

Summary Analysis of EPA's Exceptional Events Rule
USDA AAQTF Air Quality Standards Subcommittee
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Background: Since 1977, EPA guidance and regulations have either implied or documented the need for a flagging system for data affected by an exceptional event. The first EPA guidance related to the exclusion or discounting of data affected by an exceptional event was an Office of Air Quality Planning and Standards (OAQPS) guidance document.

In July 1986, EPA issued the guidance, "Guideline on the Identification and Use of Air Quality Data Affected by Exceptional Events" (the Exceptional Events Policy; EPA-450/4-86-007). The Exceptional Events Policy provided criteria for States to use in making decisions related to identifying data that have been influenced by an exceptional event. In addition to the Exceptional Events Policy, on July 1, 1987, EPA promulgated the NAAQS for PM₁₀ (particulate matter with an aerodynamic diameter of 10 micrometers or less), which also addressed the issue of excluding or discounting data affected by exceptional events. Appendix K of that rule allows for special consideration of data determined to be affected by an exceptional event.

In 1990, section 188(f) was added to the Clean Air Act (CAA) which provided EPA authority to waive either a specific attainment date or certain planning requirements for serious PM₁₀ nonattainment areas affected by non-anthropogenic sources. In 1996 EPA issued a policy to address data affected by natural events entitled, "Areas Affected by PM₁₀ Natural Events," (the PM₁₀ Natural Events Policy).

When EPA issued a revised NAAQS for ozone and a new NAAQS addressing PM_{2.5} on July 18, 1997, it established Appendices I and N to 40 CFR 50. Section 1.0 of appendix I addressed the treatment of data determined to be influenced by natural events, and section 1.0(b) of appendix N, related to the PM_{2.5} standards, provided special consideration to data determined to be affected by an exceptional or natural event. Further, EPA directed the States to follow three specific EPA guidance documents in making determinations related to data influenced by exceptional and natural events: (1) The Exceptional Events Policy; (2) The PM₁₀ Natural Events Policy; and (3) The Interim Air Quality Policy of Wildland and Prescribed fires, Memorandum from Richard D. Wilson, Acting Assistant Administrator for Air and Radiation.

Section 319 of the CAA, as amended by section 6013 of the Safe Accountable Flexible Efficient-Transportation Equity Act: A Legacy for Users (SAFE-TEA-LU) of 2005, established the definition of an exceptional event and required EPA to publish the proposed rule in the Federal Register no later than March 1, 2006 after consultation with federal land managers and state air pollution control agencies. EPA was then required to publish the final rule no later than 1 year from the date of the proposed rule. EPA published the proposed rule on March 10, 2006 (71 FR 12592).

On October 17, 2006, EPA published the final rule for the National Ambient Air Quality Standards for Particulate Matter in the Federal Register (71 FR 61143). On pages 61215 and 61216, EPA first acknowledged that it recognizes that the USDA has been working with the

agricultural community to develop conservation systems and activities to control coarse particle emissions.

“Based on current ambient monitoring information,” these USDA-approved conservation systems and activities have proven to be effective in controlling these emissions in areas where coarse particles emitted from agricultural activities have been identified as a contributor to violation of the NAAQS. The EPA concludes that where USDA-approved conservation systems and activities have been implemented, these systems and activities have satisfied the Agency’s reasonably available control measure (RACM) and best available control measure (BACM) requirements.”

In the same publication (page 61215), EPA notes that decisions about which sources to control are generally made by the State in the context of developing or revising State Implementation Plans (SIPs).

EPA’s Final Exceptional Event Rule

On March 22, 2007, EPA promulgated the “Treatment of Data Influenced by Exceptional Events; Final Rule” (72 FR at 13560). This rule, known as the Exceptional Events Rule (EER), superseded EPA’s previous natural events guidance and interim fire policy documents. The EER created a regulatory process codified at 40 CFR parts 50 and 51 (50.1, 50.14, and 51.930). These regulatory sections contain definitions, procedural requirements, requirements for state demonstrations and criteria for EPA approval for the exclusion of air quality data from regulatory decisions under the EER.

