

September 12, 1996

U.S. Environmental Protection Agency  
Public Docket  
Attention: Docket No. A-95-27  
Room M-1500, Waterside Mall  
401 M Street, SW  
Washington, DC 20460

To Whom It May Concern:

On behalf of the State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO), we are pleased to have this opportunity to provide the associations' comments on the U.S. Environmental Protection Agency's (EPA's) proposed rule on controlling emissions from onroad heavy-duty engines (HDEs), as published in the Federal Register on June 27, 1996 (61 FR 33421).

Onroad heavy-duty engines are one of the two most significant sources of mobile source NO<sub>x</sub> emissions in the country. In addition, heavy-duty diesel engines also emit substantial levels of fine particulates. Therefore, the associations strongly support efforts that will reduce emissions from HDEs and commend not only EPA, but the State of California and the engine manufacturers as well, for the cooperative effort put forth to reach agreement on the Statement of Principles (SOP) that serves as the foundation for this proposal. The rule offered by EPA represents a sound first step toward controlling HDEs.

STAPPA and ALAPCO believe that certain aspects of this proposal should be strengthened. However, we also recognize that the proposal is consistent with the terms of the SOP and that EPA feels obligated to maintain that consistency. Therefore, STAPPA and ALAPCO offer the following recommendations and urge that those that can not be incorporated into this final rulemaking be identified by EPA as top priorities upon which a firm strategy for further controlling onroad HDEs should be based.

### **Controlling NO<sub>x</sub> and PM Emissions**

As we further our understanding of the chemistry of ozone and the effects of transported ozone and ozone precursors, it is becoming increasingly apparent that for many areas of the country, lowering NO<sub>x</sub> emissions outside urban centers will result in reduced peak ozone levels in downwind areas; such reductions will likely assist many areas in attaining the health-based ozone standard. Unfortunately, the ability of states and localities to reduce NO<sub>x</sub> emissions is becoming more and more constricted as the cost-effectiveness

of additional stationary source reductions in many jurisdictions continues to decrease. For this reason, achieving the fullest extent of NO<sub>x</sub> reductions possible from HDEs is critical.

EPA has estimated that as cars and light-duty trucks become cleaner, the contribution of HDEs to NO<sub>x</sub> and particulate matter (PM) emissions becomes more significant. STAPPA and ALAPCO are concerned, however, that because the emission factors upon which the agency relies tend to assume that HDEs in use meet standards over their full useful lives, the true contribution of HDEs has been understated.

We also believe that the benefit of a more stringent NO<sub>x</sub> standard that is based exclusively on the current transient test procedure, without also addressing NO<sub>x</sub> emissions under highway driving conditions (which are common in urban areas with ozone problems), may be overstated. Therefore, we urge the agency to make evaluation of a more representative test cycle a top priority.

With respect to PM, STAPPA and ALAPCO point to the mounting scientific evidence that exposure to fine particulates poses a tremendous threat to public health. One study, which correlated daily weather, air pollutants and mortality in six U.S. cities, concluded that increases and decreases in non-accidental deaths tend to correspond closely to daily particulate levels; such an association has not been identified for other pollutants. Researchers have also estimated that as many as 64,000 people may die prematurely each year in the U.S. from exposure to particulate levels at or below the current standard.

Particulate size can vary greatly depending on the source. Particles generated by mobile sources can be as small as 0.01 microns to as large as 1 micron. Particles that result from coal combustion range from 0.1 to 50 microns, while those produced in the atmosphere through photochemical processes range in size from 0.05 to 2 microns. Windblown dust, pollens, plant fragments and cement dusts are generally greater than 2 microns in size. It is particles at the smallest end of the range -- less than or equal to 2.5 microns in size (PM<sub>2.5</sub>) -- that are especially hazardous to human health, in that when inhaled, they can penetrate into the deepest recesses of the lung and impede the respiratory process; and it is these fine particles that EPA staff have recommended be addressed by a new National Ambient Air Quality Standard.

Because almost all diesel particulate emissions are less than 1 micron in size, as EPA focuses more closely on PM<sub>2.5</sub>, the emphasis on diesel particulate will necessarily increase. STAPPA and ALAPCO recognize that the more stringent NO<sub>x</sub> standard proposed by EPA will help to reduce secondarily formed particulates. The associations believe, however, that the known health risks posed by PM warrant far greater regulatory action than this. To this end, we strongly urge EPA to implement an effective PM standard for HDEs. To the extent the agency is constrained by the SOP from incorporating a PM standard into the current proposal, we encourage the agency to aggressively pursue a discrete PM standard for onroad HDEs and to include in this final rulemaking an explicit commitment to making such a standard the highest priority of the 1999 review.

