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December 3, 2025

Sarah Brubaker
Office of Community Relations (#5)
Illinois Environmental Protection Agency
2520 West Iles Avenue
P.O. Box 19276
Springfield, Illinois 62794-9276

Re: Wildfire Exceptional Event Demonstration for Ground-Level Ozone in the St. Louis 2015 Ozone Nonattainment Area

Ms. Brubaker:

The Midwest Ozone Group[1] ("MOG") is pleased to offer these comments[2] regarding a notice seeking comments on a draft Exceptional Event Demonstration for the St. Louis Ozone Nonattainment Area published on November 3, 2025, by the Illinois Environmental Protection Agency ("Illinois EPA"). The deadline for the submittal of comments is December 3, 2025.

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. MOG's primary efforts are to work with policy makers in evaluating air quality policies by encouraging the use of sound science.

[1] The members of the Midwest Ozone Group include: 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, ExxonMobil, Hoosier Energy REC, inc., Indiana Energy Association, Indiana-Kentucky Electric Corporation, Indiana Municipal Power Agency, 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.

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

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 ("CAA"), NAAQS implementation guidance, the development of Good Neighbor State Implementation Plans, exceptional events and 179B demonstrations, and related regional haze and climate change issues.

I. Regulatory Background

When amending the Clean Air Act in 2005, Congress intended to provide regulatory relief for NAAQS nonattainment resulting from exceptional events negatively affecting air quality that were outside of a state's control. That concern led to enactment of provisions specifically establishing the process by which U.S. Environmental Protection Agency ("U.S. EPA") could exclude air quality monitoring data directly related to an exceptional event. *See* 42. U.S.C. § 7619. Subsequently, U.S. EPA promulgated the exceptional events rule. 40 C.F.R. § 50.14.

A state requesting data exclusion under the exceptional events rule must demonstrate "to the Administrator's satisfaction that such event caused a specific air pollution concentration at a particular air quality monitoring location." 40 C.F.R. § 50.14(a)(1)(ii). That demonstration must include the following:

> (A) A narrative conceptual model that describes the event(s) causing the exceedance or violation and a discussion of how emissions from the event(s) led to the exceedance or violation at the affected monitor(s);
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> (B) A demonstration that the event affected air quality in such a way that there exists a clear causal relationship between the specific event and the monitored exceedance or violation;
>
> (C) Analyses comparing the claimed event-influenced concentration(s) to concentrations at the same monitoring site at other times to support the requirement at paragraph (c)(3)(iv)(B) of this section. The Administrator shall not require a State to prove a specific percentile point in the distribution of data;
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> (D) A demonstration that the event was both not reasonably controllable and not reasonably preventable; and
>
> (E) A demonstration that the event was a human activity that is unlikely to recur at a particular location or was a natural event.

40 CFR 50.14(c)(3)(iv).

The requesting state must also comply with pre-request requirements, which include notifying U.S. EPA of the intent to request exclusion, flagging data to be excluded, engaging in public comments, and implementing mitigation measures. *See* 40 C.F.R. § 50.14(c)(2)(i); 40 C.F.R. § 50.14(c)(3)(v); 40 C.F.R. § 51.930. In short, there are three core statutory elements: (1) a clear causal relationship; (2) a showing that the event was not controllable, and (3) a showing that the event was human activity unlikely to recur at a particular location or was a natural event.

Depending on the circumstances of a particular exceptional event, a particular tier of evidence is required to provide a compelling case to U.S. EPA to exclude data under the Exceptional Events Rule. In instances where a state provides sufficient evidence to showcase that a given event is indeed an irregularity, U.S. EPA will make a concurring determination and issue an exclusion of that specific event from the dataset. 40 C.F.R. 50.14(c)(2)(ii).

U.S. EPA has recognized that particular events are exceptional and that states may request to exclude them from the dataset, given that a sufficient evidentiary standard is met. *Id*; *see generally*, 81 Fed. Reg. 68,216. U.S. EPA's guidance on wildfire events that may influence ozone concentrations outlines a tiered approach for addressing the clear causal relationship element within a wildfire/ozone demonstration as follows:

> Tier 1 clear causal analyses should be used for wildfire events that cause clear O_3 impacts in areas or during times of year that typically experience lower O_3 concentrations, and are thus simpler and less resource intensive than analyses for other events. Tier 2 clear causal analyses are likely appropriate when the impacts of the wildfire on O_3 levels are less clear and require more supportive documentation than Tier 1 analyses. Tier 3 clear causal analyses should be used for events in which the relationship between the wildfire and the O_3 exceedance or violation is more complicated than the relationship in a Tier 2 analysis, and thus would require more supportive documentation than Tier 2 analyses.

U.S. EPA, *Guidance on the Preparation of Exceptional Events Demonstrations for Wildfire Events that May Influence Ozone Concentrations* (September 2016) at 4.