The preamble of this rule provides for examples of exceptional events that may qualify for exclusion under the rule: (1) chemical spills from accidents such as fires, explosions, power outages, train derailments, vehicular accidents, or combination of these; (2) structural fires include any accidental fire involving a manmade structure; (3) exceedances due to transported pollution (national or international in origin) whether from natural or anthropogenic sources AS LONG AS all of the criteria and requirements related to exceptional events are met as defined in this rule; “An example of interstate transported emissions which may be flagged as due to an exceptional event would be emissions due to smoke from wildfires or wildland fire use fires which cause exceedances or violations of the NAAQS at monitoring sites in other State. Other examples could include data affected by emissions from mining and agricultural activities when such emissions are subjected to long-range transport, and the criteria and requirements related to an exceptional event are met as defined in this rule. In general, events due to transported pollution may be considered on a case-by-case basis.” (4) exceedances due to a terrorist attack; (5) natural events to include: (a) natural disasters and associated cleanup activities; (b) volcanic and seismic activities; (c) high wind events; (d) wildfires and wildland fire use fires; and (e) stratospheric ozone intrusions. EPA will consider other types of natural events on a case-by-case basis.

The rule applies to all pollutants for which a National Ambient Air Quality Standard (NAAQS) provides discretion to discount or exclude data. At present, the rule would apply to PM and Ozone.

In the EER, prescribed fires are specifically mentioned. In order for prescribed fires to qualify as exceptional events, States must certify to EPA that a Smoke Management Program (SMP) has been implemented or that the State has ensured that the burner employed basic smoke management practices. If an exceptional event occurs when using the basic smoke management practices approach, the State must undertake a review of its approach to ensure public health is being protected and must include consideration of development of a SMP.

EPA has decided to address more specifics of “natural events” such as high wind events and wildfires and wildland fire use fires in guidance. Draft guidance for High Wind Events was issued on May 2, 2011 with a comment period that ended June 30, 2011. A draft guidance on smoke from fires is pending.

Guidance on the Preparation of Demonstrations in Support of Requests to Exclude Ambient Air Quality Data Affected by High Winds under the Exceptional Events Rule

EPA established the definition of a high wind dust event as follows: a high wind dust event includes both the high wind and the dust that the wind entrains and transports to a monitoring site; the event is not merely the occurrence of the high wind. EPA further established: (1) the critical elements for the technical demonstration of high wind dust events; (2) the definition for “not reasonably controllable or preventable;” (3) the level of analyses for states to use to show “clear causal relationships”; and, (4) the description of “no exceedances but for the event (NEBF).”

States have submitted their comments and a summary of those key issues are:

- (1) Once draft guidance is issued, states should begin following the guidance until such time as the final guidance is released. If specific actions are not taken or criteria are not met by states, the request that data be excluded may be denied. Such mandatory requirements appear to cross the line between guidance and regulation. Where requirements are to be established, rulemaking and not guidance is the appropriate administrative process. Additionally, there are no avenues available to states that wish to challenge an EPA denial of an exceptional events request or a failure by EPA to respond to a request (which equates to a denial of a request for an exclusion in that, absent a decision by EPA, the data will remain in the data set).
- (2) The EER establishes a “but for” test, the requirement that in order for data to be excluded, a state or locality must demonstrate that “there would have been no exceedances or violation but for the event.” EPA committed in the EER to publish a proposed rule that would establish the parameters for making a demonstration once the agency “determined that techniques for adjustment of air quality data are sufficiently well demonstrated for use in exceptional events determinations.” That proposal has not yet materialized, nor has the agency provided a clear explanation of how to make such a

demonstration. The requirements as written in the draft guidance create restrictions that could result in inflated design values, driving CAA planning and regulatory processes that are not appropriate such as creating inflated design values pushing a nonattainment classification that results in control program target reductions in attainment SIPs.

- (3) The implementation of the High Winds Event Guidance requires states to implement escalating emission control measures to gain exclusion of monitoring data. The EER definition, “not reasonably controllable or preventable”, goes beyond the emission control measures required under Section 110 and Part D (for nonattainment areas) of the Act.
- (4) A policy concern relates to the level of expertise and resources required for a state to make the demonstration for an exceptional event. Many states do not have these resources. Recent demonstrations prepared by contract work for state agencies start at \$100,000 and go up in price. When state agencies prepare their own demonstration, they can expect to utilize over 2000 man hours over the course of six months.
- (5) The demonstrations required of states to show “clear causal” relationships between an event and a measured exceedance requires states to show not only that there was an impact from an event on a monitored value, but that the impact was significant enough to have caused the exceedances. States would have to calculate the incremental impact caused by an event at a monitoring site over the relevant averaging time. EPA acknowledged the preamble to the Exceptional Events Rule that there are no precise and universally applicable techniques for calculating incremental impacts.
- (6) EPA has built into the EER a determination factor of wind speed relative to their approval of an exceptional event created by high winds. EPA states they intend to use 25 mph as the minimum sustained wind speed. Rather than add clarity to the determination of exceptional “high wind” events, this presumed level of wind speed would place an unfair burden of proof on a state or locality of defeating an unsupported presumption.

