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Association of
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Sewerage Agencies

February 18, 2003

Docket ID No. OAR-2002-0059
EPA West (Air Docket)
U.S. EPA (MD-6102T)
Room B-108
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Re: *Proposed Rule on National Emission Standards for Hazardous Air Pollutants
for Stationary Reciprocating Internal Combustion Engines, 67 Fed. Reg.
77829 (December 19, 2002)*

Dear Sir or Madam:

The Association of Metropolitan Sewerage Agencies (AMSA) is pleased to provide comments on the U.S. Environmental Protection Agency's (EPA's) proposed *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*. Founded in 1970, AMSA represents the interests of over 280 of the nation's publicly owned wastewater utilities (POTWs). AMSA members serve the majority of the sewered population in the United States and collectively treat and reclaim over 18 billion gallons of wastewater every day. Many AMSA members operate Reciprocating Internal Combustion Engines (RICE) for their energy needs. AMSA estimates approximately 200 such engines at AMSA member facilities would be subject to the proposed rule. Our general and specific comments are as follows:

General Comments

AMSA submits the following general comments on the proposed standards for your consideration.

1. Landfill and Digester Gas Considerations

AMSA wishes to thank EPA for recognizing our positions on landfill gas and digester gas fired combustion equipment. We agree with the statements that fuel switching is an environmentally inferior option (*67 Fed. Reg. 77840*). Combustion of these waste gas fuels with their high carbon dioxide content provides for low-NO_x combustion, displaces the need to burn conventional fossil fuels, reduces the need to import foreign fuels and reduces overall greenhouse gas emissions if such fuels can be productively used. AMSA has long been a proponent of maximizing waste gas utilization for useful energy production.

2. Development of Alternative Emission Control Technologies

AMSA supports EPA's attempt to stimulate development and eventual use of alternative control technologies with the introduction of formaldehyde concentration limits (*67 Fed. Reg. 77841*). Such flexibility has been heavily relied upon to ultimately meet the goals of air quality management plans. We support EPA's conclusion that emission control technologies which lead to reductions in formaldehyde emissions will lead to reductions in other HAP emissions

3. Emergency Power Unit Exemption

Setting this exemption at 50 hours per year (*67 Fed. Reg. 77833*) down from the 100 or 200 hours per year commonly seen in many states air pollution regulations, could have the net effect of increasing pollution by not allowing sufficient operating time for the engine to burn off hard deposits. We suggest EPA investigate this effect and increase the exemption cut-off hours for emergency and limited use engines.

4. Performance Testing, Initial Compliance, Continuous Compliance, Reporting Requirements, General Provisions Requirements Tables

Even though RICE units located at area sources and units less than 500 HP are in essence exempt from the regulation, the large number of remaining units subject to Tables 1A through 8 are faced with no small compliance hurdle. AMSA urges EPA to go through the rule language once again and streamline the requirements wherever possible to reduce the burden on both the equipment operators and the regulatory personnel including EPA who must process many documents to implement the proposed rule. At the very minimum, many of the requirements should be re-cast into flow charts so that all the requirements for each type of engine are shown sequentially.

5. Primary Purpose of Existing Controls Is Not HAPs Reduction

AMSA believes that very few and even perhaps no existing engines have installed emission controls specifically designed for the reduction of HAPs (*67 Fed. Reg. 77838*). NSCR systems for rich-burn engines or CO oxidation catalyst systems for lean-burn engines in the EPA database have been installed to control criteria pollutants and not to control HAPs. Any HAP reductions through these devices are incidental side-benefits and for the most part are not guaranteed HAPs emissions reductions. If operating restrictions were placed on control devices to ensure HAPs reductions, the original purpose of the control device, to control criteria pollutants, could be compromised.

More specifically, most RICE units that require installing NSCR or oxidation catalyst systems have done so because of RACT, BARCT, BACT or LAER requirements for criteria pollutants. These units are subject to enforceable emissions limits and/or operating limitations. It is inappropriate to impose additional limitations on these devices by the proposed MACT standards. AMSA recommends EPA take a look at the possibility that the proposed standards exempt any RICE units with NSCR or oxidation catalyst systems installed or to be installed in compliance with other regulatory mandates to avoid this potential conflict.

