

July 27, 2007

To: Docket ID No. EPA-HQ-OAR-2004-0008 (Electronic Submittal)

RE: Control of Emissions from Nonroad Spark-Ignition Engines and Equipment; Proposed Rule

NESCAUM (Northeast States for Coordinated Air Use Management) submits the following comments on EPA's Proposed Rule for Control of Emissions from Nonroad Spark-Ignition (SI) Engines and Equipment. NESCAUM is an association of state air pollution control agencies in Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. The NESCAUM states commend EPA and strongly support the goals of this rulemaking effort. According to EPA's regulatory impact analysis, the contribution from nonroad SI engines to overall air pollution is significant, particularly for volatile organic compounds (VOC), fine particulate matter (PM_{2.5}), and carbon monoxide (CO), accounting respectively for 28%, 9%, and 24% of mobile source emissions nationally. Annual reductions in air pollutant emissions, as a result of this rule, will be substantial as illustrated by the table below:

Annual Emission Reductions in 2030 (10³ Tons) from Proposed Rule

VOCs	NO _x	PM _{2.5}	CO	HAPs ¹
631	98.2	6.3	2690	19.5

We have several suggested changes to the rule which we believe will greatly improve on the emissions benefits to be achieved.

Harmonization with California Standards

We support EPA's effort to harmonize the federal emissions standards with those standards already adopted in California. In many respects, the proposed federal standards are identical to or analogous with California standards. This approach will make it easier for the engine and equipment manufacturers to provide 50-state products to the U.S. market. However, we oppose the protracted timelines for compliance with the standards, proposed for manufacturers of small land-based SI engines and equipment. The analogous California exhaust emissions standards are fully phased-in between 2005 and 2008. In contrast, the proposed phase-in period for the proposed federal standards does not even begin until 2010 and, with special provisions afforded to small to medium volume manufacturers, full compliance is delayed until as late as 2014.

We do not believe there are valid reasons for delaying the incorporation of Phase II engines into various types of equipment nationally when manufacturers will already be supplying the California market with lower-emitting Phase III engines and equipment years earlier. This

¹ Hazardous air pollutants included in this analysis are benzene, 1,3-butadiene, formaldehyde, acetaldehyde, acrolein, naphthalene, and fifteen compounds of polycyclic organic matter (POM).

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approach for protracted delays is inconsistent with the approach taken in the same rulemaking for sterndrive and inboard (SD/I) marine engines where EPA chooses to closely track effective dates for the California standards:

EPA is proposing that the Federal SD/I standards take effect for the 2009 model year, one year after the same standards apply in California. We believe a requirement to extend the California standards nationwide after a one-year delay allows manufacturers adequate time to incorporate catalysts across the product lines as they are doing in California. Once the technology is developed for use in California, it would be available for use nationwide soon thereafter.²

We request that the exhaust emission standards for land-based small SI engines be fully implemented, beginning with the 2009 model year, consistent with the proposed compliance dates for SD/I engine standards. Further, the effective dates for the evaporative emissions standards, both for land-based and SD/I engines and equipment, should match the effective dates of the comparable California standards or follow California by no more than one year. In addition, consistent with California's approach, EPA should adopt diurnal emissions standards for land-based small SI equipment.

Exhaust Emission Standards for Handheld Equipment

We take note in this rulemaking that EPA has declined to establish more stringent exhaust emissions standards for handheld equipment beyond the Phase II standards³ adopted in 2000. The Phase II standards were affirmed by EPA in 2004,⁴ based on a technology review, with the final standards taking effect in 2007 for all handheld engine classes. According to the technology review, EPA determined that handheld engines would meet the exhaust emissions standards on schedule, mostly by modifying two-stroke designs to incorporate stratified scavenging with lean combustion, with or without catalytic aftertreatment.

Accordingly, we fail to see why HC+NO_x exhaust emissions standards for Class V handheld engines⁵ should remain 44 percent higher than the standards for smaller handheld engines. Our concern is heightened under this proposed rulemaking because, in effect, the Class V engine category will be expanded to incorporate all Class I engines with cylinder displacements less than 80 cc, regardless of whether these engines are used in handheld or nonhandheld applications. While we do not object to treating these smaller Class I engines in all respects as Class V engines, we urge EPA to revisit and strengthen the Class V exhaust emissions standards through this rulemaking.

At the time of EPA's technology review in 2004, manufacturers were concentrating their Phase II development efforts on Class IV and smaller displacement engines because these standards were to take effect two years ahead of the Class V engine standards. The speculative concerns

² 72 FR 28115, May 18, 2007.

³ 65 FR 24268, April 25, 2000.

⁴ 69 FR 1824, January 12, 2004.

⁵ Class V engines are handheld with cylinder displacements of 50 cc and higher.

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regarding technology transfer, safety, performance, weight, and other factors affecting Class V engines were primarily due to the fact that manufacturers had not begun to focus their attention on this particular engine category.

EPA's subsequent Technical Study,⁶ while confined to larger Class I and to Class II engines, has since established that catalysts can be effectively incorporated into larger engine designs and function without causing some of the problems envisioned by the manufacturers. In addition, at least one equipment manufacturer, Stihl, already has a line of professional grade chainsaws on the market that uses the smaller Class I (soon to be Class V) engines, incorporating stratified scavenging technology and/or catalytic converters to meet emissions standards. We see no basis for allowing Class V engines to certify to the most lenient HC+NO_x exhaust standards among small SI engines and therefore urge EPA to adopt more stringent standards. At a minimum, Class V engine standards should be aligned with those for smaller engines. In addition, we urge EPA to update its technology review of exhaust emissions standards for Class III and IV engines, and as necessary, adopt more stringent standards through subsequent rulemaking.

