant air quality monitor measuring a violation(s) is located near another county, then EPA would presume that the contributing county should also be designated as nonattainment for the Pb NAAQS.” The language “EPA would presume that the contributing county should also be designated as nonattainment for the Pb NAAQS” is vague and does not account for the spatial scale of the violating lead monitor. Also, EPA’s presumptions should include other air monitoring data, such as meteorological information, and modeling of emissions from the contributing source prior to including surrounding counties into a nonattainment designation. Nonattainment boundaries established around a contributing source, rather than classifying an entire county or MSA out of compliance, would be an alternative provided by the language in Section VI.B.1.

### **Attainment Designation Schedule**

The proposed rule establishes the initial designation schedule in accordance with Section 107(d)(1)(B)(i) of the Clean Air Act (CAA). The preamble states that the “more strategically targeted network” will begin to be in operation by January 1, 2010. However, the Governors of States are required to submit the initial designation recommendations to EPA no later than September 2009. The initial designations submitted by States will not have any applicable monitoring data to support the attainment status. How can states make recommendations under this scenario?

Furthermore, the initial designation of areas by EPA is scheduled to occur no later than September 2010. Because EPA will not have sufficient information to promulgate the designations, the initial designation date can be extended until September 2011. However, if the monitoring network is scheduled to begin operation by January 1, 2010, the monitoring data available for attainment designations will be less than 2 years worth of data. Although revising 40 CFR 58.20(e) allows EPA to make a nonattainment finding using only 1 or 2 years of Pb ambient air monitoring data, the designations will be made without sufficient air monitoring data, if the standard is set based upon the second maximum monthly concentration over three years.

### **Site-Specific Monitoring**

Source-oriented siting criteria of monitors based on the emission rates will bias the ambient concentrations high and will possibly unfairly determine an entire area (county) as nonattainment for the lead NAAQS. "The required source-oriented monitors shall be located at sites of maximum impact and will be classified primarily as microscale monitors representative of small hot-spot areas adjacent or nearly adjacent to facility fence-lines." Therefore, attainment designations should be limited to the microscale area and not designated by county or MSA.

Also, as mentioned previously, EPA has identified known emitters of lead by using the 2002 NEI database. An alternative to requiring States to perform ambient air monitoring is to require the identified sources to monitor their emissions impact through a regulatory process. As explained in the preamble of the proposed rule (73 FR 98 pg 29191), "the average maximum quarterly mean concentration for the time period 2003-2005 among source-oriented monitoring sites in the U.S. is  $0.48 \mu\text{g}/\text{m}^3$ , while the corresponding average for non source-oriented sites is  $0.03 \mu\text{g}/\text{m}^3$ ." Regulating known emitters of Pb would be a more prudent use of valuable resources.

### **Human Exposure Pathways**

Considering the number of children toys and costume jewelry designed for children that have been found to exceed the federal standard for lead content, the primary lead exposure resulting in elevated Pb levels for the general population of children is by ingestion and not inhalation. EPA's efforts and resources should be directed on eliminating lead in toys and products designed for children.

The preamble suggests that children ingest indoor dust containing lead from ambient air deposition. However, this year (2008) the CDC has already banned 28 toys containing excessive amounts of lead. Children may ingest significantly more lead through hand-to-mouth activities with toys rather than indoor dust. Additionally, the lead in banned toys can also contribute to the lead dust in indoor air.

For the general population of children ages 1 to 5, the median Pb blood level blood is  $1.6 \mu\text{g}/\text{dL}$ . The CASAC Pb Panel estimated 1.0 to  $1.4 \mu\text{g}/\text{dL}$  as the average nonair blood Pb level for young children. In comparison, the Pb intake and blood level resulting from exposure to ambient air is insignificant relative to the ingestion exposure from nonair sources.

