



Exceptional Events Updates

IASC/CARPA Workshop

May 2015

Current Exceptional Events Process



- An event happens and affects air quality at an “official” monitoring station
- The air agency prepares a request to EPA that identified data be excluded
- The EPA Regional Office reviews the request, to determine whether it meets the following key criteria for excluding air quality data affected by an event:
 - It was a natural event, or a man-made event unlikely to recur
 - There is a clear causal connection between the event and the air quality problem
 - There would have been no exceedance/violation “but for” the event
 - The event was not reasonably controllable or preventable
 - And, for prescribed fires:
 - “Basic smoke management practices” must have been employed for that particular fire, OR
 - The State has certified to EPA that it has adopted and is implementing a “smoke management program”
- If EPA concurs with the air agency’s request, EPA notifies the air agency by letter and attaches “concurrence flags” to the identified data in the Air Quality System database. Concurred upon data would not be included in the dataset used to make regulatory determinations.

Relevant Background



- March 2007 – Exceptional Event Rule promulgated
- May 2013 - EPA finalized interim exceptional events implementation guidance
 - Memorandum to Regional Air Division Directors with 2 attachments
 - Attachment 1 - Frequently Asked Questions document
 - Attachment 2 - High Winds Guidance document
- May 2013 – EPA announced intent to revise the Exceptional Events Rule and develop wildfire/ozone implementation guidance
 - Anticipated schedule – Fall 2015/promulgation Summer 2016
- August thru November 2013 – Stakeholder outreach and listening sessions related to rule revisions
- December 2014 – Exceptional events website redesign and development/publication of exceptional events criteria/pollutant matrix with linked examples
- Mid-2014 thru early 2015 – Focused best practices sessions with regional offices and states



Relevant Background

- States continue to express concerns about Exceptional Events Demonstrations. Concerns include:
 - Resources needed for Exceptional Events demonstrations
 - Lengthy and inconsistent reviews of Exceptional Events demonstrations
 - Lack of and/or inconsistent communication concerning treatment and processing of Exceptional Events demonstrations
- Ongoing discussions with EPA Regions and states to determine what works well and what could work better to address concerns for Exceptional Events demonstrations
 - Are there opportunities to further standardize certain aspects of Exceptional Events demonstrations?
 - How can early and frequent coordination and communication, templates and other process aids be used to improve process efficiency?
 - Are there other process improvements or technical tools EPA and states should consider?
- Technical tools and process aids identified as best practices and lessons learned will be used to complement the Exceptional Events Rule revisions and Wildfire Ozone guidance



Opportunities in Three Key Areas

1. Best practices for communication/collaboration between EPA and air agencies
 - Systematic communications process between air agencies and the reviewing EPA Regional office for exceptional events before, during and after exceptional events package development, submittal and review
2. Recommendations to clarify and simplify demonstrations
3. Recommendations for tools and consistency checks
 - Tools and resources that will enhance collaboration among regions and states and result in consistency in interpreting and applying Exceptional Events Rule elements and level of effort

1. Best Practices for Communication/Collaboration Between EPA and Air Agencies



- Communicate often
 - Communicate before, during and after development and submissions of exceptional event packages
 - During Initial meetings
 - Spend time preparing for the initial meetings by prescreening flagged events to ensure they are of regulatory significance and are likely to become Exceptional Events submissions, using shared criteria between EPA and air agencies
 - Obtain clear understanding of regulatory significance, number and type of submissions from air agencies & EPA priority for action
 - Discuss the critical path aspect of the Exceptional Events submission before generating lots of maps, data and tables
 - Obtain clear understanding on EPA timelines for action and ways to track a submission
 - Communicate throughout the development of Exceptional Events packages, sharing previous successful products for similar events, sharing templates for data and language, and review of drafts
 - Communicate after submission and EPA actions to learn EPA's decision criteria for that action and aspects of the project that worked and those that could be improved

2. Recommendations to Clarify and Simplify Demonstrations



Through Exceptional Events Rule Revisions and Guidance:

