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July 29, 2025

Mr. Jeff Stoakes, Senior Environmental Manager,
Technical Support and Modeling Section
Indiana Department of Environmental Management
Office of Air Quality, Room 1003
100 North Senate Avenue
Indianapolis, Indiana 46204.

Re: Draft Exceptional Events Demonstration Addressing the 2024
Annual Primary Fine Particles (PM_{2.5}) National Ambient Air
Quality Standard (NAAQS) for the Lake County, Indiana Area.

Dear Mr Stoakes:

The Midwest Ozone Group¹("MOG") is pleased to provide comments in support of this proposed demonstration and the use of the data involved in support of other demonstrations related to the events involved.

¹ The membership 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, 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.

While the Clean Air Act (the “Act”) requires States to meet certain air quality standards, the Act also recognizes that exceptional events, including wildfires, prescribed burns, and fireworks may sometimes prevent that from happening. Exceptional events can cause air quality monitoring data to exceed permissible concentrations of a pollutant, also called an exceedance. When that happens, the Act directs the Administrator of the United States Environmental Protection Agency (“USEPA”) to exclude that data from further consideration if the state demonstrates to USEPA’s satisfaction that the event caused the exceedance.

On June 27, 2025, the Indiana Department of Environmental Management (IDEM) issued a public notice regarding the availability for comment of a proposed “Draft Exceptional Events Demonstration Addressing the 2024 Annual Primary Fine Particles (PM_{2.5}) National Ambient Air Quality Standard (NAAQS) for the Lake County, Indiana Area.” The deadline for the submittal of comments is July 29, 2025.

The proposed exceptional events demonstration details the PM_{2.5} episodes occurring in the state of Indiana from June of 2022 through August of 2023. The proposed demonstration specifically addresses the PM_{2.5} episodes occurring at four PM_{2.5} ambient monitors located in Lake County, Indiana. The monitors are: East Chicago-Franklin School (180890006), Gary-Madison St (180890031), East Chicago-Marina (180890034) and Hammond-167th St (180890036). East Chicago Franklin School and Gary-Madison St are 1 in 3 day monitors, East Chicago-Marina and Hammond-167th St are continuous monitors. Gary-Madison St is the controlling PM_{2.5} monitor for Lake County, Indiana, which means it has the highest concentration. Specifically, for these four monitors, the proposed demonstration provides technical documentation to support IDEM’s request to USEPA to exclude PM_{2.5} monitoring data for certain days in 2022 and 2023 strongly influenced by southeastern and southwestern U.S. prescribed and wildfire smoke, Canadian wildfire smoke, and holiday fireworks.

The following comments are offered on behalf of MOG in support of this proposed exceptional events demonstration and the demonstrations of other states seeking to recognize the same events.²

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

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

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 exceptional events demonstrations, implementation of 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”), the development of greenhouse gas and Mercury and Air Toxics Standards Rules and related regional haze issues. MOG’s Membership owns and operates numerous stationary sources that are affected by air quality requirements including the PM_{2.5} NAAQS.

By way of 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 USEPA could exclude air quality monitoring data directly related to an exceptional event. *See* 42. U.S.C. § 7619. Subsequently, USEPA promulgated the exceptional events rule. 40 C.F.R. § 50.14. Under the exceptional events rule, USEPA excludes “any data of concentration of a pollutant above the NAAQS (exceedances) if the air quality was influenced by exceptional events.” *Bahr v. Regan*, 6 F.4th 1059, 1066 (9th Cir. 2021) (cleaned up).

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 certain regulatory required information:

- (A) A narrative conceptual model that described 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);
- (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;

- (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 C.F.R. § 50.14(c)(3)(iv).

In addition, a state requesting data exclusion under the exceptional events rule must select from a broad category of circumstances that are applicable to the treatment of data showing exceedances or violations of any national ambient air quality standard, including:

- (A) An action to designate an area, pursuant to Clean Air Act section 107(d)(1), or redesignate an area, pursuant to Clean Air Act section 107(d)(3), for a particular national ambient air quality standard;
- (B) The assignment or re-assignment of a classification category to a nonattainment area where such classification is based on a comparison of pollutant design values, calculated according to the specific data handling procedures in 40 CFR part 50 for each national ambient air quality standard, to the level of the relevant national ambient air quality standard;
- (C) A determination regarding whether a nonattainment area has attained the level of the appropriate national ambient air quality standard by its specified deadline;
- (D) A determination that an area has data for the specific NAAQS, which qualify the area for an attainment date extension under the CAA provisions for the applicable pollutant;
- (E) A determination under Clean Air Act section 110(k)(5), if based on an area violating a national ambient air quality standard, that the state implementation plan is inadequate under the requirements of Clean Air Act section 110; and
- (F) Other actions on a case-by-case basis as determined by the Administrator.

