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February 20, 2020

Honorable Andrew R. Wheeler
Administrator
U.S. Environmental Protection Agency
Mail Code 1101A
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

RE: Cleaner Truck Initiative; Advanced Notice of Proposed Rulemaking; Docket ID No. EPA-HQ-OAR-2019-0055.

Dear Administrator Wheeler:

The Midwest Ozone Group (MOG) is pleased to have the opportunity to comment EPA's plans for a new rulemaking that would establish new emission standards for oxides of nitrogen (NOx) and other pollutants for highway heavy-duty engines.[1]

MOG is an affiliation of companies and associations that draws upon its collective resources to seek solutions to the development of legally and technically sound air quality programs.[2] MOG's primary efforts are to work with policy makers in evaluating air quality policies by encouraging the use of sound science. MOG has been actively engaged in a variety of issues and initiatives related to the development and implementation of air quality policy, including the development of transport rules, NAAQS standards, nonattainment designations, petitions under Sections 126, 176A and 184(c) of the Clean Air Act ("Act"), NAAQS implementation guidance, the development of Good Neighbor state implementation plans (SIPs) and related regional haze and climate change issues. MOG Members and Participants own and operate numerous stationary sources that are affected by residual air quality concerns that could be addressed by the mobile source initiative set forth in the ANPR. MOG seeks the development of technically and legally sound air pollution rules and actions that may impact on their facilities, their employees, their contractors, and the consumers of their products.

[1] These comments were prepared with the technical assistance of Alpine Geophysics, LLC.

[2] The members of and participants in the Midwest Ozone Group include: American Electric Power, American Forest & Paper Association, American Wood Council, Ameren, Alcoa, Appalachian Region Independent Power Producers Association (ARIPPA), ArcelorMittal, Associated Electric Cooperative, Big Rivers Electric Corp., Citizens Energy Group, Council of Industrial Boiler Owners (CIBO), Duke Energy, East Kentucky Power Cooperative, ExxonMobil, FirstEnergy, Indiana Energy Association, Indiana Utility Group, LGE / KU, Marathon Petroleum, National Lime Association, Ohio Utility Group, Olympus Power, and City Water, Light and Power (Springfield IL).

On November 13, 2018, EPA announced plans to undertake a new rulemaking – the Cleaner Trucks Initiative (CTI) – to update standards for oxides of nitrogen (NOx) emissions from highway heavy-duty vehicles and engines. Although NOx emissions in the U.S. have dropped by more than 40 percent over the past decade, EPA notes that heavy-duty vehicles are and will continue to be one of the largest contributors to the mobile source NOx inventory in 2016, 2023 and 2028.

MOG is pleased to see EPA undertake this initiative under Section 202(a)(1) of the Act. While states have some discretion to address emissions from mobile sources, EPA clearly has authority that does not exist with the states. In these comments MOG will not only offer its support for the CTI and relative contribution findings generated by others, but also offer the results of air quality modeling data performed for MOG by Alpine Geophysics that assess the contribution that mobile sources make to ozone concentration at various monitors in the East. This data confirms the significant role that mobile sources play in determining the quality of our air and the importance of EPA's Cleaner Truck Initiative.

This initiative also provides EPA with an opportunity to address the enforceability of the CTI. This was made all the more important by EPA's recent action which added to the National Compliance Initiatives "Stopping Aftermarket Defeat Devices for Vehicles and Engines."[3]

A recent publication[4] indicates that mobile source sectors contribute substantially to the total projected inventory of NOx 2025, even when considering biogenic and geogenic (e.g. wildland fire) sources. According to the study, among the mobile source sectors in 2025, heavy-duty diesel vehicles emit the most NOx.

From an air quality perspective, this report, and as shown in Figure 1 below, presents ozone source apportionment results that estimate ozone contribution from onroad heavy-duty diesel engines are between 2 and 5 ppb for portions of the Southeast and Southwest U.S. during the 2025 ozone season.

The report also indicates that the annual average $PM_{2.5}$ contribution from onroad heavy-duty diesel engines is between 0.1 and 0.5 $\mu g/m^3$ for highly populated areas in the East, Midwest and West Coast, and along major roadways. This is shown using particulate matter source apportionment modeling as presented in Figure 2.