- Clarify “not reasonably controllable or preventable”
- Address “but for” concerns
- Flagging of data – duration of flags, descriptions, schedule and events close to regulatory submissions
- Clarify the need and utility of historical fluctuations assessments
- Provide boiler plates for “obvious” natural exceptional events; provide ways to efficiently demonstrate for recurring natural events
- Administrative changes – delegation of authority to EPA Regional Air Director to act on packages, clarify use of Letter of Intent, specify timelines for EPA review of submitted packages
- Ozone – provide guidance, standard and level of effort on packages, provisions for flagging values below the NAAQS, better tools for “but for” and “clear causal relationship,” and regional effort for catastrophic events over large scales

3. Recommendations for Tools and Consistency Checks



- Tools and resources that enhance collaboration:
 - Consistent interpretation of the rule and guidance for the set of events in discussion
 - Consistent approach to dust controls in attainment/unclassifiable areas
 - Consistent approach to 'not reasonably controllable or preventable' in attainment and designated planning areas
 - Consistent understanding of planning area requirements and existing state rules as it intersects with the Exceptional Events Rule
- Develop, share, and adapt templates that simplify organization of document to support EPA decision and action
- Provide demonstration outlines for wildfire ozone events including order in which to address elements, and type of information to support the conclusion
- Provide clarity on the types of technical tools that are applicable for each type of event



Wildfire/Ozone Guidance

- Developing concurrently with Exceptional Events Rule revisions so that guidance can reflect concepts in proposed rule
 - Focus on statutory elements
 - Examining similarities/shared analyses between but-for and clear-causal criteria
- Addressing but-for for wildfire/ozone events
 - Aim to move away from apportionment/attribution approach implied in current but-for for “obvious” cases
 - Exploring bounding/streamlining analyses and concepts for wildfire/ozone events – if a demonstration meets certain criteria, the demonstration would satisfy the but-for/clear causal criteria
 - Air agency would still need to satisfy other Exceptional Events Rule criteria (affects air quality, historical fluctuations, not reasonably controllable or preventable, human/natural event)

Wildfire/Ozone Guidance



- Wildfire Ozone Guidance: Tiered/streamlined demonstration approach for large and/or close fires that affect high ozone concentrations
 - No requirement to quantify fire impact on ozone concentration
 - Template(s) for demonstrations

- Demonstrations would include 3 elements to address clear causal/but-for:
 1. Fire characteristics and relationship to the affected monitor
 - Fire emissions for the day(s)
 - Distance from the centroid of the fire to the affected monitor
 - High ozone at the monitor
 - Guidance would identify what combination of factors “passes” to show sufficient causal connection

 2. Coincident back trajectories between fire and affected monitor

 3. At least one type of additional evidence that smoke from the fire reached the affected monitor
 - Visible satellite maps
 - MODIS data and other satellite data of aerosol optical depth, NO₂
 - High CO or PM
 - Regional ozone concentration maps
 - Regional PM_{2.5} concentration maps
 - Regional PM_{2.5} species maps/plots
 - Levoglucosan in PM
 - Unusual concentrations of potassium
 - Unusual diurnal profile of concentrations



Schedule and Next Steps

- Exceptional Events Rule Revisions and Guidance Development
 - Anticipate proposing the rule revisions in Fall 2015 and promulgating in summer 2016
 - Schedule provides promulgated rule revisions changes in advance of implementation activities (e.g., Governors' recommendations) for any potential new or revised ozone NAAQS
 - Schedule for wildfire ozone exceptional events guidance anticipated to parallel rule revision effort so guidance can reflect preamble/rule concepts
 - Provide additional guidance, as needed, to support Exceptional Events Rule revisions
 - Continued development of Exceptional Events tools (e.g., website, templates, delegations)
 - Web-based quick reference matrix on Exceptional Events website at <http://www.epa.gov/ttn/analysis/exeventsguide.htm>
 - Implement EPA's communication plan
- Exceptional Events Best Practices
 - Continue to seek and incorporate input from EPA regions and states
 - Include best practices as recommendations in guidance, rule or website resources
 - Tools on an EPA website
 - Continual improvement, dissemination, outreach, education
- Other questions/discussion



More Information

Meredith Kurpius

EPA Region 9, Air Quality Analysis Office

415-947-4534

Kurpius.meredith@epa.gov