40 C.F.R. § 50.14(a)(1)(i)

The scope of such determinations was made even clearer in the preamble to the exceptional events rules in which USEPA described its intent to extend the applicability of the exceptional events rule to the following:

- Clarify that data excluded under the procedural and substantive provisions of the Exceptional Events Rule will also be excluded from (i) design value estimates and AQS user reports (unless the AQS user specifically indicates that they should be included), (ii) selecting appropriate background concentrations for PSD air quality analyses and transportation conformity hot spot analyses, and (iii) selecting appropriate ambient data for projecting future year concentrations as part of a modeled attainment demonstration.

- Identify potential pathways for data exclusion for determinations based on “predicted” future NAAQS exceedances or violations (*e.g.*, PSD, transportation conformity).

- Identify the scenarios in which the USEPA would *not* exclude data, such as when setting priority classifications for emergency plans under 40 CFR 51.150. The USEPA believes that implementing the CAA principle at section 319(b)(3)(A) that “protection of public health is the highest priority” may necessitate that an air agency address in its emergency plan the appropriate planned response for any elevated concentration known to be possible because it has already been observed even if that elevated concentration is associated with an exceptional event.

81 Fed. Reg. 68,229 (October 3, 2016).

A state must also comply with pre-request requirements, which include notifying USEPA 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 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 USEPA 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, USEPA 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).

Wildland fires make up 44% of primary PM_{2.5} emissions. See 89 Fed. Reg. 16,214. As such, these events can cause exceedances that impact design values in a particular area.

USEPA has recognized that these 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. There are several tiers of evidentiary showings related to PM_{2.5} demonstrations. These three tiers create a ladder of increasing evidentiary burdens on the states to convince USEPA that an event merits exclusion.

- Tier 1 clear causal analyses are intended for wildland fire events that cause unambiguous PM_{2.5} impacts well above historical 24-hour concentrations, thus requiring less evidence to establish a clear causal relationship.
- Tier 2 clear causal analyses are likely appropriate when the impacts of the wildland fire on PM_{2.5} concentrations are less distinguishable from historical 24-hour concentrations, and require more evidence, than Tier 1 analyses.
- Tier 3 clear causal analyses should be used for events in which the relationship between the wildland fire and PM_{2.5} 24-hour concentrations are more complicated than a Tier 2 analysis, when 24-hour PM_{2.5} concentrations are near or within the range of historical concentrations, and thus require more evidence to establish the clear causal relationship than Tier 2 or Tier 1.

U.S. Environmental Protection Agency, *PM_{2.5} Wildland Fire Exceptional Events Tiering Document* (April 2024) at 5. It is important to note that the overall processes for exceptional event demonstrations for wildfire ozone and wildland fire PM_{2.5} are the same. See *id.* at 6.

MOG agrees that the proposed IDEM demonstration shows that the levels of PM_{2.5} concentration measured at the East Chicago-Franklin School, Gary-Madison St, East Chicago-Marina, and Hammond-167th St monitors during these events were highly unusual because many of the measured PM_{2.5} concentration exceedances for those monitors during the multiple episodes were more than 1.5 times the most

