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May 28, 2024

Administrator Michael S. Regan
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Re: Framing Questions for Existing Stationary Combustion
Turbine EGU's Framing Questions for Stakeholder Input

Dear Administrator Regan,

On March 26, 2024, USEPA posted in a non-regulatory docket at EPA-HQ-OAR-2024-0135-0002, "Existing Stationary Combustion Turbine EGUs Framing Questions for Stakeholder Input." This posting is a solicitation for public input on the Agency's efforts to reduce emissions of greenhouse gases from existing fossil fuel-fired stationary combustion turbines. EPA's stated goal is to "design a stronger, more durable approach to greenhouse gas regulation of the entire fleet of existing gas combustion turbines in the power sector under Clean Air Act Section 111(d)." "EPA plans to re-propose emission guidelines for existing electric generating unit (EGU) combustion turbines to address GHG emissions."

The following comments are offered on behalf of the Midwest Ozone Group ("MOG"). 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 that may impact on their facilities, their employees, their

* The members of and participants in the Midwest Ozone Group include: Alcoa, Ameren, American Electric Power, American Forest & Paper Association, American Iron and Steel Institute, American Wood Council, Appalachian Region Independent Power Producers Association, Associated Electric Cooperative, Berkshire Hathaway Energy, Big Rivers Electric Corp., Buckeye Power, Inc., Citizens Energy Group, City Water, Light & Power (Springfield IL), Cleveland Cliffs, Council of Industrial Boiler Owners, Duke Energy Corp., East Kentucky Power Cooperative, ExxonMobil, FirstEnergy Corp., Indiana Energy Association, Indiana-Kentucky Electric Corporation, Indiana Municipal Power Agency, Indiana Utility Group, Hoosier Energy REC, inc., LGE/ KU, Marathon Petroleum Company, National Lime Association, North American Stainless, Nucor Corporation, Ohio Utility Group, Ohio Valley Electric Corporation, Olympus Power, Steel Manufacturers Association, and Wabash Valley Power Alliance.

communities, their contractors, and the consumers of their products. 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 (including the Revised CSAPR Update), NAAQS standards, nonattainment designations, petitions under Sections 126, 176A and 184(c) of the Clean Air Act (“CAA”), 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 air quality requirements including the ozone NAAQS.

A. General Comments

1. EPA past efforts to address the development of emission guidelines pursuant to Section 111 of the Clean Air Act have been fatally flawed.

EPA’s assessment of its authorities under Section 111(d) continues to be misguided. EPA’s proposal to find that certain “systems of emission reduction” have been “adequately demonstrated” is based on the Agency’s own misunderstanding of the statutory language at issue and the applicable caselaw. EPA relies upon the *Portland Cement* case to support its rule but that case applied to new sources and not existing sources. 486 F.2d 375 (D.C. Cir 1973). This discrepancy between what has been said in the new source CAA Section 111 caselaw and existing source legal interpretations highlights that there is simply no substantive existing source 111(d) court decision. *WV v. EPA* disposed of the Clean Power Plan on anterior grounds (namely, the proper scope of a cognizable “system of emission reduction” under Section 111(a)(1)), and so reached nothing specific on 111(d)’s treatment of existing sources as such.

2. EPA’s authority to regulate existing sources pursuant to Section 111 is extremely limited.

The text of Section 111(d) provides that states are to establish standards of performance for their existing plants on an individual basis. EPA’s framing questions reach around the states’ statutory authority, imposing its own preferences for establishing BSER asking what EPA should be considering relative to existing combustion turbines’ technologies. EPA’s narrative and questions only offer a slight