While determining the risks associated with the proposed levels of the NAAQS, EPA overestimated potential risks and detailed the assumptions in the urban case studies (73 FR 29210). The air quality scenario "for the urban case studies assumes ambient air Pb concentrations higher than those currently occurring in nearly all urban areas nationally." Such assumptions do not provide credibility to the air quality scenario and urban case studies.

Furthermore, the total blood Pb and IQ loss estimates did not consider children's lead ingestion (via hand-to-mouth activities) from lead paint commonly found on and in toys. As a result, the estimated risk calculations are flawed and inaccurate. As stated in the summary of Categorization of Policy-Relevant Exposure Pathways (Preamble II.C.2.e.), EPA "could not sharply separate Pb linked to ambient air from Pb, that is background." By not fully characterizing the risk associated with ingestion, the risk attributed to ambient air Pb levels is overly conservative and is not able to be used in determine the appropriate NAAQS for Pb.

### **Quality Assurance (QA)**

The QA requirements for Pb monitoring are inadequate to evaluate the overall sampling and analysis bias. Additionally, requiring one filter of a collocated sample filter pair from one site within each primary quality assurance organization (PQAO) to be sent to an independent laboratory each quarter for analysis will require additional State funding. Unless the same independent laboratory is used by all State, Tribal, and Local Pb monitoring networks, the quality assurance of the entire Pb monitoring network cannot be accurately characterized.

The Performance Evaluation Program (PEP) for PM<sub>2.5</sub> monitoring provides quality assurance data and tools for each State's network, as well as the PM<sub>2.5</sub> network for each EPA Region. The proposed rule requires one PEP-like audit at one site within each PQAO once per year. Although the proposed rule states that "it would be the responsibility of each State to ensure that Pb PEP testing and collocation testing as described here is performed as required", the PEP program should be administered through the Regional Offices of EPA, similar to other monitoring networks.

The proposed rule further explains that "EPA plans to consult with monitoring agencies after completion of this rulemaking as to whether a centrally run program managed by EPA and funded with STAG funds would be a more efficient and preferred alternative than individual State-managed programs" (73 FR 29262). To provide more effective rulemaking, EPA should have consulted with monitoring agencies prior to the publication of the proposed rule and determined whether a program managed by EPA would be more efficient. However, if the final rule does include monitoring, Kentucky fully supports a centrally run program managed by EPA to provide a consistent QA program. As a result, the reduction in STAG funding will diminish funding for more essential programs.

### **Scaling Factors**

Although States are permitted to monitor for Pb-PM<sub>10</sub> at a required Pb monitoring site rather than monitoring for Pb-TSP, the State shall develop a site-specific scaling factor, and the scaling factor shall be approved by the Regional Administrator. The site-specific scaling factor shall be used to adjust Pb-PM<sub>10</sub> data before comparison to the standard.

In order to develop the site-specific scaling factor, Kentucky will have to purchase high-volume Pb-TSP monitors and will have to co-locate the Pb-TSP monitors with the low-volume Pb-PM<sub>10</sub>. Currently, Kentucky does not have any high-volume Pb-TSP monitors operating and does not have the available funds to purchase Pb-TSP monitors.

Consequently, allowing the use of Pb-PM<sub>10</sub> monitors instead of Pb-TSP monitors will not reduce the economic burden of developing an adequate Pb monitoring network as required by the proposed rule. Therefore, Kentucky recommends EPA establishing scaling factors to allow the use of Pb-PM<sub>10</sub> monitors without the economic burden of justifying their use.

### **Conclusion**

To summarize, Kentucky cannot support and provide funding to develop and operate the proposed Pb monitoring network. The necessary man-hours and associated costs with sample analyses are a misuse of limited resources. Additionally, if a monitoring network is established, exceedences of the NAAQS detected in the ambient air are highly unlikely. Considering that emission inventories for Pb emitting stationary sources are well established, it would be much more prudent to spend the limited resources of the state and local agencies on controlling these sources rather than wasting them on monitoring. Further reductions in STAG funds will further diminish the necessary resources for more essential, worthwhile programs.