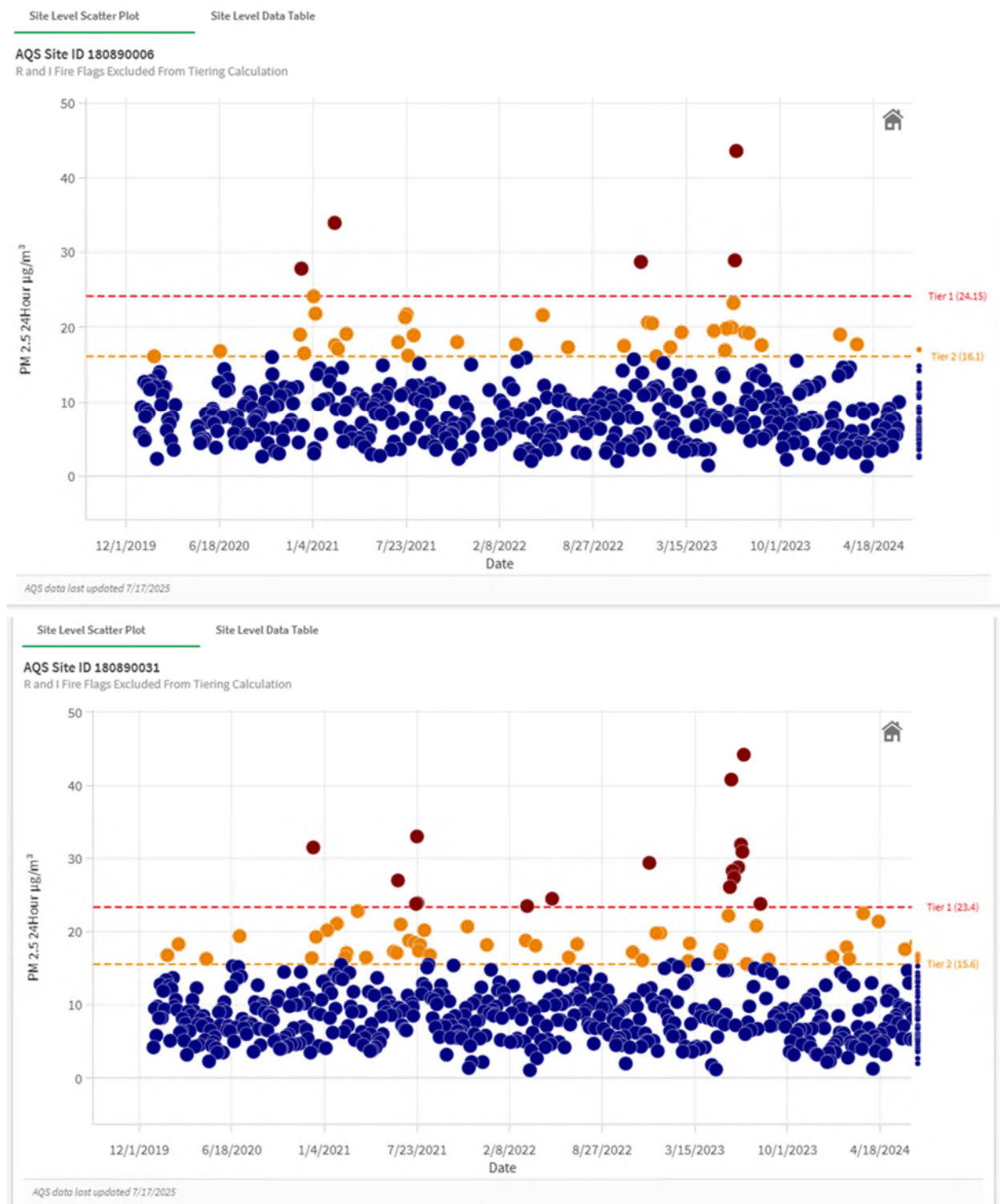
recent 5-year monthly specific 98th percentile for 24-hour PM_{2.5} data, as identified in the Environmental Protection Agency’s Tiering Tool.³

