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Air and Radiation Docket and Information Center (2822T)  
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Comments on Tier 3 Motor Vehicle Emission and Fuel Standards

The Children's Environmental Health Network (CEHN) is a national, multi-disciplinary nonprofit organization whose mission is to protect the developing child from environmental health hazards and promote a healthier environment. CEHN's Board and committee members include internationally-recognized experts in children's environmental health science and policy who serve on key Federal advisory panels and scientific boards. We recognize that children, in our society, have unique moral standing.

CEHN was created to promote the incorporation of basic pediatric facts such as these into policy and practice:

- Children can be more susceptible and more vulnerable than adults to toxic chemicals.
- Pound for pound, children eat more food, drink more water and breathe more air than adults. Thus, they are likely to have greater exposure to substances in their environment than adults.
- Children have higher metabolic rates than adults and are different from adults in how their bodies absorb, detoxify and excrete toxicants.
- Children are in a dynamic state of growth, and at birth their nervous, respiratory, reproductive and immune systems are not yet fully developed. This process of development creates periods of vulnerability. Exposure to toxicants at such times may result in irreversible damage when the same exposure to a mature system may result in little or no damage.
- In addition, because their metabolic systems are still developing, children are frequently unable to detoxify and excrete toxics as well as adults, and thus are more vulnerable to their harmful effects.
- Children behave differently than adults, leading to a different pattern of exposures to the world around them. For example, they exhibit hand-to-mouth behavior, ingesting whatever substances may be on their hands, toys, household items, and floors. Children play and live in a different space than do adults. For example, very young children spend hours close to the ground where there may be more exposure to toxicants in dust, soil, and carpets as well as low-lying vapors such as radon, mercury vapor or pesticides.
- Children have a longer life expectancy than adults; thus they have more time to develop



diseases with long latency periods that may be triggered by early environmental exposures, such as cancer or Parkinson's disease.

- Though the process of child growth and development does not change, the world of today's children has changed tremendously from that of previous generations. One of these changes is the phenomenal increase in substances to which children are exposed. As reported by the EPA, 83,000 industrial chemicals are currently produced or imported into the United States. The Centers for Disease Control and Prevention's National Human Exposure Report has amply demonstrated that such chemicals often are ubiquitous, appearing in the vast majority of blood and urine samples taken at random from the general population in the U.S. Many of these are readily passed across the placenta to the fetus or to the infant via breast milk.

Especially relevant to these standards, children and babies in the womb are especially vulnerable to air pollution. The airways of young children are smaller than those of adults, and inhalation of air pollutants that would produce only a slight respiratory response in an adult can result in potentially significant obstruction in the airways of a young child. Children also have increased oxygen needs compared to adults. They breathe more rapidly and inhale more pollutants per pound of body weight than adults, and they often spend more time engaged in vigorous outdoor activities.

Thus, CEHN supports and commends EPA for this proposed rule to strengthen tailpipe emission and fuel standards for passenger cars and trucks. We believe these proposed new standards to be justified and well-supported by a broad range of epidemiological and clinical studies, and urge the agency to expeditiously adopt these stronger standards with just a couple of suggested improvements.

Children in the U.S. face increasing diagnoses of chronic disease and developmental disorders, including asthma, neurobehavioral disorders such as ADHD, and type 2 diabetes. A growing body of scientific evidence indicates that exposure to high levels of traffic-related air pollution is associated with the development of some of these conditions. Some examples include:

- In March of this year a European peer-reviewed study, "Chronic burden of near-roadway traffic pollution in 10 European cities (APHEKOM network)", found that traffic pollution accounted for 14% of asthma cases.
- "Traffic-Related Air Pollution Exposure in the First Year of Life and Behavioral Scores at Seven Years of Age" found that children exposed to the highest levels of traffic pollution during infancy had more symptoms of hyperactivity at age 7 and were at higher risk of developing ADHD than their peers with low levels of exposure.
- Greater levels of insulin resistance (a potential precursor to type 2 diabetes) were found in children with higher exposure to air pollution in the German study "Long-term exposure to traffic-related air pollution and insulin resistance in children: results from the GINIplus and LISApplus birth cohorts".



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The risk to our children from exposure to air pollutants argues for prompt and effective action. Asthma alone affects approximately 9.6% (or 7 million) children, and this number continues to rise. By 2007, the annual costs associated with asthma, including loss of productivity as a result of missed school or work days, grew to about \$56 billion, an increase of 5.7% over 2002 costs.

While these Tier 3 standards are certainly an improvement over the Tier 2 standards, CEHN urges the Agency to make these following changes:

- EPA should **eliminate the one-year delay** of fleet average NMOG+NO<sub>x</sub> FTP standards phase-in for vehicles with GVWR above 6,000 lbs.
- The phase-in goals for NMOG+NO<sub>x</sub> should be calculated on a **per-vehicle basis** (as is proposed for the Tier 3 PM FTP standards) as opposed to the proposed fleet-wide basis (which would allow manufacturers to offset higher-emitting vehicles with extra-clean models). All vehicles should be held to a per-vehicle emissions standard in order to best protect children's health.
- EPA should issue a public annual **compliance "report card"** on each automaker. This level of transparency is in the spirit of right-to-know laws and facilitates informed consumer choices.

It is also vital that EPA resist efforts to weaken or delay this proposal. Every day of delay means that more vehicles are manufactured and sold that will release higher emissions over their lifetime, thus emitting many more pollutants into the air that our children, and their children, will breathe.

In conclusion, CEHN believes that EPA's proposed Tier 3 standards are an important step forward, and urges further improvements in aspects of this commendable proposal. The adoption of these standards will lead to stronger protections for the nation's children.

Thank you for the opportunity to comment on this important issue.

Sincerely,

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