

Review of Exceptional Event Rule Regarding Ozone

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Current Exceptional Event Rule

- Final Rule titled “Treatment of Data Influenced by Exceptional Events” published March 22, 2007 in the Federal Register.
- E-copy of document online at:
- http://epa.gov/ttncaaa1/t1/fr_notices/exeventfr.pdf
- In developing the exceptional event final rule EPA had to follow certain principles, including the principle that protection of public health is the highest priority (page 13561 of the final rule).

The Exceptional Events Rule Summarized

- The rule outlines 4 requirements that must be satisfied in order for certain air quality data to qualify for an exceptional event:
 - 1. the event must affect air quality, must not be reasonably controllable or preventable, and must be an event caused by human activity that is unlikely to recur at a particular location or a natural event. (note – exceptional events do not include stagnation of air masses or meteorological inversions, a meteorological event involving high temperatures or lack of precipitation, or air pollution relating to source noncompliance)
 - 2. there must be a clear causal relationship between the measurement under consideration and the event claimed to have affected the air quality in the area.
 - 3. the event must be associated with a measured concentration in excess of normal historical fluctuations, including background.
 - 4. there would have been no exceedance or violation but for the event.

Flagging of Data and Demonstration Submission

- Any flagging of potential exceptional event data and any submission of demonstration packages must be done by the States.
- Any flagging of potential exceptional event data along with an initial description of the event shall be submitted to EPA no later than July 1st of the calendar year following the year in which the flagged measurement occurred.
- A State that has flagged data as a potential exceptional event can, after notice and opportunity for public comment, submit a demonstration package to EPA to justify that the data should be excluded from regulatory consideration. This demonstration package would be due to EPA no later than the lesser of, 3 years following the end of the calendar quarter in which the flagged concentration was recorded or, 12 months prior to the date that a regulatory decision must be made by EPA. The State must submit the public comments it received along with its demonstration package to EPA.
- The demonstration package would then be reviewed by EPA for concurrence/non-concurrence according to the four criteria requirements outlined on the previous slide.

Ozone Exceptional Event Reviews in Region 6

- The submittal of exceptional events for ozone concentrations in Region 6 is rare. The only Region 6 concurrences on ozone exceptional events pre-2007 rule involved some ozone data in 1998 impacted by numerous and very large Mexican/Central American Fires.
- There has been only one exceptional event package for ozone concentrations submitted to Region 6 under the 2007 rule: for four hours of ozone data from April 8, 2009 at the Cherokee Nation Newkirk site in Kay County, Oklahoma impacted by wildfire emissions.
- Region 6 reviewed the package and concurred with two of the requested hours and non-concurred on the remaining two hours. The two concurred upon hours of ozone data involved hourly ozone concentrations which were the highest April hourly ozone values recorded at the Newkirk site in its nine-year history beginning in 2003.
- Each hour of ozone data was compared to the four requirements for ozone concentration data to qualify for an exceptional event as outlined on slide #3.

Some Modeling Analyses considerations

- What are impacts of meteorology on local pollution levels. Regional levels of ozone take many days to build-up typically in Texas. What is the influence of the days before the episode? Vertical structure, wind speeds, etc.
- If doing source apportionment modeling what is the typical range of emissions and how much outside the upper range of the distribution is the emission event. Consideration of impact would not be given for emissions that would be within the normal range of emissions that could be expected.
- In Houston variation in emissions and underestimation of emissions from industrial sources still plays a very large role and add uncertainty to trying to determine what was responsible for an ozone exceedance.