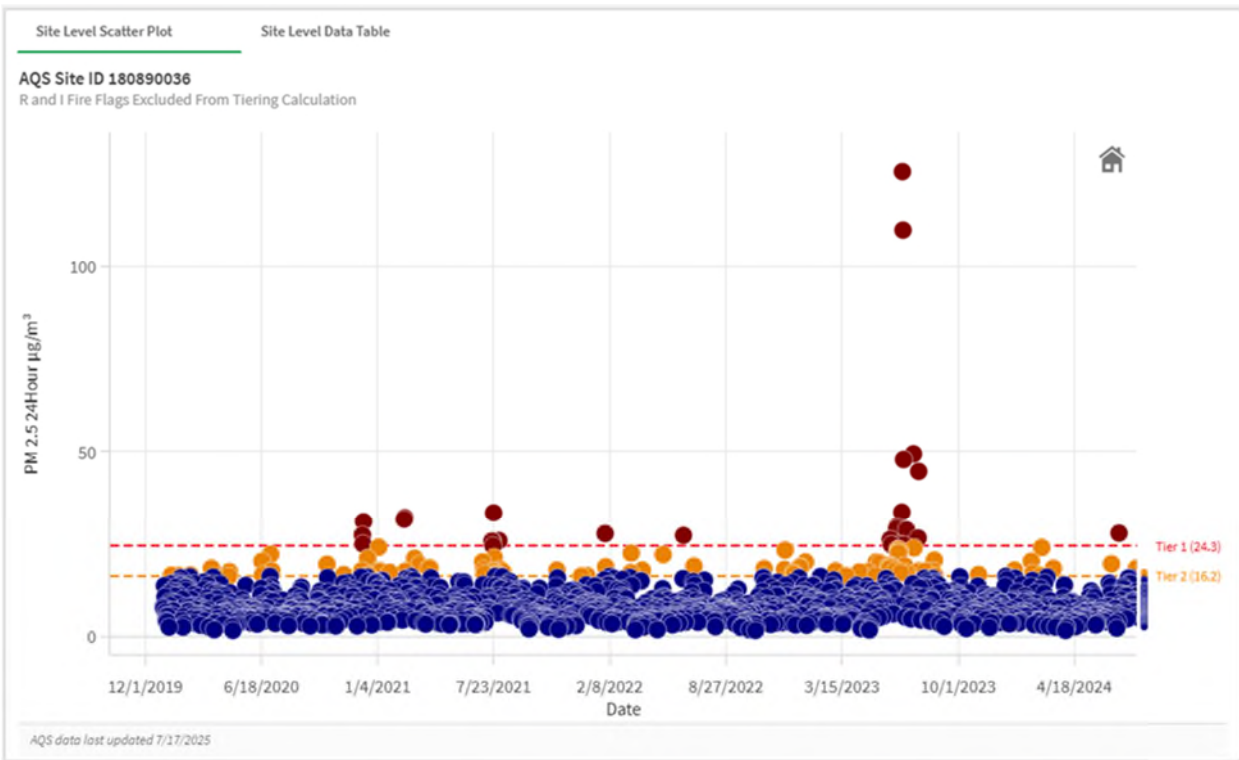
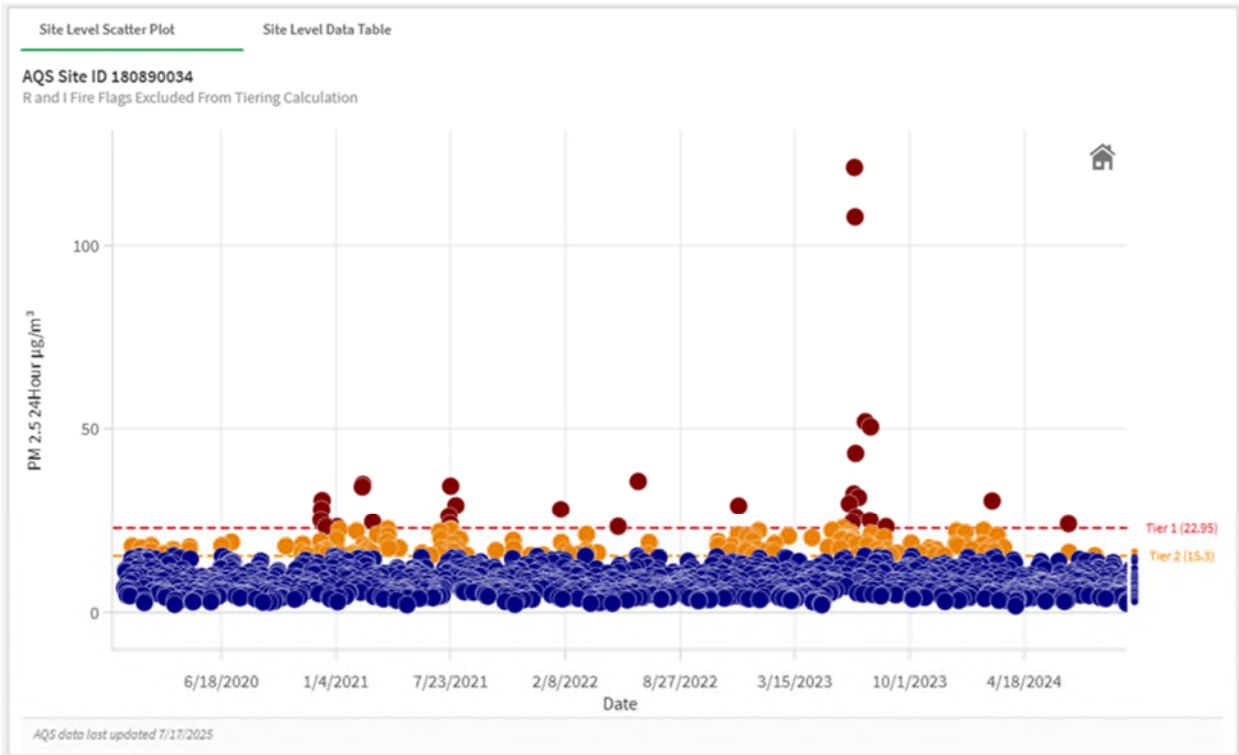
MOG also agrees with IDEM’s analysis of the impact of holiday fireworks, citing 40 CFR 50.14(b)(2), which states that “The Administrator shall exclude data from use in determinations of exceedances and violations where a State demonstrates to the Administrator’s satisfaction that emissions from fireworks displays caused a specific air pollution concentration in excess of one or more national ambient air quality standards at a particular air quality monitoring location and otherwise satisfies the requirements of this section. Such data will be treated in the same manner as exceptional events under this rule, provided a State demonstrates that such use of fireworks is significantly integral to traditional national, ethnic, or other cultural events including, but not limited to, July Fourth celebrations that satisfy the requirements of this section.”

