

March 3, 2008

To: Docket ID No. EPA-HQ-OAR-2007-0121 (Electronic Submittal)

RE: Control of Emissions from New Marine Compression-Ignition Engines at or Above 30 Liters per Cylinder; Advance Notice of Proposed Rulemaking

NESCAUM (Northeast States for Coordinated Air Use Management) submits the following comments on EPA's Advance Notice of Proposed Rulemaking for "Control of Emissions from New Marine Compression-Ignition Engines at or Above 30 Liters per Cylinder." 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 strongly support a rulemaking effort designed to achieve timely and significant reductions in air emissions from this very significant category.

Under current international standards, large marine vessels are substantial sources of air pollution. Ocean-going marine vessels burn bunker fuel that has an extremely high sulfur content, averaging around 27,000 parts per million (ppm). In contrast, U.S. law requires or soon will require most engines in the U.S. burning distillate fuels to use fuels that meet a fuel sulfur standard of no more 15 ppm. The high sulfur content of marine bunker fuel, its inefficient combustion characteristics, and the absence of stringent engine emission controls cause large marine engines to be among the most significant unregulated sources of air pollution remaining, particularly around major seaports.

Studies confirm that exposure to air pollutants of the types released from large marine engines increases the risk of death as well as visits to hospitals, physicians, and emergency rooms, and exacerbates respiratory illnesses, including asthma. Absent new regulations, marine vessel emissions are expected to continue increasing, along with the growth in goods movement and cargo throughput in U.S. ports, over the next 10 to 20 years.

Air pollution around the Ports of Long Beach and Los Angeles recently has received considerable attention from the public health community, but the problem is not simply confined to southern California. Using annual import and export tonnage moved by ocean-going vessels as a surrogate to gauge the extent and growth of air pollution around seaports, it is readily apparent that the Northeast faces a problem of similar magnitude. The table below shows that the aggregate tonnage of goods movement at northeastern ports exceeds that of the principal southern California ports and the northeastern growth rates are comparable to or far in excess of southern California's. Clearly a comprehensive national program is needed to address this growing air pollution problem.

Growth in Import & Export Tonnage at Selected Seaport Areas
(thousands of short tons)

| Seaport Area | 2001 Tonnage | 2005 Tonnage | Percent Increase from 2001 to 2005 |
|------------------------|---------------------|---------------------|---|
| Long Beach/Los Angeles | 96,527 | 110,227 | 14% |
| New York/New Jersey | 67,267 | 87,799 | 31% |
| Delaware Bay/River | 61,860 | 66,834 | 8% |
| Portland (ME) | 26,449 | 28,193 | 7% |
| Boston | 12,430 | 15,159 | 22% |
| Providence/Fall River | 3,920 | 7,851 | 100% |
| New Haven/Bridgeport | 4,336 | 4,882 | 13% |
| Portsmouth (NH) | 3,873 | 4,498 | 16% |

Source: U.S. Army Corps of Engineers, Waterborne Commerce Statistics

EPA has requested comment on numerous aspects of a prospective rule to control emissions from large marine compression-ignition engines. NESCAUM's comments below focus on three particular aspects: engine and fuel standards, on-off emission control technologies, and certification of existing engines.

Engine and Fuel Standards

EPA puts forth the following prospective standards for purpose of soliciting comments:

- Tier 2 NO_x standard for new engines as early as 2011 and 15 to 25 percent below Tier 1;
- Tier 3 NO_x standards for new engines as early as 2016 and 80 percent below Tier 2;
- PM standard for new engines - 0.5 g/kW-hr (50 to 70 percent reduction) as early as 2011;
- SO_x standard for new engines – 0.4 g/kW-hr (90 percent reduction) as early as 2011;
- Alternative to SO_x standard, achieved through use of 1000 ppm sulfur fuel; and
- Retrofit (in-cylinder modification) of existing (post-1985) engines to meet a Tier 1 NO_x standard as early as 2012.

NESCAUM supports both the level and the timing of the prospective standards and notes that these standards are consistent with the U.S. proposal currently before the International Maritime Organization (IMO). Uniform international standards are desirable for a number of reasons, including resolving questions of inconsistency in standards between U.S. and foreign-flagged vessels. However, considering the uncertainties inherent in the timing and ultimate outcome from the IMO standards-setting process, we urge EPA to move forward to propose and finalize a rule without delay that will implement the above standards, according to the referenced timeframes.

At the same time, we are concerned that the proposal involving use of marine fuel with a reduced sulfur content would apply only to new marine engines subject to the 0.4 g/kW-hr SO_x standard and only as an alternative to using aftertreatment technologies to meet the standard. EPA notes in the proposal that “SO_x emissions and the majority of the direct PM emissions from Category 3

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marine engines operated on residual fuels are a direct result of fuel quality, most notably the sulfur in the fuel.” If the sulfur content of the fuel used in the existing fleet of vessels remains essentially unregulated, then the opportunity to achieve significant SO_x and PM reductions is lost. We urge EPA to incorporate into the regulation a phase down of the allowable sulfur content of marine fuel that applies to all vessels. As a starting point, EPA should carefully consider the fuel sulfur reduction options currently before the Marine Environment Protection Committee of the IMO.

On-off Emission Control Technologies

EPA notes that several of the prospective technologies to be used to achieve the standards (e.g., selective catalytic reduction, scrubbers, fuel switching) are not integral to the operation of the engines. As a cost-saving measure, these technologies could be “switched off” in international waters, at distant points where emissions are unlikely to impact coastal populations. As a legal matter, if the regulation were to prohibit such on-off capabilities, questions are likely to be raised as to enforceability outside of U.S. territorial limits.

NESCAUM would not oppose a provision in the regulation allowing for on-off capabilities associated with the various control technologies. If EPA pursues this approach, however, it is critical for the regulation to include a reliable means of verifying that the emission control technology is being employed within sensitive areas affected by ship emissions. We therefore urge EPA to include a provision requiring automatic, downloadable, electronic logging of critical system data that is sufficient to verify compliance.

Certification of Existing Engines

NESCAUM supports employing a certification procedure assuring that remanufactured engines are meeting the Tier 1 NO_x standard in-use. We do not have a specific recommendation in this regard, but we believe that an in-use testing component is essential to the certification procedure.

The NESCAUM states commend EPA for undertaking this initiative to reduce marine engine emissions. Once again, we would stress the importance of completing the rulemaking expeditiously in order to achieve the emission reductions within the proposed time frames. 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