

# COMPONENTS OF A SUCCESSFUL EXCEPTIONAL EVENTS DEMONSTRATION

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# Exceptional Events

- On September 16, 2016, the EPA finalized the **2016 Revisions to the Exceptional Events Rule**, which address issues raised by stakeholders to reduce unnecessary burden and increase the administrative efficiency of the exceptional events demonstration process
  - Overarching goal was to improve the demonstration development and review process by improving communications, providing recommendations for demonstration narrative and analyses to include in demonstration packages, providing needed clarity in the rule and increasing administrative efficiency of demonstration submittal process
  - <https://www.epa.gov/air-quality-analysis/treatment-data-influenced-exceptional-events>
  - Rule effective date was September 30, 2016
  - Published in Federal Register on October 3, 2016 (81 FR 68216)
  - NRDC/Sierra Club filed a Petition for Review on December 2, 2016 (petitioners' brief due 5/17/17, EPA response due 8/17/17)
- General Exceptional Events Rule Background
  - Establishes procedures and criteria for identifying and evaluating air quality monitoring data affected by exceptional events
  - Provides a mechanism by which air quality data can be excluded from regulatory decisions and actions
  - Applies to all criteria pollutants and NAAQS and all event types to which the rule applies
  - Applies to all state air agencies, to (delegated) local air agencies, to tribal air agencies that operate air quality monitors that produce regulatory data and to federal land managers/federal agencies if agreed by the state
  - Affects design value calculations, NAAQS designation decisions, attainment determinations, and State/Tribal/ Federal Implementation Plan (SIP/FIP/TIP) development



## Exceptional Events Rule Revisions

- Clarify the types of determinations and actions to which the authorizing statutory authority in Clean Air Act (CAA) section 319(b) applies
- Return to the core statutory elements of CAA section 319(b)
- Clarify “not reasonably controllable or preventable” criterion
- Clarify high wind elements initially addressed in 2013 guidance
- Codify requirements for the content and organization of exceptional events demonstrations
- Remove “general schedule” deadlines for data flagging and demonstration submittal
- Include fire-related rule language and preamble text
- Include regulatory requirements for mitigation
- Include other provisions



# Components of an Exceptional Events Demonstration

- Codify requirements for the content and organization of exceptional events demonstrations (*40 CFR 50.14(c)(3)(iv) and (v)*)
  - Narrative conceptual model
  - Demonstration of clear causal relationship (including analyses comparing the claimed event-influenced concentration to historical concentrations)
  - Demonstration that the event was not reasonably controllable and not reasonably preventable
  - Demonstration that the event was a human activity unlikely to recur at a particular location or was a natural event
  - Documentation that the public comment process was followed:
    - 30-day public comment period
    - Submission of public comments
    - Address comments disputing or contradicting factual evidence in the demonstration



# Components of an Exceptional Events Demonstration

- Return to the core statutory elements of CAA section 319(b)
  - 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
  - The event was caused by human activity that is unlikely to recur at a particular location or was a natural event
  - The event was not reasonably controllable or preventable
- Recommended order of analyses within a demonstration
  - Natural events – clear causal, human activity/natural event, not reasonably controllable/preventable
  - Human activities unlikely to recur (particularly high wind dust events) - not reasonably controllable/preventable, clear causal, human activity/natural event



## Clear Causal Relationship

*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.*

- Weight of evidence analyses
- Rule language for natural events
  - Wildfires on wildland, stratospheric ozone intrusions
  - Volcanos (no specific regulatory language)
- Components of the clear causal relationship demonstration
  - Analyses that the event occurred
  - Analyses showing that the event-related emissions/pollutant were transported to the monitor(s) recording the elevated concentration(s)
  - Analyses showing that the event-related emissions/pollutant reached ground level



