

Exceptional Events Workshop
Alternatives to Exceptional Events
Breakout group session ideas
2/28/2024

The Exceptional Events Workshop in St. Louis, MO was held February 27-29, 2024. Breakout groups were formed to discuss alternatives to the Exceptional Events Rule and the demonstrations that are detailed in the rule and subsequent EPA guidance. The following questions were posed to initiate discussions:

- What other provisions under the Clean Air Act might give some regulatory relief to nonattainment areas that are impacted by episodic, uncontrollable emissions?
- Is there regional coordination or analysis that could help air agencies with their demonstrations? If so, what are they?
- Since catastrophic wildfire will become more frequent in the future (according to the IPCC), wildfire smoke events are likely to be more intense and more frequent. Some have argued that wildfire exceptional events are no longer "exceptional" but occur with such regularity that they should not be considered exceptional events. If we were not constrained by the Clean Air Act and Exceptional Events regulations, how would regulatory agencies address these events and comparisons to the NAAQS?
- Should we treat "exceptional events" differently for ozone than for PM2.5 when assessing impacts from wildfire and prescribed fire?

The following is a summary of key points reported back from breakout groups.

Applicable and complimentary provisions of the Clean Air Act

Every breakout group noted that there are other provisions of the Clean Air Act, such as 179B for international transport, which could apply to exceptional events. The interstate transport rules could play a role on exceptional event days as well. It was suggested that appendix W might have additional guidance for SIP modeling for exceptional events ("EE-lite"). A possible result of unresolved or undetected exceptional events is resulting overcontrol of anthropogenic emissions or an area that is incapable of showing progress towards the NAAQS.

There may be exemptions for federal emergencies (7418) similar to what have been used for fuel waivers during hurricanes that could be applied to periods of time with significant smoke impacts regionally/nationally. Other approaches might be to develop an approach similar to Section 126 for interstate transport, General Conformity and Section 182 for Rural Transport Areas. One group suggested there is no good alternative to EE demonstrations in the Clean Air Act.

One group noted that the Design Value calculation is not in the Clean Air Act, so a rule change could be made.

Regional and EPA Coordination that can help with demonstrations

- EPA Guidance and Training needs:

- It was noted that it would be valuable to have EPA guidance on running the CMAQ model for regional exceptional event demonstrations. Transport and source apportionment modeling would be helpful, especially for ozone exceptional events. Some obvious EE days regionally/nationally could be identified through modeling and removed from the design values automatically.
- Regional and national coordination to archive fire and smoke maps would be helpful.
- There is a need for training on the flagging of data to ensure consistency regionally and nationally. The guidance for flagging data should be consistent nationally. EPA should automate flagging on exceptional event days nationally through the application of an algorithm.
- A commonsense approach to demonstration development would be a collaborative effort with EPA while States/Locals/Tribes (SLT) are working on demonstrations so that submission of a demonstration would result in concurrence.
- The EE Demo Tool could be connected to the EPA EE demo submission process.
- EPA should coordinate regional and national smoke forecasting.
- EPA should streamline the EE demonstration review process.
- It was suggested that EPA should coordinate or lead all Tier 1 EE demonstrations and approval would be automatic; a similar suggestion was for EPA flag PM-influenced days nationally per GAM. Widespread events would be addressed with satellite and GAM data only.
- More work could be put into the tiers. As wildfire smoke exceptional events days increase, tier 1 and tier 2 could/should be automated. The resource needs are high to complete EE demonstrations, the process should be as automated as possible.
- The more EPA automates the EE demo process, the more S/L/T resources that can be focused on communications, interventions, improving smoke management and addressing greenhouse gas emissions/climate change.
- MJO/Regional coordination:
 - The MJOs could coordinate analyses with satellite data and particularly with the coming TEMPO data that provides hourly satellite pollutant data across the U.S.
 - The EE demo tool may provide a platform for multi-state EE demonstration collaboration.
 - The MJOs could create SharePoint folders for agencies to share EE demonstration drafts.
 - The MJOs could develop the conceptual model for regional events.
- One group said that AAPCA and NACAA could develop committees on Exceptional Events to share tools.

Thinking outside the CAA and EE box

It was noted that exceptional events demonstrations should be accepted not just for regulatory significance but also for the purposes of lowering the base design value locally to give the public a more accurate picture of the design value. The public has issues with the concept of data exclusion.

The term "exceptional" for wildfire smoke events may not be appropriate much longer as wildfires and wildfire smoke events occur more frequently. Climate change worsens exceptional events days, and the days are occurring more frequently. S/L/T air programs are not currently set up for this. There must be increased efforts to reduce wildfire smoke exposure and the messaging must be louder.

Should proactive controls on anthropogenic emissions be required on exceptional event days?

There is a need to form better relationships with other agencies that deal with climate change as the increase in wildfire smoke exceptional event days is influenced by climate change. In the realm of improved relationships, EPA should improve relationships with NASA and NOAA to automate the flow of data needed by SLT to complete EE demonstrations.

Are there ways to use the "most impaired" metric from the regional haze rule in the Exceptional Events rule?

Could a "PSD increment" approach be taken to smoke increments? Could Exceptional Events use a "background" concentration defined similar to the way we define backgrounds for the PSD program?

There is support for GAM being inserted in Exceptional Events Demonstrations.

EPA should develop a Tier Zero where flagging is automated and a demonstration is not required.

Can the transport rule national modeling account for the contributions from wildfire smoke annually?

Prescribed Fires

1. More prescribed fires should result in more messaging.
2. The Exceptional Events demonstration process should be simpler and easily accomplished if we are to have more prescribed fire to mitigate catastrophic wildfire.
3. The U.S. needs a national database for sharing of data on prescribed fire applications.
4. More tabletop exercises are needed.
5. Many states do not have a Smoke Management Plan (SMP), so EPA should develop a model SMP.

Treating wildfire smoke Ozone and PM_{2.5} events differently

There should be different analyses for ozone and PM_{2.5} exceptional events, and there may be regional thresholds that can help define categories for ozone wildfire smoke exceptional events. The process for PM_{2.5} exceptional events must be streamlined.

Closing Thoughts

- The 2 sets of data from FEMs and FRMs complicate how the public will/does perceive data.
- If a large number of days are excluded, does this make averages less meaningful?
- The workshop demonstrated the capacity of the MJOs to come together to address air quality issues nationally.