[3] https://www.epa.gov/enforcement/national-compliance-initiatives
[4] Zawacki, et al. https://doi.org/10.1016/j.atmosenv.2018.04.057

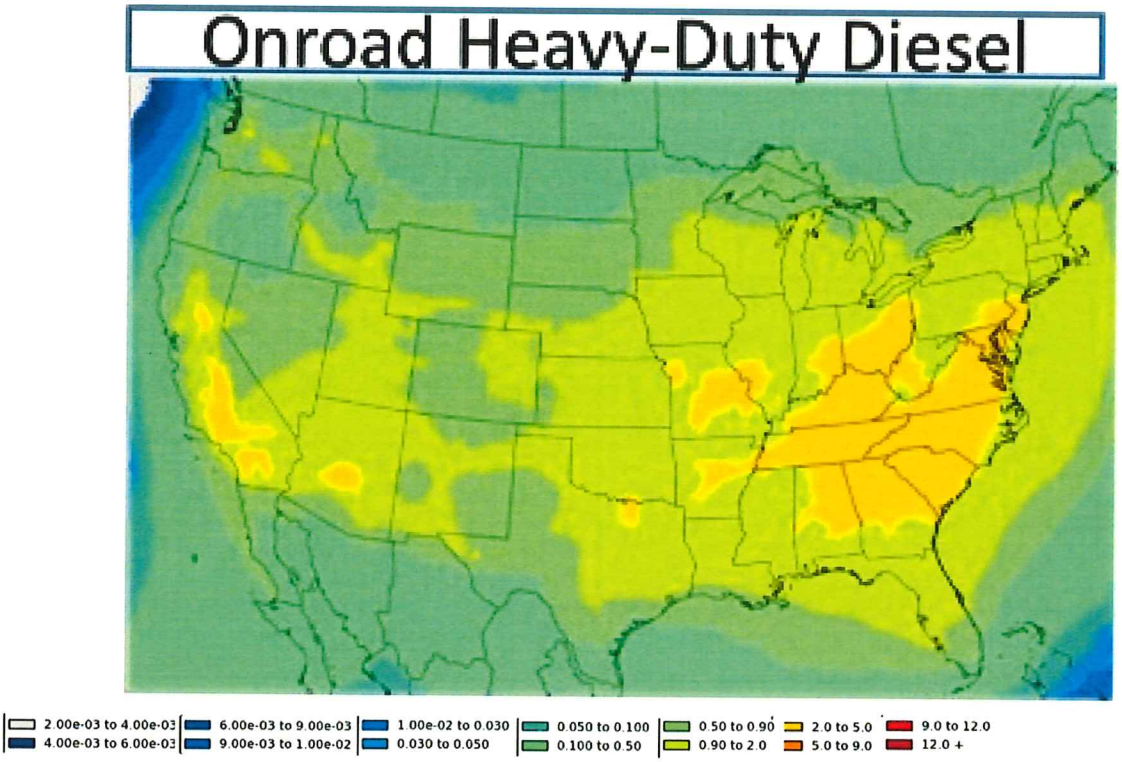

Figure 1. Projected contributions to 8hr max average seasonal ozone concentrations (ppb) for onroad heavy-duty diesel mobile source sector in 2025.