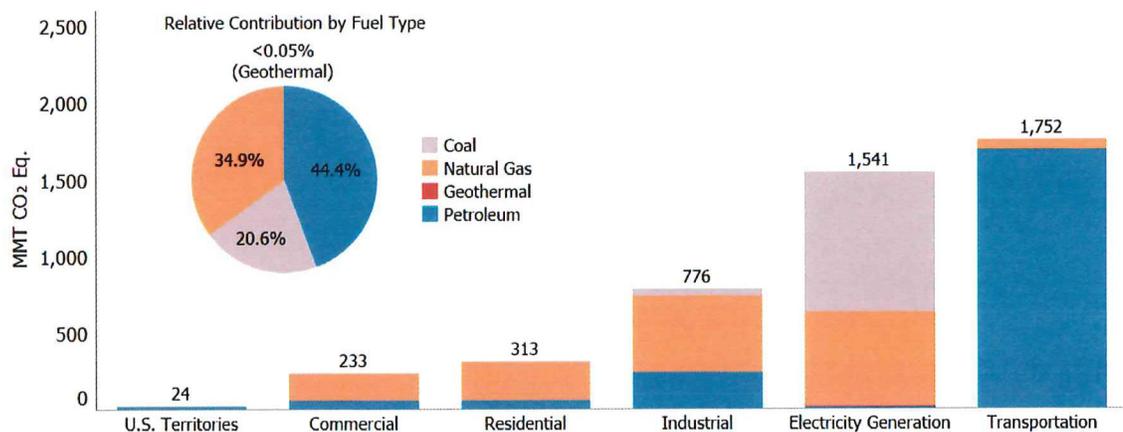
glance at the role states have in Section 111(d). As has been observed by the courts, EPA’s strategies must be consistent with the authorities in the Clean Air Act.

3. EPA’s Framing Questions fail to acknowledge or promote the U.S. policy initiative to return manufacturing to the U.S.

U.S. initiatives to move manufacturing to a U.S. model will significantly impact the U.S. GHG emission inventory. Invoking the NSPS authorities, EPA invites the reader to only look to a slice of one sector, combustion turbine EGUs. With increased electrification of other GHG-emitting sectors of the economy, such as personal vehicles, heavy-duty trucks, and heating and cooling of buildings, the narrow review of combustion turbines makes no sense. Pollution is coming from other sectors of the economy at an increased rate with the electrification shift to the power generation sector. EPA’s mission appears to be to reform the EGU source category as a surrogate for revisions to the energy economy of the United States. The Clean Air Act does not provide such authorities per *WV. v. EPA*.

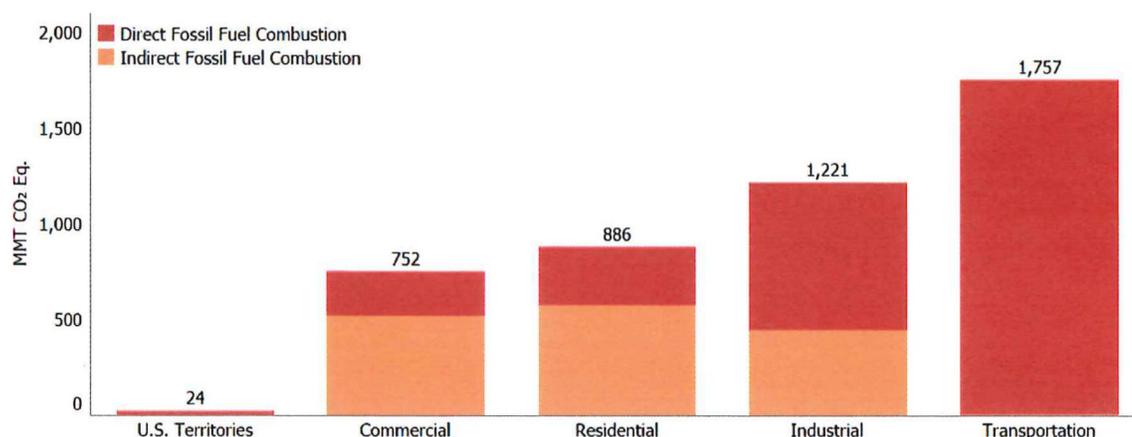
The five major fuel-consuming economic sectors are transportation, electric power, industrial, residential, and commercial. Carbon dioxide emissions are produced by the electric power sector as fossil fuel is consumed to provide electricity to one of the four sectors, or “end-use” sectors as set forth in Figures ES-5. *Inventory of U.S. Greenhouse Gas Emission and Sinks: 1990 – 2021* (USEPA 2023).

Figure ES-5: 2021 CO₂ Emissions from Fossil Fuel Combustion by Sector and Fuel Type



The following Figure ES-6 summarizes CO₂ emissions from fossil fuel combustion by end-use sector showing electric power emissions for each end-use sector on the basis of each sector’s share of aggregate electricity use.

