United States
Environmental Protection
Agency

Air and Radiation

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Office of Mobile Sources

Regulatory Announcement

Diesel Fuel Quality: Advance Notice of Proposed Rulemaking

The U.S. Environmental Protection Agency (EPA) is considering setting new quality requirements for diesel fuel to enable the use of a new generation of emission control technologies for diesel engines. These changes would provide large reductions in the emissions of pollutants that contribute to the harmful effects of ozone and particulate matter. The Advance Notice of Proposed Rulemaking (ANPRM) summarizes key issues surrounding diesel fuel changes and seeks input from interested parties.

Background

Diesel engines used to power trucks, buses, some automobiles, and nonroad equipment (such as farm tractors and bulldozers) are major contributors to our nation's air quality problems. Although progress has been made over the last decade in reducing emissions from diesels, they continue to be a large source of oxides of nitrogen (NOx) and diesel particulate matter (PM). NOx contributes to ground-level ozone, the main ingredient in smog. Diesel PM causes

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adverse respiratory health effects, and is also thought to pose a potential cancer risk. In addition to the impacts of emissions from heavy-duty and nonroad diesel engines, automobile manufacturers are planning to expand the use of diesels in sport utility vehicles and other fast-selling light-duty vehicles over the next few years. This may greatly add to the diesel's impact on the environment.

Highlights of ANPRM

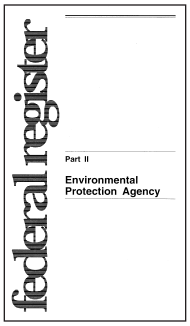
To reduce the environmental impact of diesel emissions, EPA is considering requiring improvements in the quality of diesel fuel. New diesel emission control technologies are being developed with the potential to reduce NOx emissions by 50 to 75 percent, and PM emissions by over 80 percent. However, some of these technologies appear to be very sensitive to sulfur in the fuel. Currently, highway diesel fuel sulfur is regulated to a maximum of 500 parts per million (ppm) and nonroad diesel fuel is not regulated by EPA at all. Diesel engine manufacturers have projected that sulfur levels must be reduced to 30 ppm, or perhaps even lower, to enable these sulfur-sensitive technologies to work.

This advance notice is tied closely to EPA's recent proposal for Tier 2 emission standards for passenger cars and light trucks, including sport utility vehicles, pickup trucks, and minivans. Under these standards, diesel vehicles would have to meet the same standards as gasoline vehicles. As part of the Tier 2 program, EPA also proposed to lower sulfur levels in gasoline, in part because it will enable advanced catalyst technologies needed to achieve the new standards. With this ANPRM, the Agency is seeking comment on the merits of improving the quality of diesel fuel as well, as an enabler of advanced technologies for diesel emission control, without which diesel vehicles may not be able to meet Tier 2 standards. These technologies, if proven viable, would likely transfer to heavy-duty highway applications, and eventually to nonroad applications, yielding large NOx and PM benefits.

Issues Related to Diesel Fuel Quality Control

The advance notice seeks comment on many issues related to diesel fuel quality control, including:

- Should fuel parameter changes other than sulfur reduction be pursued?
- How effective will advanced sulfur-sensitive emission control technologies be?
- What sulfur levels are needed and when?
- What would the refinery and distribution costs be?
- How soon can low sulfur fuel be made available?
- What would be the impact on small refiners?
- How can the program be made flexible for refiners and still be effective?
- Would a phased approach be appropriate, such as an early introduction of low sulfur fuel for light-duty vehicles affected by the Tier 2 program?
- Should nonroad fuel be desulfurized to current highway fuel quality levels?



Public Participation Opportunities

We welcome public comments on this advance notice from all interested parties. You may submit written comments to EPA up to 45 days after the ANPRM is published in the *Federal Register*. For instructions on submitting written comments, please see the *Federal Register* notice. It is available from the EPA Air Docket by calling (202) 260-7548; please refer to Docket No. A-99-06.

The address for submitting written comments is:

Docket No. A-99-06
U.S. Environmental Protection Agency
Air Docket (6102)
Room M-1500
401 M Street SW
Washington, DC 20460

The advance notice is available electronically via the EPA Internet site at:

www.epa.gov/oms/fuels.htm

Decisions on diesel fuel quality need to be made quickly so that the Tier 2 program may be implemented in the most coordinated and cost-effective manner. We therefore plan to pursue this action on an accelerated schedule. If, following this advance notice, we decide that a proposal is warranted, we plan to publish a notice of proposed rulemaking later this year, and a final rule as soon as possible after that. The proposal stage would include a public hearing and additional opportunities to submit written comments.

For More Information

Additional documents related to the advance notice are available electronically at the Internet site listed above, or by contacting:

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