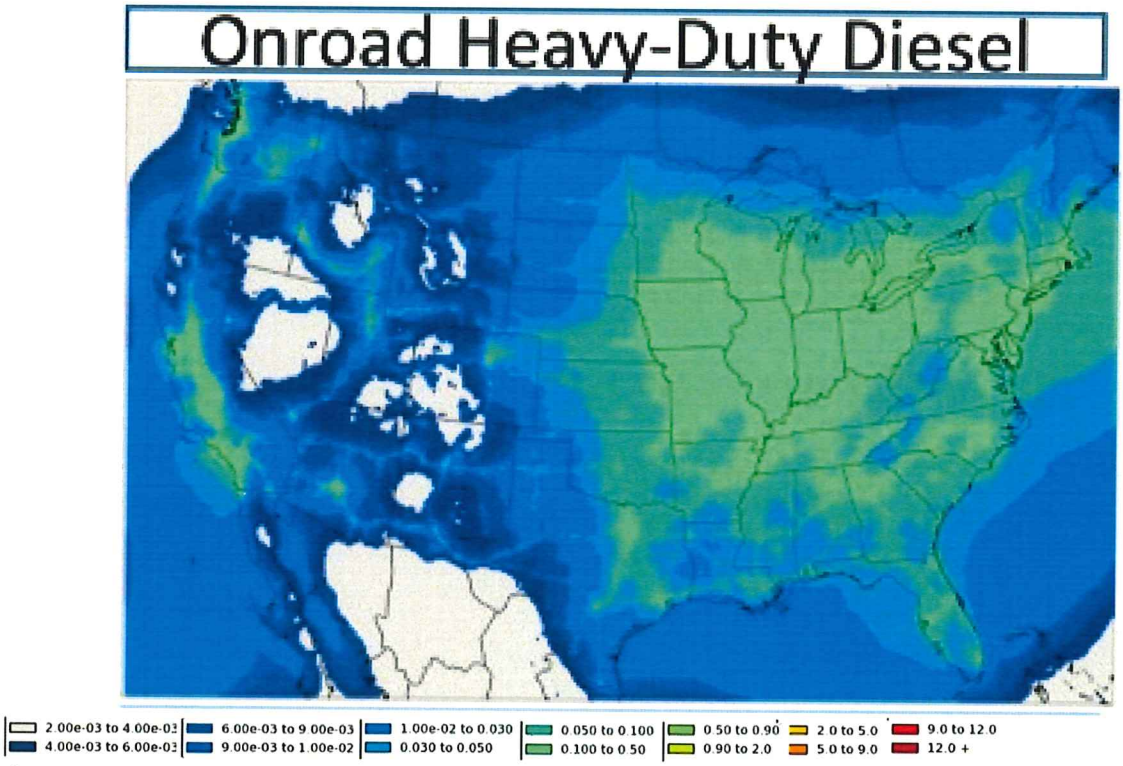

Figure 2. Projected contributions to annual average $PM_{2.5}$ concentrations ($\mu g/m^3$) for onroad heavy-duty diesel mobile source sector in 2025.

A recent EPA presentation[5] related to current ozone trends at key eastern state monitors examined ozone trends and spatial patterns based on measured data in urban and rural/regional locations to further understand the extent to which high ozone concentrations remain a regional problem in the East or if high ozone concentrations have become more of a local problem. As part of the findings presented, it was suggested that the current ozone problems in parts of the Eastern US may have become more of local problem within the nonattainment area and nearby states, as opposed to broad regional problem with a large geographic reach far upwind of the downwind state.

The presentation hypothesizes, among other issues, that "the NYC area has higher mobile source emissions than other parts of the OTR, (on- road and non-road sources)." Using EPA's 2016v1 modeling platform, we see in Figure 3 below for the combined states of New York, New Jersey, and Connecticut, mobile source emissions comprise 57% (0.26 million tons) of annual NOx emissions in 2016, 42% (0.14 million tons) of annual NOx emissions in 2023, and 36% (0.11 million tons) of annual NOx emissions in 2028.