Specific Comments

AMSA submits the following specific comments on the proposed standards for your consideration.

1. Concentration Limit Preferable to Percent Reduction

The proposed standards set minimum percentage pollutant reductions across NSCR or oxidation catalyst-equipped engines. There are no final or terminal concentration alternatives that these so-equipped engines may follow. Impacts on public health depend not upon the percent reduction, but upon final concentrations, or more accurately, exit mass emissions. For instance, a poorly tuned engine could generate very high uncontrolled emissions. Even with a high percent reduction across the control device, the remaining emissions still could be high.

Furthermore, the percent reduction standards require more extensive performance testing and monitoring. Such an approach will require dual range CEMS (*67 Fed. Reg. 77834*) for monitoring both inlet and outlet, which are more expensive to certify and maintain. AMSA recommends that the standards allow sources to choose either percent reductions or final concentration limits as determined by an approved source test for *all* new, reconstructed or existing engine types irrespective of the control technique employed.

2. Continuous Compliance Provisions Burdensome

The proposed standards require continuous monitoring of pressure drop across the catalyst, catalyst inlet temperature and temperature rise across the catalyst, and setting operating limits of these parameters in reference to the initial performance test data. Since these operating parameters vary depending upon engine load, the initial performance test must be mapped over the entire operating range to establish the reference points. This is especially true of variably loaded engines such as those following diurnal sewage flow patterns. Upon changing as little as a single catalyst element, the same parameters must be re-established (*67 Fed. Reg. 77843*). Hence, extremely comprehensive and frequent source tests could result from these proposed regulations. AMSA believes that the periodic monitoring provisions that have been relatively recently agreed to by EPA and states as part of the Title V program should serve as the continuous compliance criteria of the proposed regulation. For example, use of simple hand-held CO monitors using approved EPA protocols with results reported through the Title V process are more than adequate for this purpose and should be offered as an option to operators. The same can be mentioned about the use of Parametric Emission Monitoring Systems.

3. Formaldehyde Concentration Limit

We believe that the 350 ppbvd formaldehyde alternative emission limitation for 4SRB stationary RICE is too low. The chosen limit is achieved by the best performing engine during CSU testing while for other types of engines the highest emissions from the performance range had been chosen as the emissions limit (*67 Fed. Reg. 77842*).

4. Industry Emissions and Potential Health Effect

EPA states that if the proposed rule is implemented at all affected RICE facilities, annual cancer incidence is estimated to be reduced on the order of ten cases per year (*67 Fed. Reg. 77847*). AMSA suggests this number be clarified or eliminated, especially since the MACT standards are not risk-based and EPA cites many uncertainties in its evaluation.

5. Estimation of Hazard Quotients and Hazard Indices

Table 2. – Dose response Assessment Values for HAP Reported Emitted by the RICE Source Category (*67 Fed. Reg. 77848*) provides the unit cancer risk estimates and reference concentrations values for chronic exposure. AMSA suggests that reference values for acute exposure be added to the table. Such information will allow facilities to more accurately calculate their hazard indices when the health risk assessment guidance is implemented.

6. Petitioning of Administrator for Operating Limitations Is Cumbersome

The requirements (*67 Fed. Reg. 77862*) and the explanation of the requirements (*67 Fed. Reg. 77835*) to petition the Administrator to develop site specific operating conditions if one should choose alternative formaldehyde limits are cumbersome. AMSA assumes the concept behind the procedure is to let an operator establish and submit for approval its own enforceable criteria that are strongly correlated to the desired formaldehyde limits. While AMSA understands that the provision is designed to provide flexibility, many of the requirements border on research-oriented items that perhaps only the largest and most knowledgeable operators are capable of performing. EPA acknowledges (*67 Fed. Reg. 77841*) that they wish to encourage alternative emission control technologies, hence the reason for formaldehyde concentration limits. AMSA believes that EPA should acknowledge this potential research aspect of the formaldehyde limits and give operators up to one year to properly design, execute and submit the results of a testing program to define operating parameters.

