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November 14, 2025

Mr. Aaron Szabo (szabo.aaron@epa.gov)
Assistant Administrator
Office of Air and Radiation
United States Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20004

Re: Input for Initial Attainment/Nonattainment
Designations in Illinois for the 2024 Revised Primary
Annual PM2.5 NAAQS.

Dear Assistant Administrator Szabo:

As we approach the upcoming statutory deadline for USEPA to finalize designations of areas under the 2024 PM2.5 National Ambient Air Quality Standards (NAAQS), the Midwest Ozone Group (MOG)¹ respectfully requests that USEPA consider the comments of MOG submitted to Illinois EPA on March 26, 2025 (attached and identified as Exhibit A) regarding its draft recommendations and the

¹ The members of the Midwest Ozone Group includes: 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., Citizens Energy Group, City Water, Light & Power (Springfield IL), Cleveland-Cliffs Inc., Council of Industrial Boiler Owners, Duke Energy Corp., East Kentucky Power Cooperative, Exxon Mobil Corporation, Indiana Energy Association, Indiana-Kentucky Electric Corporation, Indiana Municipal Power Agency, Indiana Utility Group, Hoosier Energy REC, Inc., LGE/KU, Marathon Petroleum Company, Monongahela Power 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

need for required improvements in air quality data and analysis that should be undertaken before making any final designation decisions.

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 their facilities, their employees, their communities, their contractors, and the consumers of their products.

The State of Illinois is an important U.S energy and manufacturing state that is significantly impacted by USEPA regulatory policies. Ranking fifth in the nation's population and sixth in GDP, the state is home to four refineries that collectively process almost 1.1 million barrels of crude oil per day, with numerous ethanol and biodiesel production facilities. In addition to substantial coal reserves and its role as a top five electricity generating state, Illinois is also a key hub for crude oil and natural gas flows that help maintain the efficiency of the North American energy platform for the benefit of all energy producers and consumers in the U.S. Consistent with the President's Executive Order on *Unleashing American Energy*, our recommendations focus on ensuring all regulatory requirements, many of which will affect important energy resources, are grounded in applicable law.² With this objective in mind, MOG urges USEPA to consider the significant factors raised in this letter which significantly impact on the data to be used to make any final designation decision.

One of MOG's major concerns is that the data relied upon to support the draft PM2.5 designation recommendations³ for the Chicago and the Metro-East St Louis metropolitan areas⁴ are fatally flawed. Unless corrected, this boundary overreach will have significant erroneous negative consequences for energy-intensive industries and economic growth for the region. Before finalizing the PM2.5 designations for these metropolitan areas, MOG urges that USEPA should take the

² E.O. [Unleashing American Energy](#), January 20, 2025. Section 2(d) states that it is the policy of the US to ensure that all regulatory requirements related to energy are grounded in clearly applicable law

³ Illinois EPA, "Technical Support Document: Recommended Initial Attainment/Nonattainment Designations in Illinois for the Revised Primary Annual PM2.5 National Ambient Air Quality Standard", March 3, 2025.

⁴ Including Cook, DuPage, Kane, Lake, McHenry and Will counties, and portions of Kendall and Grundy counties in the Chicago metropolitan nonattainment area, and Madison, Monroe and St Clair counties, along with part of Randolph county in the East St. Louis metropolitan area.

following steps to ensure the accuracy of PM_{2.5} monitoring data and its implementation guidance:

- *Correct remaining FEM monitor biases:* Over the last decade, Illinois has shifted from relying on Federal Reference Methods (FRMs) monitors to Federal Equivalent Methods (FEMs) monitors due to their continuous monitoring capability and their low capital and operational cost. Unfortunately, these monitors also came with a significant regulatory penalty due to their persistent positive bias in measuring PM_{2.5} concentrations, particularly during periods of high smoke. And while EPA finalized a rushed correction factor developed by the manufacturer for the Teledyne T640/T640X FEM monitors shortly after the new PM_{2.5} standard was promulgated, many states found the correction factor to be inadequate. All 34 of Illinois' PM_{2.5} monitoring locations⁵ employ Teledyne T640/T640X monitors, so these biases are statewide.

In its March 14, 2024, comments to USEPA on its proposed update of PM_{2.5} data from T640/T640X FEM monitors (attached and identified as Exhibit B), MOG specifically noted that the PM air quality results measured by Teledyne monitors are not comparable with the results measured by FRM and could result in not only in inaccurate calculations of PM_{2.5} design values but also erroneous designation of PM_{2.5} nonattainment areas.

