

September 28, 2009

Air and Radiation Docket and Information Center
U.S. Environmental Protection Agency
Mailcode 6102T
1200 Pennsylvania Ave., NW
Washington, DC 20460
Docket I.D. #EPA-HQ-OAR-2007-0121

Dear Docket:

**Re: NPRM Control of Emissions from New Marine Compression Ignition Engines
at or Above 30 Liters per Cylinder - Docket I.D. # EPA-HQ-OAR-2007-0121**

The Northeast States for Coordinated Air Use Management (NESCAUM) appreciates the opportunity to submit comments on the U.S. Environmental Protection Agency's (EPA's) notice of proposed rulemaking (NPRM) entitled "Control of Emissions from New Marine Compression Ignition Engines at or Above 30 Liters per Cylinder." NESCAUM is an association of the air pollution control programs in the eight Northeast states, including: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. NESCAUM has provided technical and policy support to our member states for over 40 years. NESCAUM strongly supports EPA's proposal to control emissions from C3 marine engines. We do, however, have three comments we ask the Agency to consider: 1) should designation of U.S. coastal areas as an Emission Control Area (ECA) be denied or significantly delayed, we strongly urge EPA to exercise its authority under the Clean Air Act (CAA) to reduce ocean going vessel emissions for all ships calling at U.S. ports; 2) implementing future additional measures to reduce the NOx and PM emissions not addressed by this rule; and 3) establish a mechanism to encourage reductions in existing C3 marine engines.

NESCAUM commends EPA for its leadership and technical work on this issue. The Agency's submission of a proposal to designate certain coastal waters of the U.S. as an Emission Control Area, the submittal of a proposal for development of standards for C3 engine emissions of nitrogen oxides, sulfur oxides, and particulate matter to the International Maritime Organization (IMO), and the proposal we are commenting on today for the development of standards to control air pollution emissions from U.S. flagged ocean going vessels bring us much closer to realizing substantial reductions in C3 engine emissions. The C3 engine standards, if implemented as proposed, will lower nitrogen oxide (NOx) emissions by 80 percent and particulate (PM) emissions by 85 percent beginning in 2016. We strongly support the Agency's proposal.

Air Quality Background

Controlling emissions from ocean going vessels is a key component of an overall strategy to improve air quality in the Northeast. EPA estimates that ocean going vessels contribute 6 percent of U.S. mobile source NOx, over 10 percent of U.S. mobile source PM_{2.5}, and 40 percent of U.S. mobile source sulfur oxides (SOx) emissions. Ocean going vessel activity is projected to increase significantly in the U.S. in general, and on the East Coast in particular. Given the projected increase in vessel activity and the implementation of stringent emissions and fuel quality standards that have been established for other mobile sources, the Agency projects ocean going vessels will contribute 40 percent of NOx, 75 percent of PM_{2.5}, and 95 percent of U.S. SOx emissions in 2030. The Northeast region is home to many ports and emissions from category 3 engines are a significant source of NOx, fine particulate, and SO₂. In 2000, the Port of New York and New Jersey received 139 million short tons of cargo and was ranked the third largest port in the U.S. Approximately 230 tons of PM_{2.5} was emitted by ocean going vessels in that year in the Port of New York and New Jersey – more than a third of all PM_{2.5} emissions from port-related activity – excluding emissions associated with drayage. The port is located in a densely populated urban area and near environmental justice communities that are disproportionately impacted by pollution. Ocean going vessels call at a number of other ports in the region where poor air quality adversely impacts the health of residents.

Northeast Efforts to Reduce Port-Related Emissions

States agencies, in conjunction with port authorities and marine fleet operators in the Northeast are undertaking significant efforts to reduce emissions from ships in the region in New York, Connecticut, New Jersey, Maine, Vermont, and New Hampshire. For example, Staten Island ferry boats operating in New York harbor are being retrofitted with selective catalytic reduction (SCR) or rebuilt to more stringent emissions standards. In addition, 42 private ferries in New York Harbor have been retrofitted with diesel oxidation catalysts. Tugboat engines, fishing boats, and other vessels are also being rebuilt, repowered, or retrofitted in the Port of New York and New Jersey or in other parts of the region. These significant efforts demonstrate the region's commitment to reducing emissions from marine vessels. However, because states in the region have no authority to require reductions from ocean going vessels we are wholly reliant upon EPA to regulate this source.