MOG notes that EPA's 2016 rule and guidance on exceptional event demonstrations represent but one interpretation of what is required under Section 319. Many commenters on the 2016 US EPA guidance for ozone exceptional event demonstrations from wildfires criticized the guidance for its prescriptive nature and the burdens it imposes on states, which burdens actually discourage the development of demonstrations. In reference to these requirements, MOG does not endorse them as the best approach to implementing this crucial statutory provision but, rather, emphasizes that Illinois's compliance with these requirements in the draft exceptional event demonstration for Saint Louis further supports

its prompt approval. MOG supports further changes to the 2016 rule and related guidance to affirm EPA's role in conducting multi-state analyses of exceptional events, simplify the required demonstrations, and allow greater discretion in how evidence is produced and assessed.

II. Saint Louis Exceptional Event Demonstration

MOG strongly supports the Illinois EPA's effort to assess the influence of US and Canadian wildfire events on the state's air quality and its ability to meet current NAAQS. The history of the Saint Louis and Chicago ozone nonattainment areas suggests that wildfire events may have repeatedly impacted these areas over the last 10 years, with significant regulatory consequences. Classified first in 2018 as a marginal nonattainment area (based on 2014 to 2016 data), with a design value of 72 ppb, the Saint Louis area's design value has hovered above the 2015 70-ppb standard for the last ten years, despite the imposition of significant controls. MOG believes that many unaccounted-for wildfire events and foreign emissions are likely responsible, starting with a Canadian wildfire event in 2015 that could have tipped the area into nonattainment for the original 2015 standard designations.[3] Similarly, wildfire emissions may have also resulted in the area's reclassification in October 2022 from a marginal to moderate nonattainment area, with a design value of 71 ppb based on 2018 to 2020 data.[4] Understanding the causes of current air quality exceedances should remain a key priority for Illinois and USEPA going forward to avoid expenditures on potential controls that do not address the underlying problem.

The Illinois EPA exceptional events demonstration shows that plumes from Canadian wildfires which took place in Quebec and Ontario on days leading up to June 6, 2023, adversely affected ozone in a regulatorily significant way at Illinois' Alton and Wood River monitors such that if EPA approves the proposed exceptional events demonstration and excludes the data, the Illinois side of the St. Louis ozone nonattainment area[5] will attain the 2015 Ozone National Ambient Air Quality Standard ("NAAQS") for the three-year average for the years 2023 to 2025.

Illinois EPA's demonstration establishes that the documented event caused ozone exceedances at the Alton and Woods River monitors. Illinois EPA correctly notes that exclusion of the data on the relevant dates would result in attainment of the 2024 revised

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[3] 5 Chicago, Canadian Wildfire Smoke Affecting Illinois Air Quality, July 7, 2015

[4] US EPA, Determinations of Attainment by the Attainment Date, Extensions of the Attainment Date, and Reclassification of Areas Classified as Marginal for the 2015 Ozone National Ambient Air Quality Standards

[5] The Missouri Department of Natural Resources (MO DNR) is also submitting an exceptional event demonstration to U.S. EPA Region 7 to exclude certain days, including June 6, 2023, for monitors on the Missouri side of the NAA. Both Illinois EPA and MO DNR further plan to submit Redesignation Requests and Maintenance Plans for the NAA, upon concurrence with the exceptional event demonstrations.

primary annual ozone NAAQS at these monitors. The demonstration addresses such remaining factors as a narrative conceptual model describing the events as not reasonably controllable and not caused by human activity and satisfy requirements related to notification of the public of the events and participation of the public in the submission of these requests.

Illinois EPA's demonstration includes a myriad of analyses that support a clear causal relationship:

(1) comparison of historical ozone concentrations for Alton and Wood River monitors located on the Illinois side of the St. Louis Nonattainment Area;

(2) presentation of photographic evidence showing the magnitude of the fires, smoke transport to the monitors, or smoke at the ground level of the monitors;

(3) U.S. EPA's AirNow PM2.5 and ozone Air Quality Index maps indicating ozone was elevated in the St. Louis Core Based Statistical Areas due to the impact of the Canadian wildfires;

(4) Hybrid Single-Particle Lagrangian Integrated Trajectory model ("HYSPLIT") back trajectory results showing that all three HYSPLIT back trajectories align with the smoke plumes on the HMS map for the Alton and Woods River monitors;

(5) 99th percentile analyses showing the Wood River data satisfying U.S. EPA's guidance key factor for a Tier 1 analysis by being 5-10 ppb greater than the 99th percentile value, and the Alton monitor satisfying the guidance key factor by being greater than the 99th percentile value accordance with the U.S. EPA tiering guidance;

(6) a quantity of fire emissions over distance analysis showing that all monitors have a value greater than U.S. EPA's clear causal threshold of 100;

(7) the Generalized Additive Model showing the clear, causal relationship for the Wood River monitor;

(8) matching day ozone increment analyses showing that the measured ozone concentration at the Alton and Woods River monitors on June 6, 2023, were greater than the average ozone concentrations for historical days that have matching meteorological conditions; and

(9) results from U.S. EPA's Expedited Modeling of Burn Events Results modeling showing that Canadian wildfires impacted ozone concentrations on the event day at the Alton and Wood River monitors, with a difference in modeled concentrations with and without wildfire impacts of 28 ppb at both monitors.