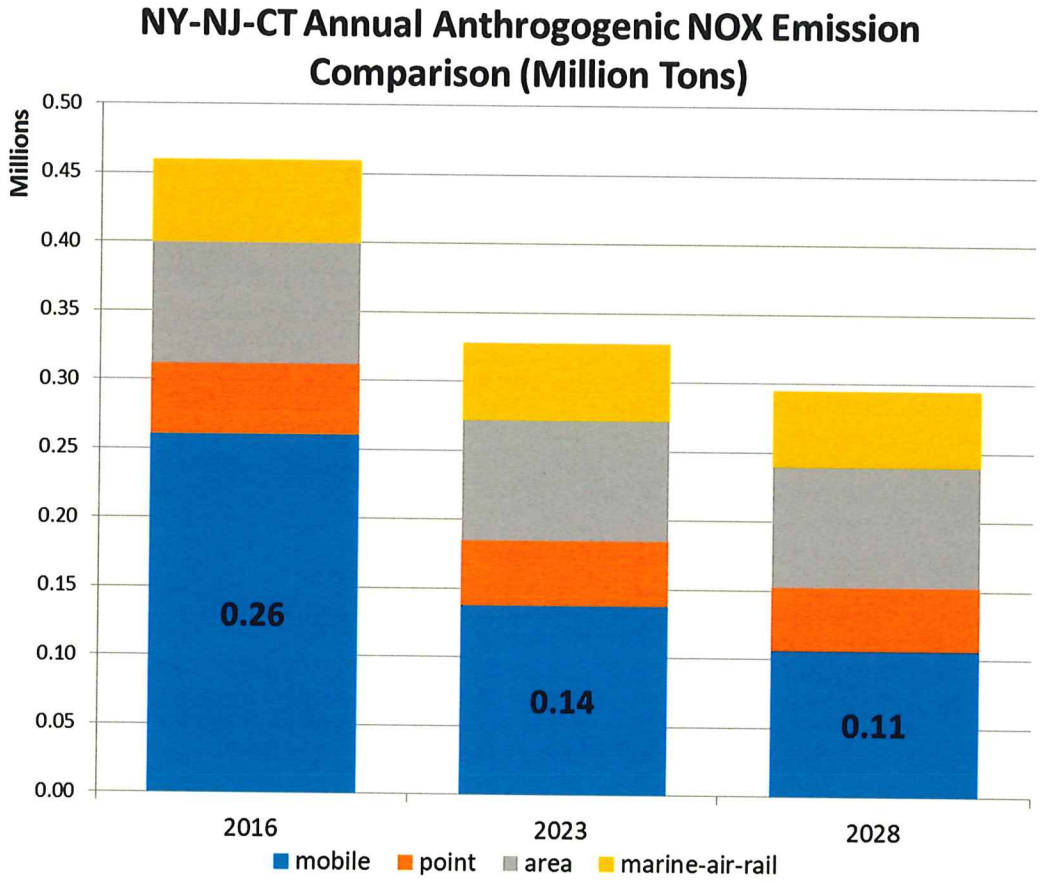

Figure 3. Annual anthropogenic NOx emissions by major source category (millions of tons) for New York, New Jersey, and Connecticut.

[5] http://midwestozonegroup.com/files/2018-05-14_EPA_OAQPS_-_Analysis_of_O3_Trends_in_the_East_in_Relation_to_Interstate_Transport.pdf

This is corroborated in an analysis prepared by Alpine Geophysics, LLC which provides the ozone source apportionment relative contribution calculations for the various source sectors from multiple upwind states to downwind receptors.[6] Keeping with the New York City and coastal Connecticut domain investigated by EPA, local source emissions from mobile categories have the greatest relative contribution to projected ozone concentrations in the domain.

Figure 4 provides ozone source apportionment results for the Queens, New York monitor (360810124) in the 2023 projection year. The figure shows geographic, source category-based relative contribution to the 2023 ozone design value predicted at the monitor. In the figure, the height of each bar represents the relative contribution to other geographic (state or region) sources of category-based emissions (individual colors within each bar). Of importance in this figure, the bars for New York and adjacent state New Jersey dominate the list of anthropogenic emission contributions and within that bar, the red (onroad mobile) and green (nonroad mobile + area + marine/rail/air) are of greatest relative modeled contribution.