Specific Comments on the EPA Proposal

The comprehensive strategy that EPA has developed to reduce C3 related emissions - which includes designation of U.S. coastal areas as an ECA zone by the IMO - will result in substantial reductions in C3 emissions, once the IMO has acted on the EPA's ECA application. This strategy does rely, however, on a mechanism outside of the Clean Air Act to achieve reductions in C3 emissions. Should the ECA designation not be approved or if it is substantially delayed, we strongly urge EPA to take action under the authority established by the Clean Air Act to reduce C3 emissions from all vessels calling at U.S. ports.

NESCAUM supports the Tier 2 NO_x standards and believes they are technically feasible using such approaches as common rail fuel injection, advanced turbochargers, and improved valve timing and combustion chamber design. Common rail systems are currently being produced by manufacturers such as MAN Diesel and Wartsila. Use of this technology along with other approaches will allow manufacturers to meet the proposed Tier 2 NO_x standards in the timeframe proposed by EPA.

September 28, 2009

NESCAUM also supports the proposed Tier 3 NO_x standards and believes they are achievable in the timeframe proposed by EPA. Today, over 300 C2 and C3 engines have been equipped with SCR; some of these marine vessels have been in service for 10 years, and have accumulated 80,000 hours in use with the SCR aftertreatment systems in place. Here in New York, a Staten Island ferry boat equipped with SCR – the Alice Austen - has demonstrated NO_x reductions as high as 95 percent in cruise mode. Other marine vessels that have been fitted with SCR include cruise ships, icebreakers, tankers, container ships. In addition, other technologies such as EGR, direct water injection, or water emulsification could be used to meet the proposed Tier 3 NO_x standards in the timeframe EPA has proposed. Given that SCR systems in use have been shown to reduce NO_x up to 95 percent, we ask EPA to put in place more stringent NO_x limits for C3 engines in a future rulemaking. Projected growth in ocean going vessel activity will mean that the 20 percent of NO_x emissions not addressed by this rule will constitute a significant amount of NO_x that will adversely impact air quality and public health. Thus, we urge EPA to propose more stringent NO_x controls in a future rulemaking.

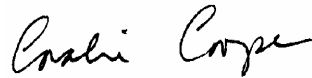
EPA has not proposed to set PM emission standards for C3 engines, but would require engine manufacturers to measure and report PM emissions. We support the Agency's plans to evaluate the impacts of its proposed actions on PM emissions, and to assess the feasibility of further PM reductions. However, because of the potential for carbonaceous PM to increase due to a NO_x/PM tradeoff, and because of the lack of certainty that anticipated reductions in organic PM will actually occur, we ask that the Agency strengthen its commitment by setting a date certain by which it will complete its evaluation. Further, while the proposed rule is expected to reduce 85 percent of PM emissions, the remaining 15 percent will represent a substantial amount of PM emitted in and around Northeast ports. These PM emissions will add to local and regional air pollution problems. In addition, the PM emissions will exacerbate health issues associated with PM, such as cardiovascular morbidity and mortality and an increased number and severity of asthma attacks. For these reasons we ask the Agency to propose a direct PM standard in a future rulemaking.

September 28, 2009

We also ask that EPA establish a program to reduce emissions from existing C3 engines, since these engines will be in service for many years to come and will continue to pollute at very high rates unless action is taken to reduce their emissions. We believe that a Voluntary Marine Verification Program, as described in the Preamble to the proposed rule, could play an important role in addressing emissions from existing engines. We urge EPA to pursue the development of such a program.

In conclusion, we strongly support the Agency's proposed rulemaking and ask the Agency to strengthen its overall strategy to reduce C3 engine emissions by taking the actions suggested above. We look forward to working with you in any way that we can to see that the proposal is finalized as expeditiously as possible.

Very truly yours,

A handwritten signature in black ink, appearing to read "Coralie Cooper".

Coralie Cooper
Transportation Program Manager

Cc: Margo Oge
NESCAUM Directors