In a December 2024 letter to USEPA, the Association of Air Pollution Control Agencies (AAPCA) summarized the results of an analysis by the Georgia Environmental Protection Division of 68,000 FRM/FEM measurements at over 200 sites nationwide that had FRM monitors collocated with T640/X monitors.⁶ After implementing the Teledyne adjustment algorithm, the Georgia EPD found that the Teledyne monitors at 31 percent of the locations from 2018 to 2023 had a bias that exceeded 10 percent, with the average overall normalized mean bias of 6.4 percent for all sites. This means that Illinois monitors with readings as high as 9.6 to 9.9 micrograms per cubic meter could be incorrectly measuring values that are in attainment with the 2024 PM_{2.5} standard. However, AAPCA's average estimates may still underreport the true bias in Illinois data due to the unaddressed positive bias

⁵ [State of Illinois Ambient Air Monitoring 2025 Network Plan](#), pages 21-24

⁶ Association of Air Pollution Control Agencies, [December 20, 2024 Letter to EPA](#), p2

reported by USEPA during periods of smoke.⁷ Recent research, relying on NASA's hazard mapping system (HMS), shows that most of Illinois experiences more than 40 days of smoke annually.⁸ It is apparent that the actual bias could be much higher than the AAPCA's averages – a significant cause of uncertainty which could be pivotal to a designation determination. Failure to fully correct the Teledyne bias in normal and smoke-filled days, means that the monitors may also be eliminating what little headroom the state has in attainment areas to permit expansion of its productive capacity.

- *Recognize USEPA's non-discretionary duty under the Clean Air Act to ensure the accuracy and reliability of the monitoring data by conducting analyses and excluding all potential exceptional events.* Under Section 319(a)(1) of the Clean Air Act, USEPA has a non-discretionary duty to establish an air quality monitoring system that utilizes "uniform air quality monitoring criteria and methodology". In pursuit of this goal, Section 319(b)(3)(A)(v) requires USEPA to issue Exceptional Event (EE) regulations that ensure air quality data is "carefully screened to ensure that events not likely to recur are represented accurately in all monitoring data and analyses." To meet this requirement, Section 319(b)(3)(B)(i) also clarifies that the data supporting the occurrence of an exceptional event can be provided by Federal, State, or local government agencies. Although states are given the authority to petition USEPA to correct the data for EEs, USEPA's obligation to review the integrity, consistency, and accuracy of the monitoring values is independent of this petition process and critical to meeting the CAA principal of accurate monitoring data and implementing multiple CAA regulatory programs. These programs, listed by USEPA in its 2019 Memorandum on "Additional Methods, Determinations, and Analyses to Modify Air Quality Data Beyond Exceptional Event" ("EPA 2019 Memorandum"),⁹ include decisions regarding NAAQS designations, attainment demonstrations, clean air 1-year data extensions, and the determination under section 110(k)(5) of whether a SIP is adequate.¹⁰ USEPA's failure to correct distorted air quality data has

⁷ EPA, *Supplemental Information on the EPA's Update of PM_{2.5} Data from T640/T640X PM Mass Monitors*, May 13, 2024. On page 2, EPA notes "Even higher positive biases have been reported for sites with smoke impacts from fires"

⁸ University of Illinois, Gies College of Business [Wildfires affecting lives even a thousand miles away](#),

⁹ EPA, ["Additional Methods, Determinations, and Analyses to Modify Air Quality Data Beyond Exceptional Event"](#). April 4, 2019

¹⁰ *Id.* Pg 2

ripple effects across multiple regulatory programs, imposing unnecessary costs on state and local governments, manufacturing, and consumers.

- *Prioritize the correction of air quality data in multi-state nonattainment areas, such as Chicago and East St Louis.* USEPA's obligation to correct the data, even in the absence of state petitions, is especially important in multi-state nonattainment areas. Many of the highest PM_{2.5} readings in Illinois are likely driven by significant wildfire events in 2021 and 2023 that affected multiple states across the Midwest and even in the northeast. The significance of the 2021 unusual smoke-prone year is demonstrated in the attached analysis by MOG (Exhibit A) that shows no violating monitors in DuPage, Grundy, Kendall, McHenry, Lake, or Will counties by basing air quality design values on 2022 to 2024 data instead of 2021 to 2023 data. As is noted in these comments, USEPA can at a minimum avoid the 2021 inflations by basing its determinations on more recent data for the period 2022 to 2024. Furthermore, 2023 wildfire events can be addressed for East St. Louis and Chicago by relying on the EE demonstrations of Missouri Department of Natural Resources¹¹ and Indiana Department of Environmental Management¹², respectively, for proximate monitors located in the same metropolitan areas, just across state lines. The 2023 Canadian wildfires were not isolated and instead impacted large swaths of the United States. USEPA could use its discretion to exclude data for the same 2023 wildfire days that were demonstrated at monitors just across the state line.
- *Remove Source and Near-road monitoring data in places where the public is not meaningfully exposed.* In making PM_{2.5} designations, it is important to exclude monitors that are not representative of general public exposures. For instance, the location of many source and near-road monitors in locations where the public does not reside is likely to provide an inaccurate assessment of public exposure to PM_{2.5}. Similarly, locations where the general public cannot stay for more than a small portion of the averaging time of this NAAQS

¹¹ [“2015 Ozone 8-Hour NAAQS and 2024 PM_{2.5} Annual NAAQS, Exceptional Event Demonstration for St. Louis Area”](#), September 16, 2025. Excluding data for 43 impacted days reduces St. Louis Blair Street monitor design value from 9.1 to 8.7 ug/m³.

