

August 15, 2000

Carol Browner  
Administrator  
U.S. Environmental Protection Agency  
Ariel Rios Building  
1200 Pennsylvania Avenue, N.W.  
Washington, DC 20460

Dear Ms. Browner:

We are writing on behalf of the State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO) to urge you to take action to address the serious problem of diesel particulate emissions. STAPPA and ALAPCO are the national associations of state and local air pollution control agencies in the states and territories and over 150 major metropolitan areas across the United States. Under the Clean Air Act, the members of STAPPA and ALAPCO have the primary responsibility for implementing our nation's clean air program on behalf of our citizens. As such, we are very concerned about the serious adverse public health effects that result from emissions of diesel particulate. This problem is particularly difficult for us because, for the most part, state and local agencies are powerless to regulate emissions of diesel particulate on our own. We must rely on the federal government to take action to address this problem.

*Diesel Particulate is a Threat to Public Health*

We believe it is clear that diesel particulate is a serious threat to public health. There have been numerous studies documenting the fact that diesel exhaust, which includes diesel particulate as an important component, poses a broad spectrum of adverse health impacts. More specifically, approximately 30 epidemiological studies indicate that there are increased lung cancer risks associated with diesel emissions. On average, these studies suggest that long-term (occupational) exposures to diesel exhaust are associated with an increase of 40 percent in the relative risk of lung cancer.

Various credible organizations have noted the association between exposure to diesel exhaust and cancer. For example, the International Agency for Research on Cancer (IARC) has concluded that diesel exhaust is a "probable" human carcinogen. More specifically, diesel exhaust includes many substances that the Clean Air Act lists as hazardous air pollutants, 15 of which have been identified by IARC as human carcinogens or probable or possible human carcinogens. Additionally, the National Institutes for Occupational Safety and Health has called

diesel exhaust a “potential occupational carcinogen” and the state of California has identified diesel exhaust as a chemical known to cause cancer. Finally, in its Ninth Report on Carcinogens, the U.S. Department of Health and Human Services has designated diesel exhaust particulate as “reasonably anticipated to be a human carcinogen.”

One factor that contributes to the detrimental health impacts of diesel particulate is that most diesel particulate is in the inhalable particle range of 10 microns or less in diameter. In fact, 94 percent of the mass is less than 2.5 microns, which are shown to be inhaled and penetrate into the deepest regions of the lungs and pose significant health threats.

Human exposure studies indicate that diesel particulate matter can cause inflammatory and immunological responses, which precede airway inflammation, airway disease, and asthma response. In short, diesel particulate matter may have a role in the increasing incidence of allergic hypersensitivity and asthma that has been observed particularly among children.

Indeed, the U.S. Environmental Protection Agency’s (EPA’s) own documents recognize the relationship between diesel particulate and adverse health effects. For example, EPA’s recently released draft “Health Assessment Document for Diesel Exhaust” (July 2000) concludes that diesel exhaust “is likely to be carcinogenic to humans by inhalation at any exposure condition.”

In addition, EPA’s proposed “Control of Emissions of Hazardous Air Pollutants from Mobile Sources” (65 *Federal Register* 48068, August 4, 2000) states that “studies suggest that the particulate component [of diesel exhaust] plays a substantial role in carcinogenicity and noncancer effects. Investigations show that diesel particles...induce lung cancer at high doses and that the particles, independent of the gaseous compounds, elicit an animal lung cancer response.... Additional evidence suggesting the importance of the role of particulate matter in diesel exhaust includes the observation that the extractable particle organics collectively produce cancer and adverse mutagenic toxicity in laboratory experiments.”

Finally, in EPA’s proposed “Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements” (65 *Federal Register* 35430, June 2, 2000), the agency states that diesel particulate contains hazardous air pollutants (including possibly chromium, manganese, mercury, nickel and dioxins) and that health studies on diesel particulate have indicated “potential hazards to human health that appear to be specific to this emissions source.” With respect to chronic exposure “these hazards included respiratory system toxicity and carcinogenicity.” Acute exposure also causes “a wide range of physiological symptoms stemming from irritation and inflammation mostly in the respiratory system....” With respect to noncancer health effects, EPA’s proposal indicates that those associated with diesel particulate overlap some health effects related to ambient particulate, including respiratory problems (cough, labored breathing, chest tightness and wheezing) and chronic respiratory disease (cough, phlegm, chronic bronchitis and some evidence of decreases in pulmonary function).