7. Emission and Operating Limitations

AMSA is also concerned with the overall extended timeframe of the approval process for Performance Tests and Other Procedures petition requests (*67 Fed. Reg. 77862*). The timeframes are compounded by the Title V environment of public review and comment and EPA review of significant permit revisions. This in turn is further exacerbated by the pre-approval requirement at Section 63.6620(f). All of these layered requirements should be re-reviewed by EPA comprehensively and streamlined to reduce the burden on regulated entities and regulators. The existing Title V framework including periodic monitoring should be relied upon to the maximum extent possible to minimize duplicative and redundant requirements under this proposed MACT.

8. Limited Test Data Requires Flexible Limits

AMSA is also concerned that the proposed operating criteria appear to be based on very limited CSU testing laboratory data with engines operating over a limited load range. While we are aware that very competent work was performed, only a few engines were actually tested at other than base load conditions. In essence, each test engine represents thousands of similar, but not identical, engines in the field including cyclically and variably loaded machines. Even though the highest laboratory formaldehyde level was selected for the regulatory level to be conservative, the requirement in Table 4 (67 Fed. Reg. 77869) to operate the engine at the lowest possible anticipated load may result in a greater range of formaldehyde numbers than what was determined by CSU on their laboratory engines. It is also possible that the installed catalyst systems may work perfectly well beyond the stipulated operating limits or temperature and load in EPA's proposed rule. AMSA recommends that the standards allow for sources to establish all appropriate operating limits based on operating data collected through the initial catalyst life period, up to five years, so that truly representative engine-in-the-field data can be obtained.

9. Tiered Analytical Approach for Predicting Exposure

AMSA agrees that it is a good idea to establish applicability cutoffs for low health risk RICE by including look-up tables (67 Fed. Reg. 77849). This is especially true given the large engine population in the United States. Our concern is that EPA-approved modeling procedures that should be used at the second tier to demonstrate that exposure to emissions from the facility doesn't exceed the hazard index limit, usually are too conservative and tend to over-predict the emissions. We suggest that facilities should be allowed to use any industry-approved models for evaluating emissions and the corresponding health risks.

10. Same Emission Limitation for Existing vs. New 4SRB Engines

This idea seems to run counter to EPA's traditional thinking that it is harder to retrofit existing facilities to install control technology than it is to incorporate a feature in a yet-to-be-constructed facility. It is conceivable that because of space limitations, installed catalysts may not be sufficiently large to achieve the desired reductions or have a uniform laminar flow pattern across the face of the catalyst as would a properly designed new facility. Hence, it is not reasonable to set the same emission limitations for both existing and new 4SRB engines. Since retrofits to control systems of existing units are generally more difficult and expensive than for new units, some consideration should be shown for existing units (e.g., less restrictive emissions reduction requirement).

11. Startup, Shutdown and Malfunction Plan Inconsistent

Table 8 line #16 (67 Fed. Reg. 77872) indicates that no startup, shutdown and malfunction plan is required. However, subparagraph 63.6640(c) (67 Fed. Reg. 77863) requires a source to operate in accordance with the startup, shutdown and malfunction plan. Table 7 line 2i also mentions "plan." AMSA believes that RICE units do not need startup, shutdown and malfunction plans and recommend that the emissions and operating limits do not apply during the startup, shutdown and malfunction periods. Malfunction reports are appropriate but filing plans per 63.6640(c) would be a large and unnecessary burden on both operators and regulators.

12. Affected Source Compliance Dates

Section 63.6595 (a)(2) (*67 Fed. Reg. 77861*) requires that a new or reconstructed RICE scheduled to start up before the date of publication of the final rule must comply with the emission and operating limitations no later than that date. For new engines caught in this window, compliance with all the proposed requirements is overly ambitious and we recommend a more reasonable one year compliance time frame, after the date of publication of the final rule in the *Federal Register*.

Similarly for area sources becoming major sources, the requirement to be in compliance at the time of the switch is unreasonable (Section 63.6595(b)) (*67 Fed. Reg. 77861*). AMSA believes that similar to what Title V allows, one year is an appropriate timeframe for the unit to come into compliance after it becomes a major source.

AMSA appreciates the opportunity to comment on the proposed standards. If you have questions or wish to discuss our comments further, please contact AMSA Air Quality Committee Chairman Mr. Ed Torres at 714/593-7082 or Will Pettit, AMSA, at 202/833-3280.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Hornback", written in a cursive style.

Chris Hornback
Director, Regulatory Affairs