¹² [“Exceptional Events Demonstration Addressing the 2024 Annual Primary Fine Particles \(PM_{2.5}\) NAAQS for the Lake County, IN Area”](#), August 14, 2025. Excluding data for 21 impacted days reduces Gary-Madison design value from 9.7 to 8.7 ug/m³.

should not be considered in estimating design values. EPA should work with states to carefully evaluate their monitoring networks to ensure that monitors that are unrepresentative of public exposure based on location and/or duration of exposure are removed from the air quality data used to determine designations. With respect to Chicago monitors, monitor 17-031-1016 “Lyons Township” is denoted in Illinois’ 2025 Air Monitoring Network Plan¹³ as a “source monitor” to be applied to the daily PM_{2.5} standard and not the annual standard. Nevertheless, posted USEPA 2023 PM_{2.5} Design Values and 2024 PM_{2.5} Design Values¹⁴ inappropriately reflect design values for this monitor. In 2023 and 2024, the annual design values for this source-oriented monitor are 1.1 ug/m³ and 1.4 ug/m³ higher than any of the other eleven Cook County monitors. With this monitor removed from consideration, the highest Cook County monitor (Monitor 17-031-103) has a design value of 9.4 ug/m³ without any data exclusions for 2023 wildfire impacts.

- *Rescind USEPA Implementation Guidance Requiring the Use of a Five-Factor Ozone Framework Analysis for PM_{2.5} Designations.* EPA’s February 7, 2024 “Initial Area Designations for the 2024 Revised Primary Annual Fine Particle National Ambient Air Quality Standard” memorandum¹⁵ incorrectly directs states to employ a five-factor analysis that was derived in part from Section 107(d)(4) of the CAA for determining ozone nonattainment areas, not PM_{2.5} nonattainment areas: “As a framework for area-specific analyses, the EPA intends to use, and recommends that states and Tribes base their nonattainment area boundary recommendations on, an evaluation of information relevant to five factors...”¹⁶ Compounding this mistake, the memorandum also states that the Agency will begin its analysis by considering counties in the entire Core Based Statistical Area (CBSA) or Combined Statistical Area (CSA) in which the violating monitor(s) is (are) located without explaining why this approach is needed to address PM_{2.5} exceedances. These decisions that are untethered from the CAA bias the analysis toward including entire metropolitan areas rather than a data and emission-driven analysis of the nonattainment boundaries that reflect local PM_{2.5} emission sources.

¹³ [State of Illinois Ambient Air Monitoring 2025 Network Plan](#), page 22

¹⁴ EPA, [“PM_{2.5} Design Values, 2024 \(xlsx\)”](#), June 3, 2025

¹⁵ EPA, [“Initial Area Designations for the 2024 Revised Primary Annual Fine Particle National Ambient Air Quality Standard” Memorandum](#), February 7, 2024

¹⁶ *Id.* Pg 5

- *Do Not Assume Designations for the 1997 PM2.5 Standard or the Current Ozone Standards Reflect Today's PM2.5 Challenge:* As noted in MOG's comments on Illinois' Technical Support Document for its proposed designations under the 2024 PM2.5 Standard (Exhibit A), some states, such as Illinois, may cite the similarity of their recommended PM2.5 designations for the 2024 standard to the nonattainment designations for the 1997 standard as an additional reason for acceptance. This logic is flawed. The PM2.5 pollutant composition and sources contributing to PM2.5 concentrations have changed significantly over the last 30 years, such that any historic comparison will have little value to assessing current air quality. The attached MOG comments also note instances where the state has been attentive to local sources and drawn much smaller nonattainment boundaries without sacrificing air quality improvement and attainment.
- *EPA should not finalize PM2.5 designations for Illinois until it has completed a thorough review of the accuracy of the air quality data to exclude unrepresentative data.* Given EPA's statutory obligation to ensure accurate monitoring data, the significant use of FEM monitors in Illinois, and the high incidence of smoke-affected data, USEPA should delay finalizing the PM2.5 designations until it has conducted a thorough review of the accuracy of the air quality monitoring data in Illinois and the shared multi-state nonattainment regions.

Based on research conducted by MOG, we believe there is a high likelihood that the potential nonattainment areas for Chicago and East St Louis will shrink dramatically or be eliminated by correcting the persistent FEM monitoring bias and removing EEs from 2021 to 2024 air quality data. This is especially important, given USEPA's statutory duty to ensure the accuracy of air quality monitoring data and the importance of this region to US energy dominance and economic growth.

Sincerely,



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