Figure ES-6: 2021 End-Use Sector Emissions of CO₂ from Fossil Fuel Combustion



Transportation activities accounted for 37.9 percent of U.S. CO₂ emissions from fossil fuel combustion in 2021, with the largest contributor being light-duty trucks (37.3 percent), followed by freight trucks (23.3 percent) and passenger vehicles (20.8 percent). EPA notes the decline in direct and indirect emissions from the industrial sector by 20.7 percent since 1990. “This decline is due to structural changes in the U.S. economy (i.e., shifts from a manufacturing-based to a service-based economy), fuel switching, and efficiency improvements. From 2020 to 2021, total energy use in the industrial sector increased by 3.7 percent, due to increase in total industrial productions and manufacturing output. U.S. initiatives to move manufacturing to a U.S. domestic model will significantly impact the U.S. GHG emissions inventory.

4. EPA’s questions fail to address the risk of grid reliability and the implications to the U.S. economy.

Notably, EPA only raises the question of grid reliability as impacted by BSER for existing combustion turbines as among a “wide range of concerns” after exploring technologies, market mechanisms, subcategorization and compliance flexibilities. EPA invites an assessment of reliability relative to only a portion of the existing EGU sector. EPA is not looking at one portion of the EGU sector but at new and existing sources of many kinds. EPA’s Section 111 programs are targeting technologies for renewable energy, energy storage, co-firing hydrogen as a fuel supplement, and construction of new peaking units to name a few examples as part of its effort to manage grid reliability. It is not appropriate for EPA to narrow its assessment and framing questions as if these combustion turbine units exist in a vacuum. EPA arbitrarily narrowing the assessment is a violation of the major questions doctrine. On point is the June 1, 2023 statement offered by Manu Asthana,

President and CEO, PJM Interconnection, to the U.S. Senate Committee on Energy & Natural Resources:

The pace of retirements is being driven in large part by state laws and federal environmental initiatives that create a clear near-term, date certain requirement for generation to comply or retire. On the other hand, the pace of additional new renewable generation is currently slower than anticipated.

...

The reliability challenge from prematurely losing resources we need to manage the grid dominated by intermittent renewable generation is concerning. Identifying this possible outcome now affords us an opportunity to manage this transition in an orderly and coordinated fashion that ensures the continued supply of reliable electric power.

...

If the rate of premature retirements continues to outpace installation of replacement generation with the attributes necessary to maintain grid reliability, the nation may well face challenges with maintaining adequate supply to meet electric power demand, at the very time we are moving aggressively to electrify the transportation and home heating sectors.

...

There is a critical need for integrating analysis of the reliability impact of specific state and federal policies prior to those policies being adopted. We remain concerned that compliance dates that impact the generation fleet are being chosen without such a rigorous analysis always being undertaken. Although EPA does undertake a limited analysis in certain rulemakings, its analysis does not take into account the reliability attributes needed by system operators or the feasibility of cost of the compliance alternatives proposed in the particular rulemaking. From a process standpoint, it would be appropriate for a more thorough reliability analysis to become a standing requirement for federal actions that could impact reliability. And although EPA has entered into a Memorandum of Understanding with the Department of Energy to consider reliability issues as part of EPA rulemaking deliberations, the reliability analysis and consultation should be undertaken with those entities

that actually operate the grid in addition to, and not as a replacement for, coordination with DOE.

There is also the additional grid reliability concern associated with the extended RTO approval process that relates to the approval of any new or replacement generation and concerns about the reliability of renewables. A key factor in addressing reliability is to recognize the value of combustion turbines relative to renewables. In addition, reliability should be addressed by slowing down the rate of retirements.

The North American Electric Reliability Corporation's (NERC) recent reliability assessments have "pointed to the disorderly retirement of traditional generation (with its inherent ability to provide essential reliability services and balance energy reserves) as one of the biggest challenges facing the grid." NERC's 2023 Summer Reliability Assessment show that two-thirds of North America is at elevated risk of energy shortfalls this summer due to conventional generation retirements, a substantial increase in forecast peak demand, and an increasing threat from a wide-spread heat event. That assessment also identifies EPA's recently finalized ozone transport rule as one that will exacerbate these reliability challenges.