We believe the health effects related to exposure to diesel particulate, both cancer and noncancer, warrant federal action.

### Emissions of Diesel Particulate are Significant

The fact that exposure to diesel particulate is so deleterious to human health is of greater concern because of the prevalence of emissions of these pollutants. Vehicles emitting diesel exhaust, including heavy-duty trucks, buses, light-duty cars and trucks, as well as construction and farm equipment and other nonroad sources, are common in all areas of the country and have been increasing in number. According to EPA's estimates, approximately one million new diesel engines begin operating each year in this country. Further, auto manufacturers have plans to greatly increase the sales of diesel-powered vehicles (including both light-duty vehicles and light-duty trucks).

Diesel-powered vehicles emit large quantities of particulate matter. In fact, by 2010, they are projected to emit over 400,000 tons of particulate matter each year in the United States. In urban areas, the contribution of mobile sources to overall levels of particulate matter is substantial and the share of those emissions from diesel vehicles is significant.

In addition, the high rates of economic growth over the last decade have led to a substantial increase in construction activity. By and large, construction equipment employs minimal diesel control technology, thus contributing to elevated levels of diesel particulate.

As worrisome as mobile source emissions of diesel particulate are, there has been an even greater increase in stationary diesel engine activity. The use of diesel generators has moved beyond emergency backups and is becoming a peaking source of electricity. With recent spikes in natural gas prices, it is likely that diesel peaking units will have an economic advantage in the future. Furthermore, these units tend to be located in urban areas, where they directly contribute to relatively high emissions concentrations.

Clearly then, emissions from diesel engines contribute to exceedances of the health-based National Ambient Air Quality Standard (NAAQS) for particulate matter. Currently there are 18 consolidated metropolitan statistical areas (CMSAs) in the country, with a total population of over 27 million people, that are either in nonattainment or are within 10 percent of exceeding the NAAQS for PM<sub>10</sub>. Included in these CMSAs are the nonattainment areas that are part of Los Angeles, New York City, and Las Vegas, where traffic from heavy-duty diesel vehicles is especially substantial. These populations are also exposed to elevated long-term ambient levels of diesel particulate. STAPPA and ALAPCO believe aggressive action to address the contribution of diesel particulate to the overall particulate matter problem is essential.

### EPA Must Take Aggressive Action

In view of the significant health problems related to diesel particulate, and the increasing emission trends, we strongly urge you to use all of your authorities to reduce emissions of this pollutant. We commend you for proposing standards on heavy-duty engines and vehicles and highway diesel fuel sulfur controls (65 *Federal Register* 35430, June 2, 2000). This action will certainly go a long way toward ameliorating the diesel particulate problem. However, that rule alone can not adequately solve the problem and we recommend you take advantage of other strategies to further reduce diesel particulate emissions.

The options we encourage you to consider are the following, among others: listing diesel particulate as a hazardous air pollutant under Section 112(b) of the Clean Air Act; reducing emissions of diesel particulate through the urban air toxics program of Section 112(k); regulating diesel particulate through the mobile source-related air toxics program under Section 202(l) of the Clean Air Act; regulating diesel particulate from the mobile source nonroad sector, including locomotives, ships and construction equipment; limiting diesel emissions from stationary diesel engines, such as diesel generators; and promoting diesel retrofit programs.

In conclusion, we urge you to recognize the significant and growing threat to public health that diesel particulate presents and to take every action at your disposal to address this problem aggressively and expeditiously. If we can assist you in any way in this endeavor, please call upon us.

Thank you for your consideration of our recommendations on this issue. If you have any questions, please do not hesitate to contact either of us or the STAPPA/ALAPCO Secretariat at (202) 624-7864.

Sincerely,

/ S /

Ronald C. Methier  
President of STAPPA

/ S /

Marcia T. Willhite  
President of ALAPCO

cc: Robert Perciasepe