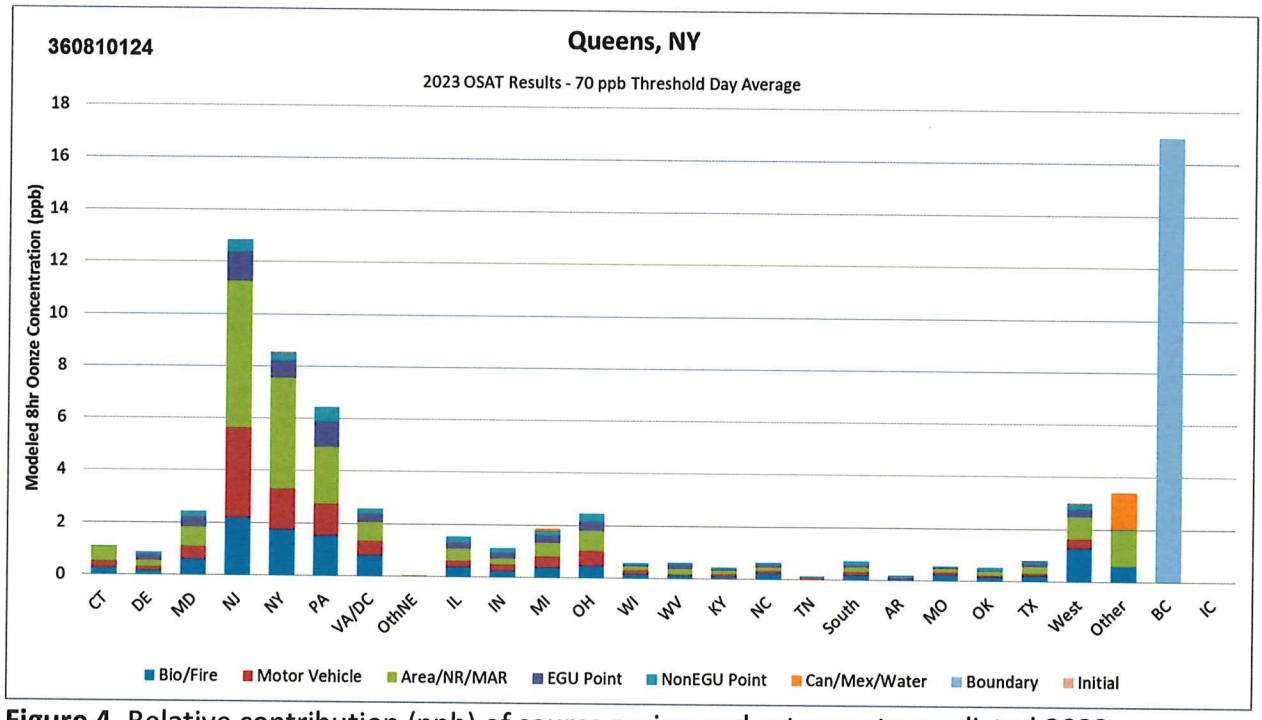

Figure 4. Relative contribution (ppb) of source region and category to predicted 2023 ozone design value at Queens, New York receptor (360850067).

When we look at the aggregate of all categories, regardless of geography (Figure 5), we also see that motor vehicles (15%) and nonroad mobile + area + marine/rail/air (29%) dominate the relative contribution to projected ozone concentrations.

[6] http://www.midwestozonegroup.com/files/Ozone_Modeling_Results_Supporting_GN_SIP_Obligations_Final_Dec_2017_.pdf