The state of permitting and NEPA review for projects to reduce GHG emissions is consumptive of time and money with unpredictable results. Reliance upon significant infrastructure modifications to replace reliable, dispatchable power is not a stable path forward to deliver power across the nation.

The Framing Questions, offered in isolation of both the entirety of electric generation across the economy and the cumulative impact of all new final rules applicable to EGUs, do not allay electric reliability concerns but exacerbate those concerns placing at risk the nation's key infrastructure for electricity that is critical to the health and well-being, and security for all citizens of the United States.

5. The CAA does not mandate promulgation of a NSPS.

The CAA Section 110 provides an obligation on EPA to issue a federal plan in the instance where a state fails to prepare a "satisfactory" plan. With regard to existing sources, however, Section 111(d)(2) gives EPA the authority to *elect* to develop a federal rule. EPA 's framing questions fail to explain the policy choice to segregate existing combustion turbines presumably to promulgate a focused regulation.

Any new controls would be excessively expensive and would harm the power industry and its customers. Financing high dollar new generation projects such as those combustion turbines targeted by the framing questions, presents substantial challenges. Public power entities do not have investors to raise capital, they typically rely on the operating income to perform projects or invest in new generation assets. Many municipalities have limited emergency funds to purchase power. EPA must recognize that IRA tax incentives are only available for renewable generation. IRA is not a complete funding source and cannot support generation transitions in seven years.

Emission of GHG from the EGU sector has been steadily reducing in recent years and is expected to continue for the foreseeable future as the result of new regulatory programs and routine retirements. As noted previously in these comments, EPA fails to factor in direct and indirect emissions from structural changes in the U.S. economy. EPA must broaden the analysis and the Framing Questions to determine what emissions reductions are sought and for what CAA policy objective.

6. The economic impact of any CAA Section III initiative must be addressed in the context of Environmental Justice.

The Framing Questions fail to address the environmental impact on poor communities that will be and are compromised due to EPA's energy transition goals represented by these questions. Grid reliability implies electricity available to all users, not simply a few. Compromised communities faced with increased unemployment, expensive and intermittent electricity, and other factors enhanced by this proposal (i.e., supply chain shortages, reduced tax base for education and connectivity) are again adversely impacted.

The Framing Questions do not reference the need to provide meaningful opportunity for those communities to engage in this dialogue. Costs to implement additional controls on existing units directly affect communities. Natural gas pipelines and hydrogen pipelines must be constructed to support some of these targeted technologies listed by EPA. Pipeline construction concerns are clearly an issue for which the general public has numerous unanswered concerns.

7. Air quality and other health and environmental impacts for people living near stationary combustion turbines.

As can be seen from the following figures, the locations of CAMD reported 2023 emissions from natural gas-fired combustion turbines plotted with preliminary AQS monitor-level design values from 2023, for both annual PM2.5 and maximum daily averaged 8-hr ozone concentrations, indicate that in areas where densely situated metro area source categories (onroad and nonroad mobile sources, commercial cooking, residential wood combustion, etc.) do not typically exist, monitors are found to be below nonattainment thresholds as established by the National Ambient Air Quality Standards. Accordingly, there is no reason to be concerned that stationary combustion turbines are either causing air quality problems or creating health concerns.