MOG notes that the proposed demonstration shows that fireworks and Kansas, Florida, New Mexico, and Canadian wildfire events affected the four Lake County monitors during each of the multiple documented 2022 and 2023 episodes. This caused average PM_{2.5} concentrations at those four monitors to experience multiple

³ U.S. Environmental Protection Agency. “Tiering Tool – for Exceptional Events Analysis”. Air Quality Analysis. U.S. Environmental Protection Agency, March 26, 2024, <https://www.epa.gov/air-quality-analysis/tiering-tool-exceptional-events-analysis>

daily Tier 1 and 2 level exceedances as defined in USEPA's Tiering Tool during the relevant periods as shown below and as seen in IDEM's demonstration.





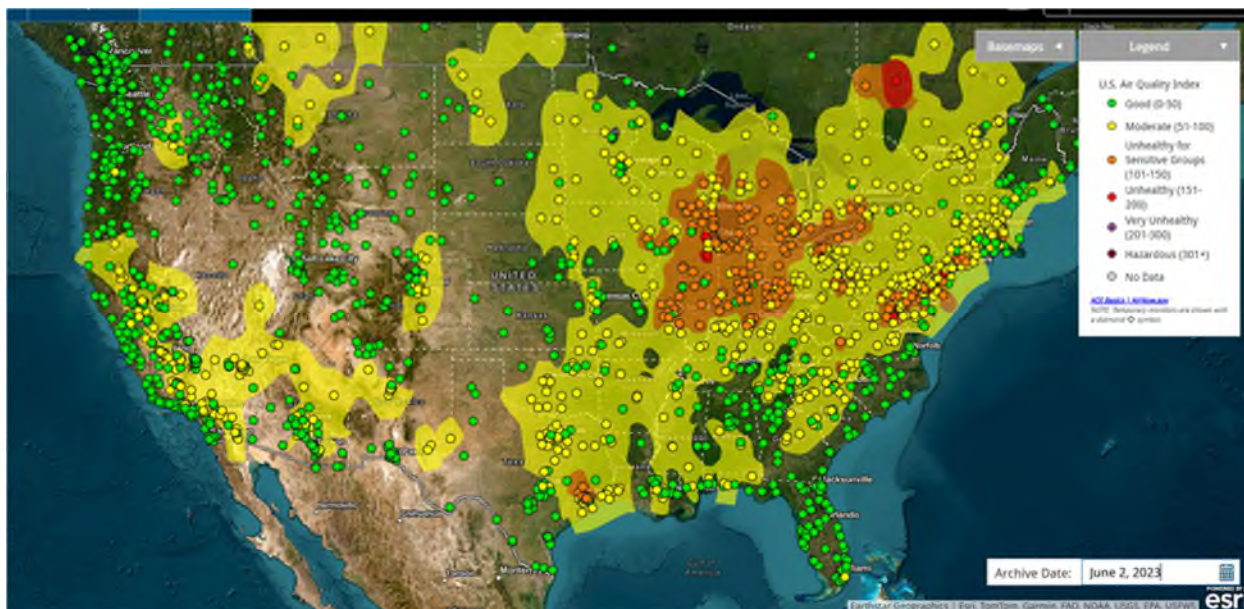
MOG fully supports the IDEM request that the USEPA Administrator excludes the ambient PM_{2.5} concentrations measured at the four Lake County, Indiana, monitoring sites from calculation of annual PM_{2.5} design values and from other regulatory determinations.