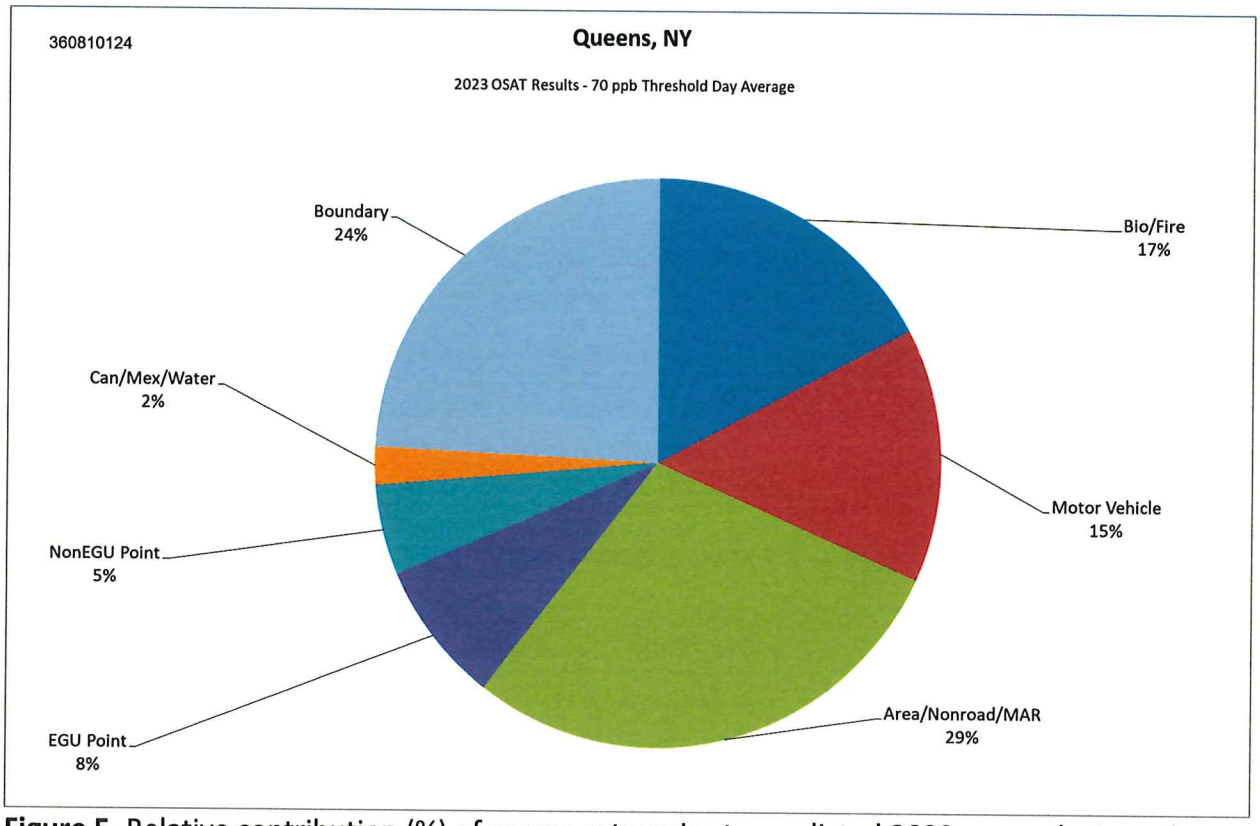

Figure 5. Relative contribution (%) of source categories to predicted 2023 ozone design value at Queens, New York receptor (360850067).

Similar results are seen in Figure 6 at the coastal Connecticut site at Fairfield (090010017) with emissions from New York, New Jersey, and Connecticut dominating the geographic contributions. Again, similar to the Queens, New York monitor, emissions from the red (onroad mobile) and green (nonroad mobile + area + marine/rail/air) are of greatest relative modeled contribution. This is also seen in Figure 7 when geography is removed from the equation.

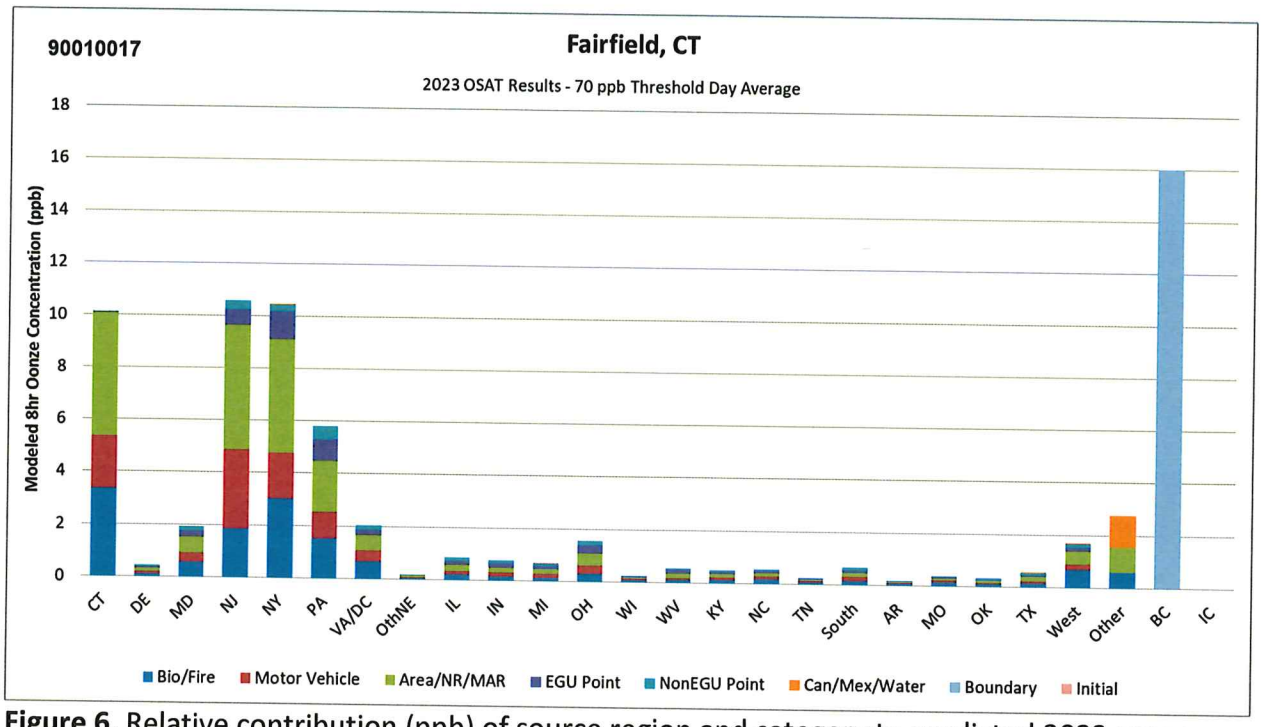

Figure 6. Relative contribution (ppb) of source region and category to predicted 2023 ozone design value at Fairfield, Connecticut receptor (090010017).