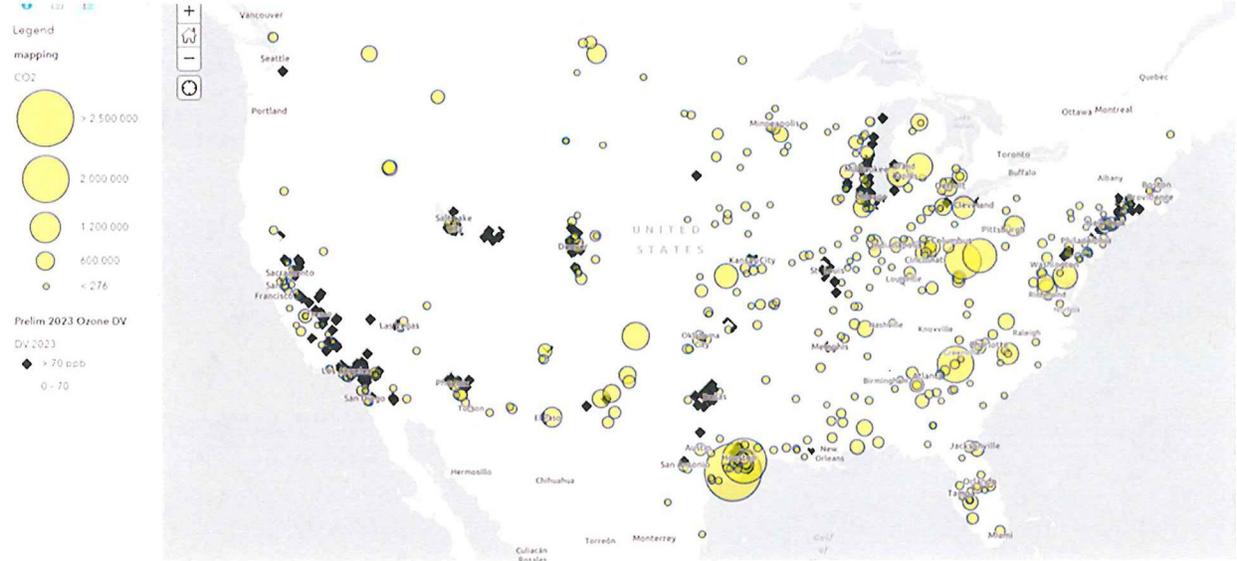


Figure 1. Annual natural gas fired combustion turbine CO2 emissions (tons) and preliminary MDA8 ozone design values (ppb) from 2023.

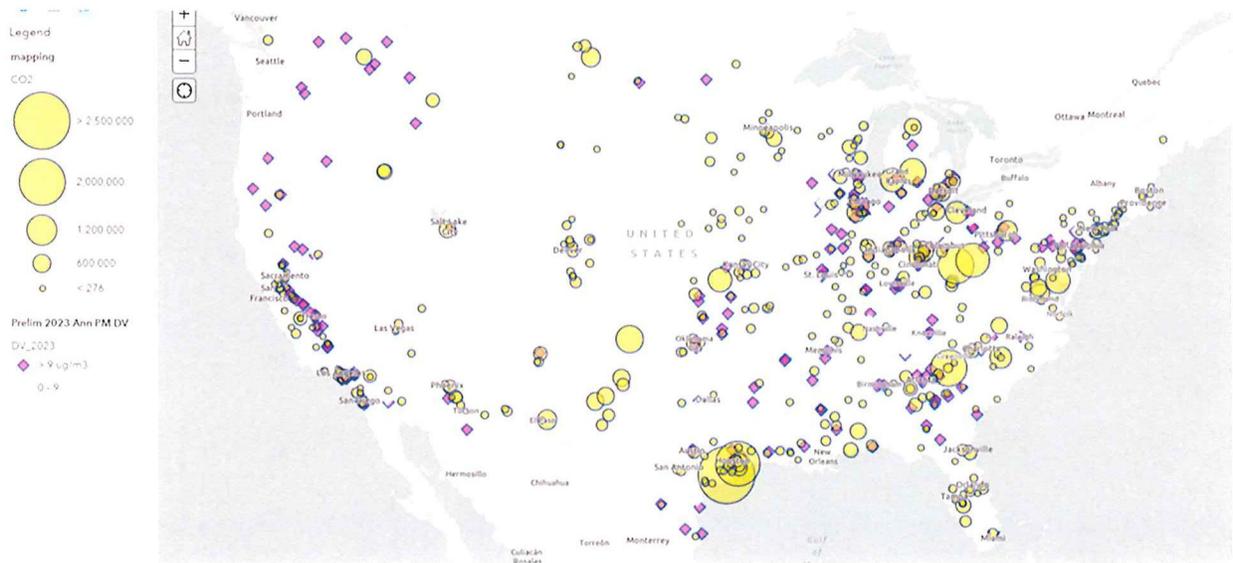


Figure 2. Annual natural gas fired combustion turbine CO₂ emissions (tons) and preliminary annual PM_{2.5} design values (µg/m³) from 2023. [Source of graphs? Cichanowicz? EPA? DOE]