As set forth in its proposed demonstration, IDEM has shown that transported smoke from 2022 and 2023 wildfires on wildlands and holiday fireworks caused the PM_{2.5} exceedances at the four Lake County, Indiana, monitors. IDEM also correctly notes that excluding days that correlate to Tier 1 and Tier 2 days at the Gary-Madison St monitor shows the other Lake County monitor design value for 2022 through 2024 falls below the 9.0 µg/m³ threshold, falling from 9.7 µg/m³ to 8.7 µg/m³ and resulting in attainment of the 2024 revised primary annual PM_{2.5} NAAQS.

The proposed demonstration goes on to address such remaining factors as a narrative conceptual model describing the event as not reasonably controllable and not caused by human activity and satisfies requirements related to notification of the public of the events and participation of the public in the submission of this request.

The monitor and episode days that are carefully addressed in the proposed IDEM demonstration are far from the only ones that have influenced air quality during those time frames. Many PM_{2.5} monitors in the same area also observed 24-hour average PM_{2.5} concentrations at significantly elevated levels on the same exclusion dates, as well as on days around these dates. Additional days, even if not currently ‘regulatorily significant,’ may in the future be relevant and significant not only to Indiana but also to other states. USEPA should consider allowing this proposed demonstration to stand for those additional monitors and days, as needed.