Given Illinois EPA's draft exceptional event demonstration and the related draft request to redesignate the Saint Louis area as attainment[6], MOG requests that EPA evaluate whether the additional emission controls included in the May 4, 2025, State Implementation Plan Revision for Nitrogen Oxide Emissions (35 ILL. Adm Code 217)[7] are necessary for the required attainment demonstration and maintenance plan, especially if Illinois EPA is able to show that previous exceptional events and/or foreign emissions may have caused the 2018 to 2020 71 ppb exceedance that led to EPA's marginal to moderate reclassification of the area. If an analysis of the data confirms the contribution of exceptional events to this exceedance, Illinois EPA may also want to consider evaluating whether a reconsideration of the marginal to moderate reclassification is warranted.

MOG also encourages the Agency to evaluate whether the Saint Louis or Chicago nonattainment areas would have attained the standard but for the role of foreign emissions authorized under Section 179B of the CAA. This may be a factor that could help buttress the Illinois EPA's draft proposal to reclassify the Saint Louis area as an attainment and underscore the incorrect premise of the December 17, 2024, regulatory decision to reclassify the Saint Louis area from moderate to serious.

The monitors and episode day that are carefully addressed in the proposed Illinois EPA demonstration are far from the only ones that have influenced air quality during those time frames. Many ozone monitors in the same area also observed 8-hour average ozone concentrations at significantly elevated levels on the same exclusion dates, as well as on days around these dates.

Air quality data and maps demonstrate that air quality during these identified episodes had significant impact on multiple other monitors in the Midwest and northeastern United States. Below are Hazard Mapping System smoke analysis (left) and ozone air quality index (right) plots from June 6, 2023, episode that illustrate that multiple monitors in the region are also likely to have Tier 1 threshold exceedances of current or future regulatory significance.

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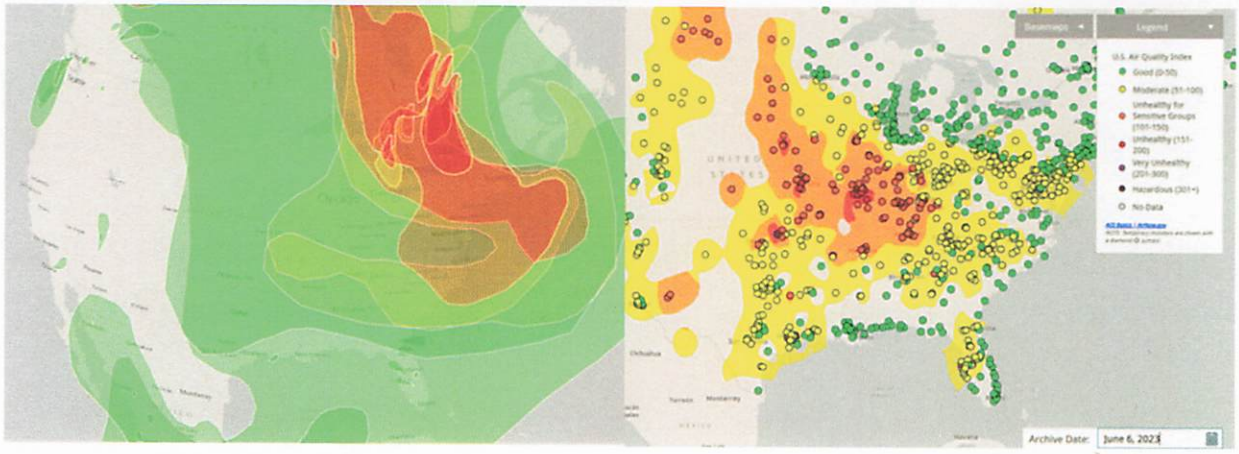
[6] Illinois EPA, Redesignation Request and Maintenance Plan for the Illinois Portion of the St. Louis MO-IL Ozone Nonattainment Area for the 2015 Ozone National Ambient Air Quality Standard

[7] IEPA, State Implementation Plan Revision for Nitrogen Oxide Emissions (35 ILL. Adm Code 217)



MOG agrees that the proposed demonstration shows that the event that affected the Alton and Woods River monitors on June 6, 2023, is properly analyzed as Tier 1, with the Wood River data satisfying U.S. EPA's guidance key factor for a Tier 1 analysis by being 5-10 ppb greater than the 99th percentile value, and the Alton monitor satisfying the guidance key factor by being greater than the 99th percentile value accordance with the U.S. EPA tiering guidance.

MOG fully supports the Illinois EPA request that the U.S. EPA Administrator exclude the ambient ozone concentrations measured at the Alton and Woods River monitors site on June 6, 2023, from calculations of annual ozone design values and from other regulatory determinations.

III. Conclusion

For the reasons set forth above, MOG urges the U.S. Environmental Protection Agency to concur with this demonstration.

Sincerely,

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