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Gina McCarthy, Administrator
United States Environmental Protection Agency
EPA Docket Center
Mail code: 28221T
1200 Pennsylvania Avenue NW
Washington, D.C. 20460

Mark R. Rosekind, Administrator
National Highway Traffic Safety Administration
NHTSA Docket Center
1200 New Jersey Avenue, SE
Washington, DC 20590

Attention: Docket ID Nos. NHTSA-2014-0132 and USEPA–HQ–OAR–2014-0827

RE: Proposed Rule - Phase 2 Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles

Dear Administrators McCarthy and Rosekind:

The Ozone Transport Commission (OTC) appreciates the opportunity to comment on the United States Environmental Protection Agency's (USEPA) proposed Phase 2 Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles published in the Federal Register on July 13, 2015 (FR DOC # 2015-15500). The OTC was created under the Clean Air Act (CAA) to work with the USEPA and states in the Ozone Transport Region (OTR) to coordinate ground-level ozone pollution control planning in the Northeast and Mid-Atlantic region of the United States (42 U.S.C. § 7511c(a)).

Air quality in our region does not meet the current ozone National Ambient Air Quality Standards (NAAQS) and is not expected to meet the proposed 2015 NAAQS without substantial not yet on the books decreases in Oxides of Nitrogen (NO_X) emissions. Mobile sources, particularly heavy-duty vehicles, are a significant contributor of NO_X emissions in the region. USEPA has the authority and responsibility to provide these remission reductions. The OTC calls on the USEPA to evaluate and deliver additional NO_X reductions from medium- and heavy-duty vehicles in a time frame to assist the attainment of the 2008 and expected 2015 Ozone NAAQS.

Background on Ozone

Ground-level ozone is a significant health threat. It is known to cause respiratory illnesses, exacerbate or trigger asthma related episodes, increase respiratory-related emergency room and hospital admissions, and compromise the immune system leading to increased incidents of other respiratory illnesses, including pneumonia and bronchitis, and to cause premature death. Ozone is formed when Volatile Organic Compounds (VOCs) and NO_X mix and interact with sunlight.

Research has shown that ozone formation in the OTR is predominately driven by regional NO_X emissions from mobile sources.

Importance of Diesel Trucks in Formation of Ground Level Ozone

Recent modeling and inventory analyses OTC completed to plan for meeting both the 2008 and expected 2015 Ozone NAAQS, has shown that diesel trucks are a large contributor of NO_X emissions which lead to ground level ozone pollution. National runs of the USEPA MOVES model show that heavy-duty diesel trucks alone make up greater than 60% of the onroad mobile NO_X emissions in the mid 2020's and when applied to our preliminary predictions of the anthropogenic NO_X emissions inventory, make up 10% of the overall emissions. NO_X emissions from diesel truck emissions need to be reduced substantially in order for the states in the OTR to meet the 2015 ozone NAAQS.

Auxiliary Power Units

In the Regulatory Impact Analysis (RIA) for the Heavy-Duty Greenhouse Gas proposal USEPA cites a reduction in NO_X emissions of around 7% in 2025 due to the implementation of the rule, primarily from an expansion of the use of Auxiliary Power Units (APUs). Although this reduction is commendable, it is not nearly enough to achieve the NO_X reductions necessary for the states in the OTR to meet their clean ozone obligations, and leaves a great amount of potential for emission reductions unrealized. There are also concerns as to whether the 7% reductions will be achieved given that USEPA has reduced its estimate of the emission benefits from the use of APUs cited in the first Heavy-Duty Greenhouse Gas Rule.

Lastly, while MOVES modeling points to the air quality benefits derived from APU usage, there remains a significant difference between the emission standards for the Tier 4 smaller nonroad diesel engines typically used in APUs as compared to the emission rates of a modern long haul truck at idle. To prevent any potential backsliding from air quality benefits appreciated from the newest on-road engine standards, we recommend adding language to ensure that there are no increases in emissions from either NO_X or fine particulate matter as a result of increased use of APUs on all affected vehicles.

Technologies and CARB

The California Air Resources Board (CARB) has a voluntary program for heavy-duty diesel manufacturers to certify that their vehicles meet lower NO_X standards. Testing is also underway by CARB and members of industry to further demonstrate the technologies necessary to meet lower NO_X standards for diesel vehicles. Some examples of the technologies available to meet lower NO_X standards are:

- Thermal management
- Selective catalytic reduction (SCR) positioning improvements
- Advanced high porosity substrates
- Low temperature catalyst activity

- Passive NO_X adsorber catalysts
- Improved urea dosing strategies

These technologies allow diesel trucks to meet lower NO_X standards and need to be implemented relatively quickly in order for the states in the OTR to attain the 2008 and expected 2015 Ozone NAAQS. Early action is needed given that the heavy-duty diesel fleet sector turnover is significantly slower than that seen in light-duty vehicle turnover. If standards began by 2020, OTC's analysis found that a 10% reduction in NO_X could be achieved by the mid 2020s.

Implications of a Lower 2015 Ozone NAAQS on the OTR

USEPA is under a court order to revise the Ozone NAAQS in October of 2015. USEPA has proposed a revision to the Ozone NAAQS in the range of 65 – 70 ppb and as low 60 ppb, whereas the current NAAQS is set to 75 ppb. Several states in the OTR do not meet the 75 ppb standard and if currently complete ambient air quality data is examined, all but two states in the OTR would be in at least marginal nonattainment for a 70 ppb NAAQS, and all but one state in the OTR would be in at least marginal nonattainment for a 65 ppb NAAQS. Furthermore, at the 65 ppb level, over half of the jurisdictions in the region are facing moderate nonattainment. The timeline legislated in the Clean Air Act would require states to begin achieving the ozone NAAQS in 2023.

In the RIA, USEPA also found that 23% and 43% of the NO_X controls needed in the OTR to meet the 70 ppb and 65 ppb NAAQS respectively were "unknown." These controls will need to come from mobile sources and need to be on the way by 2023 and is further evidence supporting the need for greater NO_X reductions from heavy-duty diesel trucks.

Implications of 2018 Regional Haze Planning

States are required to submit regional haze SIPs demonstrating improvement in regional haze by 2028. The latest science and analyses of emission trends show an increasing impact of nitrates and secondary organic aerosols on regional haze, both of which are impacted by NO_X emissions. Reducing NO_X emissions from heavy-duty diesel emissions through lower emission standards would assist states in meeting the Clean Air Act required regional haze goals.

Work with Manufacturers

USEPA needs to send signals now to the manufacturers that additional NO_X emission reductions will be required. Such an action would allow manufactures to holistically develop engine and emission control systems. This early signal to manufacturers could help reduce the costs of such systems and avoid the need for incremental designs, where manufacturers first implement technologies to meet the lower greenhouse gas standards and then, several years down to road, needing to address reduced NOx emission standards. USEPA needs to take a multi-pollutant approach with mobile source standards and finalize a rule that deals with all of the pollution that

needs to be reduced from diesel trucks. Furthermore, if this does not occur, it is highly likely that additional NO_X reductions needed from the sector will not occur in a timeframe necessary for the OTC states to meet their ozone nonattainment obligations and upwind states to meet their good neighbor contributions.

Summary

The OTC appreciates the opportunity to submit these comments and welcomes discussion on this matter. Please contact the undersigned at (202) 508-3840 with questions.

Sincerely,

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cc: OTC Commissioners
OTC Air Directors