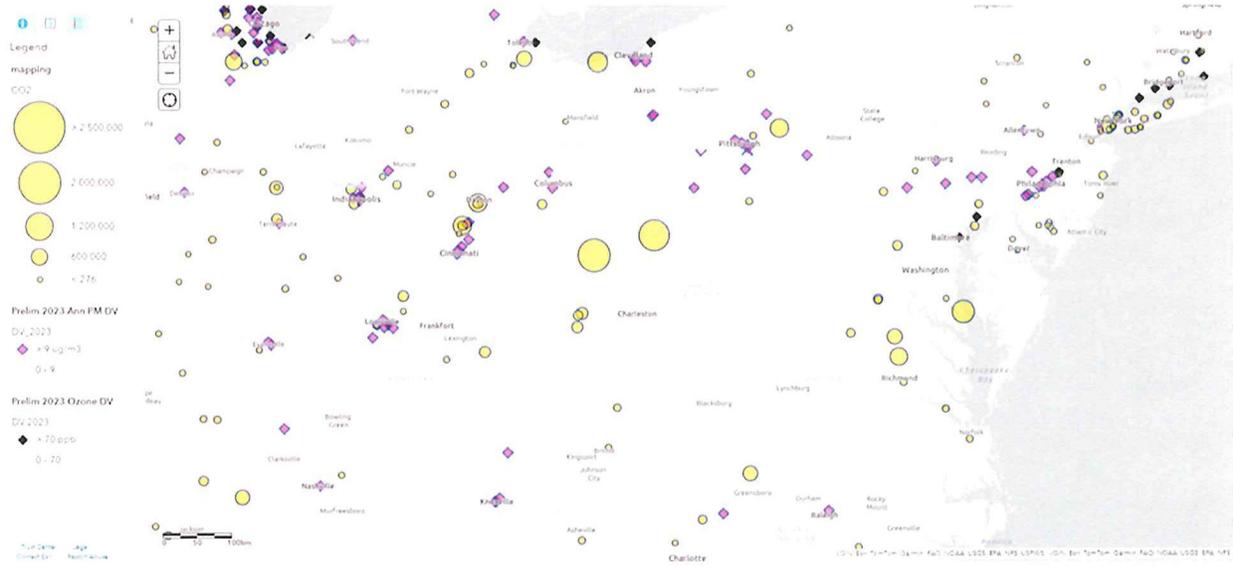


Figure 3. Zoom of Midwestern state annual natural gas fired combustion turbine CO₂ emissions (tons), preliminary MDA8 ozone design values (ppb), and preliminary annual PM_{2.5} design values (µg/m³) from 2023.

8. Concerns related to construction of new pipelines for CO₂ and hydrogen.

To accommodate the transport of hydrogen, development of pipeline systems will be required. There is no infrastructure in place to deliver hydrogen and reliance upon existing natural gas pipelines is not feasible at volumes needed. Hydrogen is

low energy density which impacts transportation options. Pipelines are the only viable means to deliver a reliable supply. Permitting such a system and gaining public support would be very difficult in light of the highly explosive nature of hydrogen.

CO2 pipeline development would similarly involve new construction and permitting. The need for such pipelines will be considerable since few units will have available CO2 storage on-site. EPA's own Class VI storage program continues to falter with very few permits issued or state delegations granted.

9. Concerns related to long-term storage of CO₂ (i.e. carbon sequestration).

While there are very few CCS demonstration projects, none of them are reflective of real-world facts and circumstances. The efficacy of the long-term storage of CO2 is simply unproven. This is in part related to costs and the fact that there are no state or federal programs in place to manage long-term obligations for utilization of the pore space across state boundaries. There are many issues that have not been addressed both technically and legally concerning CO2 storage.

MOG appreciates this opportunity to provide input to the Framing Questions and will continue to engage in these and other key Clean Air Act programs being advanced by U.S. EPA. As additional information addressing the Framing Questions is developed, we will make that information available to the agency.

Very truly yours,



Kathy G. Beckett

Counsel for Midwest Ozone Group