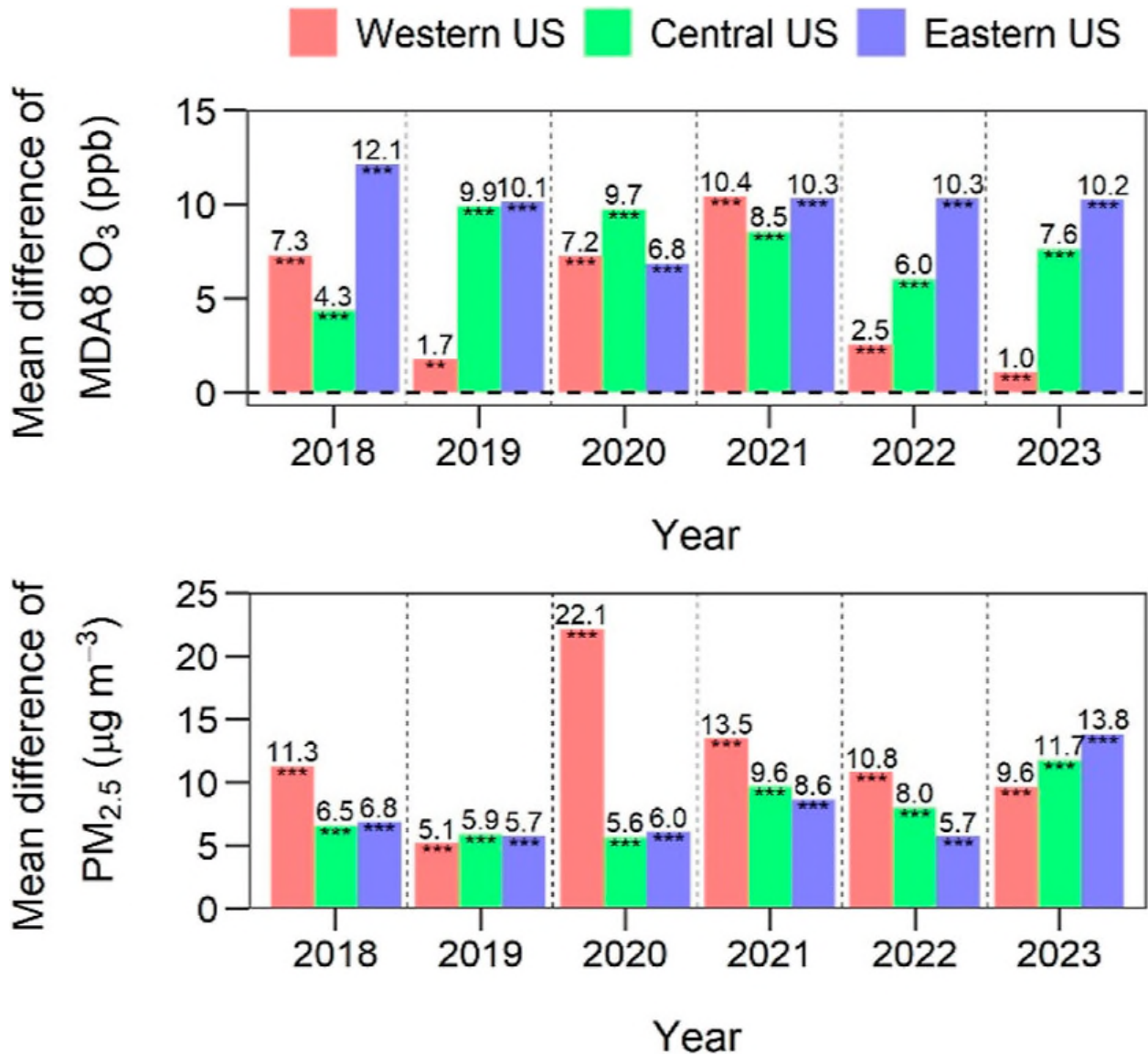
Air quality data and maps demonstrate that air quality during these identified episodes also had significant impact on multiple other monitors in the Midwest, northeast, and MidAtlantic US. Below are PM_{2.5} air quality index plots from the June 2, 2023, episode that illustrates that multiple monitors in these regions are also likely to have Tier 1 threshold exceedances of current or future regulatory significance during this and other exceedance episodes.



MOG also recognizes recent studies⁴ that indicate calculated enhancement in both ozone and PM_{2.5} concentrations across all US states during May–September for 2018–2023, with large influences in 2020 and 2021, due to California fires, and 2023, due to Canadian fires. In 2023, as demonstrated in the figure below, wildfire smoke enhanced (increased) PM_{2.5} concentrations on average by 11.7 ug/m³ and ozone concentrations by 7.6 ppb in the central US on days when smoke was present.

With these values in mind, MOG urges that IDEM consider preparing separate ozone exceptional events demonstrations when wildfire smoke enhanced ozone and PM_{2.5} concentrations concurrently fall on similar dates. Examples include evaluating the 2022 and 2023 smoke/fireworks episodes for the Gary and nearby Ogden Dunes monitors that have design values slightly above the 70 ppb ozone standard and would result in attainment levels below the standard if these episodes were removed from the list of high concentration observations.

⁴ Environ. Sci. Technol. 2024, 58, 33, 14764–14774



MOG urges USEPA to accept other demonstrations that may utilize this technical work to demonstrate wildfire influence on other regional monitors during the same episodes of record and to permit expansion of these data to ozone exceptional events demonstrations as applicable.

MOG appreciates this opportunity to offer comments in support of the proposed IDEM exceptional events demonstration for the exceedances of the 2022 and 2023 Annual PM_{2.5} NAAQS at the four Lake County, Indiana, monitors due to smoke from holiday fireworks and wildfire smoke. MOG also appreciates the opportunity to express support for consideration of this data in the development of demonstrations by other states related to these events. Congress has made it clear

that data of the nature described in this proposed demonstration cannot and should not be used to implement a NAAQS and other matters of regulatory significance.

Very truly yours,

A handwritten signature in blue ink that reads "Edward L. Kropp". The signature is written in a cursive style with a large initial 'E'.

Edward L. Kropp
Legal Counsel
Midwest Ozone Group