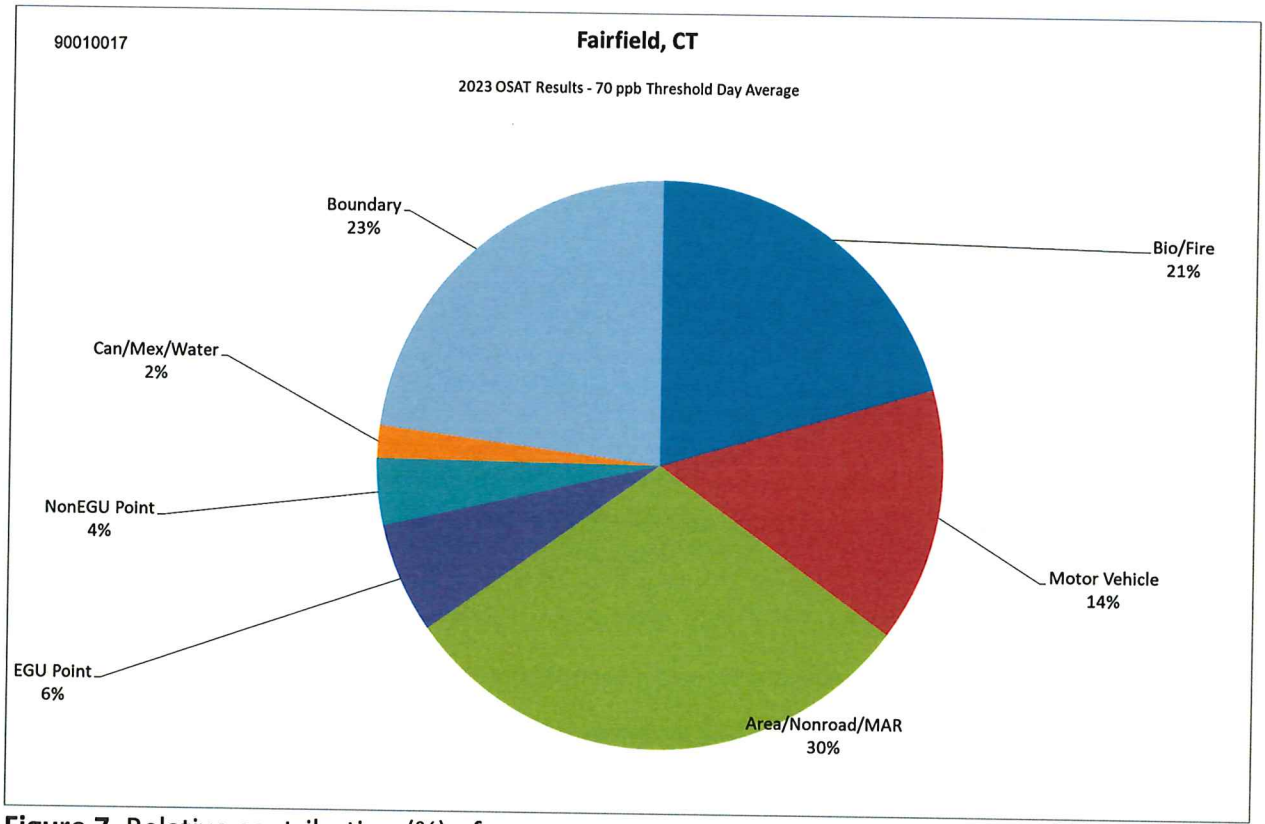

Figure 7. Relative contribution (%) of source categories to predicted 2023 ozone design value at Fairfield, Connecticut receptor (090010017).

This pattern is also seen across most of the eastern U.S. and as seen in Figure 8, motor vehicle emissions (red piece of each pie) are a significant percentage of relative contribution to 2023 ozone concentration predictions from U.S. anthropogenic sources at most monitors.