## Clear Causal Relationship

- Analyses that the event occurred
  - Comparison to historical concentrations (example analyses in rule preamble)
  - Occurrence and geographic extent of the event (news statements, advisories, satellite imagery, etc)
- Analyses showing that the event-related emissions/pollutant were transported to the monitor(s) recording the elevated concentration(s)
  - Satellite imagery
  - Back/forward trajectories
  - Directional wind data
- Analyses showing that the event-related emissions/pollutant reached ground level
  - Speciation data at the monitor (or at regional monitors)
  - Spatial extent maps comparing event days and non-event days



## Human Activity Unlikely to Recur or a Natural Event

*The event was caused by human activity that is unlikely to recur at a particular location or was a natural event.*

- Natural Events
  - *Natural event* means an event and its resulting emissions, which may recur at the same location, in which human activity plays little or no direct causal role. For purposes of the definition of a natural event, anthropogenic sources that are reasonably controlled shall be considered to not play a direct role in causing emissions. (40 CFR 50.1(k))
  - Recognized natural events (81 FR 68232): wildfires, stratospheric ozone intrusions, volcanic and seismic activity, natural disasters, and windblown dust from natural, undisturbed landscapes
  - Natural events can recur





## Human Activity Unlikely to Recur or a Natural Event

*The event was caused by human activity that is unlikely to recur at a particular location or was a natural event.*

- Human activity that is unlikely to recur at a particular location
  - Unlikely to recur
    - Benchmark of three events in 3 years: same event type generating emissions of the same pollutant in the 3 years prior to the date of the event in question
    - A single discrete event is one occurrence even if it extends over more than one day
  - Particular location
    - Definition may vary depending on the specifics of the area
    - Air agencies and EPA Regional offices should proactively discuss what a “particular location” means



## Not Reasonably Controllable or Preventable

*The event was not reasonably controllable or preventable*

- Not reasonably controllable
  - Reasonable measures to control the impact of the event on air quality were applied at the time of the event
- Not reasonably preventable
  - Reasonable measures to prevent the event were applied at the time of the event
- Case specific approach evaluated in light of information available as of the date of the event



## Not Reasonably Controllable or Preventable

- Regulatory presumptions for not reasonably controllable or preventable in certain situations
  - The emissions generating activity is beyond the jurisdictional boundaries of the state submitting the demonstration [50.14(b)(8)(vii)]
  - The emissions generating activity is a natural event and all anthropogenic contributors are reasonably controlled
    - Wildfires on wildland [50.14(b)(4)]
    - Large-scale, high-energy high wind dust events [50.14(b)(5)(vi)]
    - Stratospheric ozone intrusions [50.14(b)(6)]
  - Deference to measures in a nonattainment or maintenance SIP/FIP/TIP approved within 5 years of the date of the event [50.14(b)(8)(v)]
- If applicable, demonstrations should point to the specific regulatory presumption



## Not Reasonably Controllable or Preventable

- Analyses to address other/non-natural sources that could potentially contribute to event-related emissions
  - Identify the natural and anthropogenic sources of emissions causing and contributing to the monitored exceedance or violation, including the contribution from local sources
  - Identify the relevant SIP, FIP or TIP or other enforceable control measures in place for these sources and the implementation status of these controls
  - Provide evidence of effective implementation and enforcement of reasonable controls, if applicable.



# Exceptional Events Implementation: Next Steps

- The 2016 rule revisions and final wildfire/ozone guidance were needed first steps, but efficient and coordinated implementation is critical. November 2016 workshops were an important step in successful implementation (*i.e.*, to make sure that EPA Headquarters, EPA Regional offices, and states/locals/tribes are on same page).
- What is next?
- Additional Implementation Materials
  - Revisions to 2013 *Interim Exceptional Events Guidance Documents*
  - Stratospheric Ozone Intrusion Document
  - Alternate Paths for Data Exclusion Document
  - Prescribed Fire/Ozone Document
- Continued development of exceptional events tools
  - Templates
  - Website updates
  - AQS modifications to reflect rule revisions guided by feedback from newly created AQS workgroup
  - Standardized metrics and tracking
  - Targeted efforts with FLMs – communications and tools
  - Best practices for multi-state exceptional events demonstrations



# Questions and Comments