Schedule for Implementing SD/I Exhaust Emissions Standards

We support EPA's current proposal, that the SD/I catalyst-based exhaust emissions standards take effect in 2009, one year following implementation in California. We agree with EPA's position that once the catalyst-based technology is introduced across product lines in California, it should be readily available nationwide soon thereafter. We see no need for EPA to implement the alternative approach of extending the compliance date to 2010. At the same time, as it appears that General Motors is discontinuing supplying the 4.3 and 8.1 liter engine blocks in 2009, we would not object to allowing additional time, as suggested, for the orderly transition to the 4.1 and 6.0 liter blocks. Our understanding is that the engines based on the 4.3 and 8.1 liter blocks represent a relatively small portion of the new marine engine market, compared to other more widely-used blocks. Presumably, the new 4.1 and 6.0 liter blocks will not claim a large share of the market, at least in their introductory years. Therefore, the overall emissions impact should be minimal if additional transition time is provided. We would support this approach (allowing additional time for engine blocks representing a small fraction of the market) over the alternative approach of allowing all engine families to certify to a more lenient transitional standard over the 2009-10 timeframe.

Engine Diagnostics and Crankcase Emissions Controls for SD/I Engines

We support EPA's proposal to require positive crankcase ventilation controls on SD/I engines. Further, we support requiring engine diagnostics to ensure maintenance of stoichiometric control of air-to-fuel ratios.

⁶ EPA Technical Study on the Safety of Emission Controls for Nonroad Spark-Ignition Engines Below 50 HP, EPA 420-R-06-006, March 2006.

Durability and In-Use Testing

It is essential that the engines affected by this rulemaking meet the applicable standards for the entire useful life of the equipment into which they are installed. Consequently, we contend that the proposed requirements for verifying durability of emissions controls, as they pertain to land-based SI and SD/I engines and equipment, are inadequate, principally because there are no requirements for in-use emissions testing. For example, in the case of land-based SI engines, when a manufacturer specifies the useful life of a particular piece of equipment, performance evaluation of field-aged engines is only one of several means deemed by EPA as acceptable for documenting their choice, and this evaluation does not necessarily have to include emissions performance. Under the proposed regulation, a manufacturer conceivably could simply conduct a survey to assess the typical lifespan of the equipment into which the engine is installed and thereby fully satisfy the requirement for documentation of durability. Where a manufacturer selects a lower than expected nominal value for the useful life of a particular piece of equipment, EPA merely “expect[s] to routinely review the information to confirm that it complies with the regulation.” Consistent with the durability requirements pertaining to OB/PWC engines, we urge EPA to incorporate similar requirements for manufacturers of land-based SI and SD/I engines and equipment, including a robust in-use testing program.

Labeling

We support EPA’s proposal to require engines and equipment be labeled in a manner that will help the user better understand the intended useful life of the equipment. Using descriptors such as Residential, Premium Residential, Commercial, and Heavy Commercial will be helpful in this regard, provided that there is a means to match the descriptor against a specified useful life period in terms of operating hours or years. In addition, we support the concept of a “green labeling” program, as a means to make consumers aware of which engines exhibit especially clean emissions performance as consumers make their equipment choices. In the Phase II rulemakings for handheld and nonhandheld SI engines,⁷ EPA committed to “pursue the development of [a] voluntary green labeling program for small SI engines as a nonregulatory program.” More than eight years have now elapsed since EPA made this commitment and as yet, there is no such program. We urge EPA, through this rulemaking, to renew its commitment to work with stakeholders to develop a green labeling program.

Special Provisions for Small and Medium Volume Manufacturers

As we have already stated above, we oppose the various provisions for small and medium volume manufacturers of engines and equipment that extend the use of Phase II compliant land-based SI engines for several years beyond the initial introduction of Phase III engines. However, we would not oppose a program whereby small businesses may apply individually to EPA for limited temporary relief from specific requirements due to economic hardship or other circumstances beyond their control.

⁷ 64 FR 15208, March 30, 1999 and 65 FR 24268, April 25, 2000.

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Petition of the American Road and Transportation Builders Association (ARTBA)⁸

ARTBA's petition has no relevance to this proposed rulemaking and we therefore urge EPA not to respond to ARTBA through this particular rulemaking. Almost 10 years ago, EPA established that "states are not precluded under section 209 from regulating the use and operation of nonroad engines."⁹ We are troubled by EPA's statement that on the one hand suggests it is not contemplating explicit changes to existing rules pursuant to the ARTBA petition, but on the other hand indicates EPA may "make...changes to the regulations to conform our response to ARTBA." We contend that any changes contemplated to regulations in response to ARTBA's petition should be the subject of a separate rulemaking and public hearing. If, however, EPA is determined to respond to ARTBA's petition through this rulemaking, we wish to go on record urging EPA to deny the petition in its entirety.

Summary

The NESCAUM states commend EPA for undertaking this initiative to reduce emissions from nonroad spark-ignition engines and equipment. If the changes suggested by the NESCAUM states are incorporated, the rule will result in more significant, and much needed, reductions in an expedited timeframe. If you have any questions, please contact Eric Skelton of my staff at (617) 259-2028.

Sincerely,



Arthur N. Marin
Executive Director

Cc: NESCAUM Directors

⁸ "Petition to Amend Rules Implementing Clean Air Act section 209(e)," American Road and Transportation Builders Association (ARTBA), July 12, 2002.

⁹ 40 CFR 89, Appendix A to Subpart A – State Regulation of Nonroad Internal Combustion Engines.