Lead (Pb) fits awkwardly into the regulatory structure established for dealing with air pollutants through a national ambient air quality standard (NAAQS). For the vast majority of the public, inhalation of lead in ambient air and exposure to contemporary lead deposition from ambient air are not the main sources of lead exposure.

Key elements in protecting the public from lead toxicity include protection from lead in house paint and on household items; lead in food storage and cooking containers, serving containers, and utensils; lead in toys and jewelry; and lead in food and water. An effective, integrated program to protect the public, especially children, from lead toxicity must also include protection from existing lead in soil.

Because there are multiple pathways for lead exposure, meeting a NAAQS for lead, no matter how low the standard is, cannot ensure protection of public health from lead toxicity. Instead, establishing a NAAQS for lead is only one of a number of risk reduction steps necessary to protect public health.

The EPA's Maximum Achievable Control Technology (MACT) standard for secondary lead smelting (40 CFR Part 63, Subpart X) is designed to prevent hazardous public exposure to lead from the sources subject to the MACT. However, the MACT lacks a provision for continuing ambient air quality monitoring at the point of public exposure to ensure that the total impact on air concentrations of lead near these sources remains low. Industrial point sources that are potentially significant sources of lead air emissions can expose children to lead in air and, more importantly, to lead in recently settled dust. If the design and/or operation and maintenance of emission control equipment are inadequate, lead air emissions from these sources can raise children's blood lead levels significantly. An advantage of continuing to have a NAAQS for lead is that it provides an established mechanism for requiring continuing ambient air quality monitoring for lead near potentially significant industrial sources of air emissions.

There should be two primary objectives of the ambient air monitoring network for lead:

1. One should be to measure maximum ambient air concentrations near potentially significant industrial point sources of lead emissions to the ambient air so that there will be data to identify whether lead in ambient air is contributing to toxicologically significant public exposure to lead.
2. A second should be to determine long-term trends in urban ambient air lead concentrations to ensure that ambient air concentrations remain at or below their current low levels. A limited number of monitoring sites in larger cities would be adequate to meet this second objective.

Whether the EPA reaffirms the current NAAQS for lead, makes it more stringent, or revokes it, the EPA should adopt appropriate, cost-effective requirements for monitoring ambient air lead at potentially significant industrial sources, mainly primary and secondary lead smelters, to ensure against toxicologically significant exposure to lead through ambient air. These are the source types that have demonstrated a significant

potential to cause sudden, high levels of public exposure to lead through ambient air as well as to produce long-term elevated lead concentrations in ambient air. If the EPA is unable to require ambient air quality monitoring for lead near these sources without a lead NAAQS, the EPA should not revoke the lead NAAQS.

According to the EPA Staff Paper[1], lead remains a major public health problem. Support for that statement includes "increased frequency of ADHD" (attention deficit hyperactivity disorder) in children. If airborne lead exposure is an important cause of "increased frequency of ADHD," EPA should clarify why the increased frequency of ADHD is consistent with the dramatic decreases in ambient air lead levels and children's blood lead levels.

Regarding EPA's reliance on the Lanphear, et al. (2005) pooled analysis of seven epidemiologic studies, given the gross differences in IQ level across studies compared to the much smaller differences shown within studies, clarification and explanation is needed to demonstrate the ability of these studies to quantify adverse effects.

[1] EPA-450/R-07-013, available at
http://www.epa.gov/ttn/naaqs/standards/pb/data/20071101_pb_staff.pdf

Responses to EPA Specific EPA Requests for Comments in the Advance Notice of Proposed Rulemaking for the National Ambient Air Quality Standard for Lead:

Q: What should the level of the primary NAAQS for lead be? (72FR71528, 72FR71532)

A: This question should be answered as part of a comprehensive review of governmental programs to prevent toxic exposures to lead in the most sensitive population, young children.

The TCEQ recognizes that such a review is not practical at this time because of federal Clean Air Act requirements and court orders, but the TCEQ makes the following comments:

1. Because lead in ambient air does not appear to be the main cause of elevated blood lead levels in most children, a primary NAAQS for lead of 0.0 $\mu g/m^3$ (zero) would not ensure protection from lead toxicity; and
2. As the EPA notes, there is lead in roadside dust from use of leaded gasoline, which ended roughly two decades ago. (ANPR, 42FR71521; Staff Paper, 2.2.2.3[1]) A lead NAAQS that would require cities to make expensive efforts to reduce the small ambient air contribution of decades-old automotive lead in roadside soil would compete directly with funding of programs to identify children with elevated blood lead levels from exposure to more relevant sources such as lead paint, cookware, and/or consumer products. For this reason, establishing an unreasonably low NAAQS for lead would be counter-productive for public health.

Q: Should the indicator for a lead NAAQS, lead in total suspended particulate matter, remain the same? (42FR71526)

A: Yes. A smaller size fraction could miss significant amounts of lead from certain sources. Additionally, neither the EPA nor most states have the resources to pay for a change in sampling technology.

Q: Should the three-month averaging time for the current standard be shortened to one month? (42FR71528)

A: No. The EPA should either continue using the current calendar quarter averaging period or change to a rolling three-month averaging time whether the EPA keeps or changes the level of the standard. Instead of shortening the NAAQS averaging time, a more appropriate way to address the need for a quick response to short-term high ambient air lead concentrations and to sudden increases in lead concentrations is prompt enforcement of the National Emissions Standards for Hazardous Air Pollutants (NESHAPS) Maximum Achievable Control Technology (MACT) standards and state/local rules and permit requirements for upsets.

Additionally, EPA and most states do not have the additional monitoring resources necessary to support a statistically defensible one-month averaging

time. Adopting a one-month averaging time would require additional or new samplers and/or additional staff resources to collect more samples to provide enough samples to support a statistically defensible monthly average. In most cases, these resource demands would divert resources from current monitoring for other pollutants with a more widespread impact on public health, for example, $PM_{2.5}$.