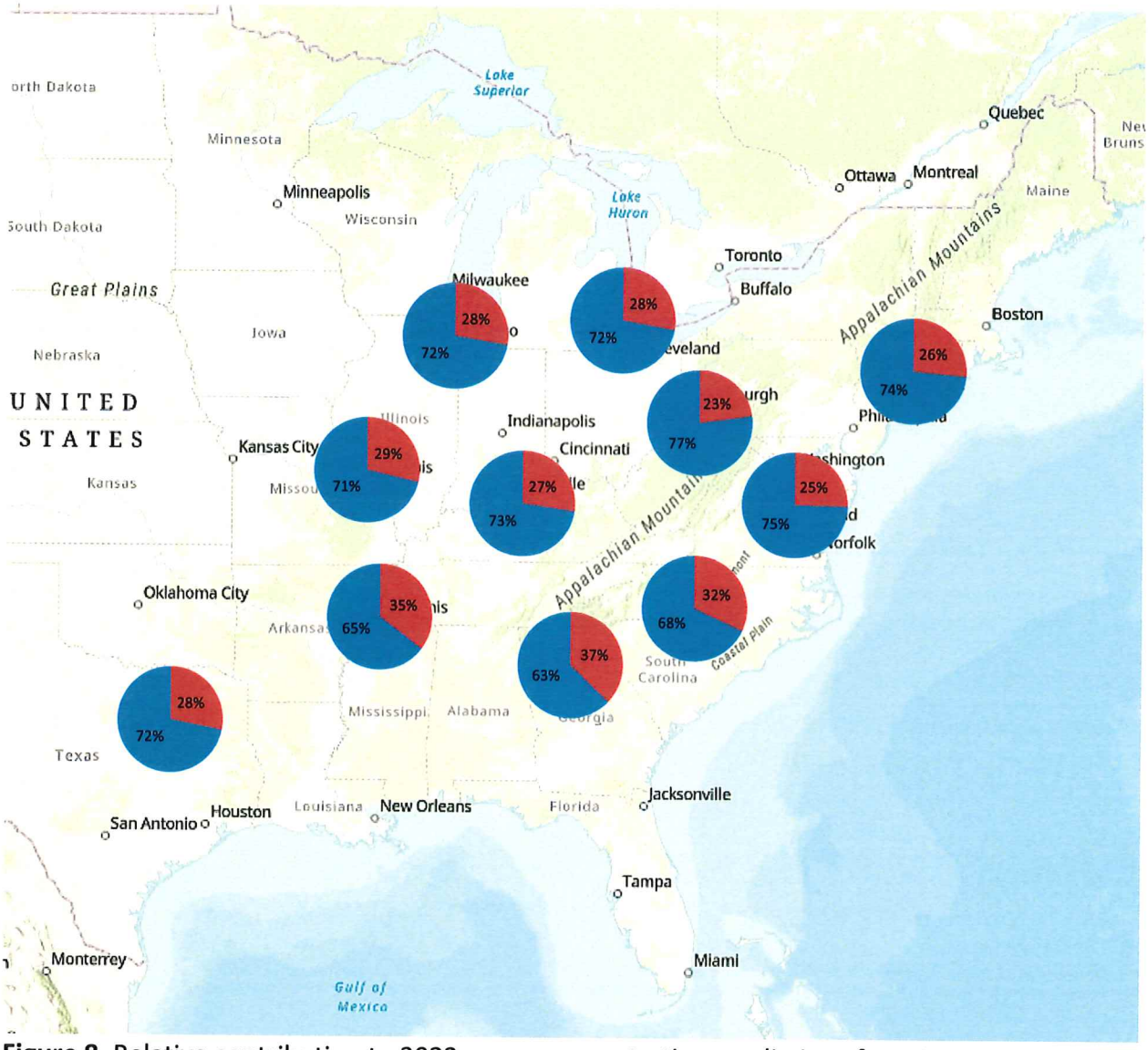

Figure 8. Relative contribution to 2023 ozone concentration predictions from U.S. anthropogenic sources. Red indicated onroad mobile source emission contribution. Blue indicates all other U.S. anthropogenic source emission contribution.

Conclusion

As can be seen in these comments, mobile sources have a significant impact on air quality. MOG very much supports EPA's plans to establish new emission standards for NOx and other pollutants for heavy-duty highway engines as a major component of mobile source emissions.

Very truly yours,

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Midwest Ozone Group

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