## **Compliance**

The effectiveness of an emissions standard is directly affected by the ability of the corresponding compliance program to assure that the standard is met over the useful life of a vehicle. The compliance program for heavy-duty diesels does not provide such assurance.

The costs and difficulties associated with the in-use testing of HDEs have precluded an effective recall program for such engines, thus removing the deterrence that a recall program provides. In addition, the heavy-duty certification program is essentially a self-certification program with only nominal EPA oversight. Therefore, the primary enforcement mechanism is the Selective Enforcement Auditing (SEA) assembly line test program. Although assembly line test data for light-duty vehicles show very high compliance, a number of heavy-duty engines have failed the SEA across program in recent years, reinforcing the concern that significant compliance problems exist. The full extent of these problems is unknown, however, in that budgetary and other constraints have prevented widespread assembly line testing of HDEs. These concerns are further compounded by the fact that as emissions standards become more stringent, the risk of in-use deterioration will likely increase.

There is general agreement that self-certification and SEA are the weakest components of the light-duty vehicle compliance program; so weak, in fact, that EPA is pursuing their curtailment. Yet, the HDE compliance program relies entirely on these two deficient elements. An effective compliance program is essential to ensure full achievement of the potential emission reductions from this important source category. Accordingly, STAPPA and ALAPCO encourage EPA to upgrade the overall compliance program for HDEs to provide greater confidence that properly maintained and operated heavy-duty trucks and buses in use in fact meet the standards to which they are certified over their full useful lives.

## **State Inspection and Maintenance Programs**

STAPPA and ALAPCO acknowledge EPA's initial effort to develop guidance -- to address test procedures and standards or pass/fail cut-points -- that states can use to establish inspection and maintenance (I/M) programs for heavy-duty vehicles. While worthwhile, this effort is insufficient. At a minimum, EPA should 1) require the introduction of onboard diagnostic systems that will alert vehicle owners and operators to problems with emissions control components and allow states to interrogate the computer chip as part of an I/M program; 2) develop one or more "short" test procedures, such as the snap-idle test, that correlate with the heavy-duty diesel certification test and can be used in the field by states and EPA to determine compliance; 3) require such "short" tests as part of the certification process (as it does for light-duty vehicles); and 4) recommend appropriate pass/fail cut-points for states to use in administering their I/M programs.

In addition, beyond these improvements, we believe it is essential that EPA play a greater role in ensuring the nationwide uniformity of heavy-duty I/M. Heavy-duty vehicles

engaged in interstate commerce travel regularly state lines; a federal role in ensuring comparable test standards will be imperative to effective I/M efforts.

### **Gasoline-Powered HDEs**

Historically, the use of three-way catalysts has enabled gasoline-powered engines to achieve substantially lower NOx emissions. STAPPA and ALAPCO, therefore, are concerned that the proposed rule establishes the same emissions standards for both gasoline-powered and diesel HDEs, thus overlooking the true low-emissions capability of gasoline-powered engines. Accordingly, the associations encourage EPA to reconsider the emissions standards for gasoline-powered HDEs.

### **Averaging, Banking and Trading**

EPA has indicated that its proposed changes to the existing averaging, banking and trading (ABT) program are intended to "maximize the flexibility and incentives for early introduction of technology...." The agency further notes that it "has gained experience with the operation of its ABT program which gives it more confidence in being able to successfully modify the program...." However, based upon available data for the current ABT program, STAPPA and ALAPCO are concerned that program expansions could have an adverse impact on the potential success of a HDE control program.

The associations question the degree to which the current ABT program has actually stimulated technological advances and innovation and promoted the greatest level of emissions reductions. We believe that rather than encouraging the early introduction of advanced technologies, the current ABT program, without the potential deterrence provided by a viable recall program, provides additional opportunities to avoid introducing advanced pollution controls. Therefore, before expanding the ABT program, we encourage EPA to conduct and publish a thorough analysis of the current ABT program, demonstrating that the program is, in fact, realizing its stated goals and achieving emission reductions that are at least equivalent to those that would result without such a program. Unless such success can be clearly demonstrated, the ABT program in its current form should not be expanded, but rather replaced with an alternative that can truly achieve at least the same emission reductions as an "every-vehicle" standard.

Finally, with respect to the compliance margin for participation in an ABT program, STAPPA and ALAPCO believe EPA's proposed margin of 5 percent is too low to ensure the air quality benefits that can and should be achieved. The associations instead recommend a compliance margin of no less than 10 percent, which we believe would more reliably ensure emission reductions, while preserving flexibility for industry.

Once again, we thank you for this opportunity to provide STAPPA and ALAPCO's views on this important issue. We look forward to working with EPA and other stakeholders as efforts to control emissions from HDEs progress.

Sincerely,

John Elston (NJ)

Chair

STAPPA Mobile Sources and Fuels Committee

Richard Baldwin (Ventura, CA)

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