EER’s Impact on Agriculture: In spite of assurances from EPA administration before Congressional hearings that EPA does not want to regulate particulate matter from agriculture, the EPA passes the final decision to states. When states have difficulties in meeting SIP emission control levels, these entities will search out additional sources to regulate. With the High Wind Events Guidance, tillage and harvesting practices along with unpaved farm roads will become the most likely targets.

Issue #1: The SAFE-TEA-LU Act of 2005 defined “natural events;” “principles” EPA was to follow when developing the Exceptional Events Rule; and the “requirements” of what EPA must include when developing the Exceptional Events Rule.

- “(A) IN GENERAL.—The term ‘exceptional event’ means an event that—
- “(i) affects air quality;
- “(ii) is not reasonably controllable or preventable;

“(iii) is an event caused by human activity that is unlikely to recur at a particular location or a natural event; and

“(iv) is determined by the Administrator through the process established in the regulations promulgated under paragraph (2) to be an exceptional event.

“(B) EXCLUSIONS.—In this subsection, the term ‘exceptional event’ does not include—

“(i) stagnation of air masses or meteorological inversions;

“(ii) a meteorological event involving high temperatures or lack of precipitation; or

“(iii) air pollution relating to source noncompliance.

“(A) PRINCIPLES.—In promulgating regulations under this section, the Administrator shall follow—

“(i) the principle that protection of public health is the highest priority;

“(ii) the principle that timely information should be provided to the public in any case in which the air quality is unhealthy;

“(iii) the principle that all ambient air quality data should be included in a timely manner, an appropriate Federal air quality database that is accessible to the public;

“(iv) the principle that each State must take necessary measures to safeguard public health regardless of the source of the air pollution; and

“(v) the principle that air quality data should be carefully screened to ensure that events not likely to recur are represented accurately in all monitoring data and analyses.

“(B) REQUIREMENTS.—Regulations promulgated under this section shall, at a minimum, provide that—

“(i) the occurrence of an exceptional event must be demonstrated by reliable, accurate data that is promptly produced and provided by Federal, State, or local government agencies;

“(ii) a clear causal relationship must exist between the measured exceedances of a national ambient air quality standard and the exceptional event to demonstrate that the exceptional event caused a specific air pollution concentration at a particular air quality monitoring location;

“(iii) there is a public process for determining whether an event is exceptional; and

“(iv) there are criteria and procedures for the Governor of a State to petition the Administrator to exclude air quality monitoring data that is directly due to exceptional events from use in determinations by the Administrator with respect to exceedances or violations of the national ambient air quality standards.

Recommendation: Appropriate changes to the Exceptional Events Rule are needed to provide states with details of reasonable elements to include in a request to flag monitoring data as an exceptional event.

Issue #2: While EPA can suggest that USDA conservation measures are equivalent to RACM and BACM, states have the ultimate authority of determining which sources to control. California is a good example of a state deciding to control agricultural emissions.

Recommendation: The following academic and technological improvements are needed for fair regulation of agriculture:

- a. Correct emissions factors for agricultural processes (if states don't have a ready source to turn to, they will utilize what is available to them even if there is little science behind the factors)
- b. Review of existing USDA Conservation Best Management Practices to address particulate emissions of any kind
 - i. The AAQTF recommends NRCS request time at the next NACAA meeting to make a presentation on these practices and where states can find them (suggest Dr. Honeycutt be the speaker)
 - ii. The AAQTF recommends NRCS work with EPA Administrator to incorporate USDA Conservation Best Management Practices into future EPA rulemaking that has the potential to impact agriculture or private land owners.
- c. The technological research of "over sampling" of PM in agricultural environments needs to be concluded by providing the resources to complete this job.

Issue #3: EPA has an Interim *Air Quality Policy on Wildland and Prescribed Fires Guidance*. In the EER, EPA confirms that it will be releasing an update on this policy moving towards a "final" guidance. The existing policy lacks specificity. A concern, based on the proposed High Wind Events Guidance, is that states will have the same difficulties implementing this new guidance for fire. Many private landowners utilize prescribed burning for a variety of reasons (control undesirable vegetation, reduce fuel hazards that can lead to wildfire, improve wildlife habitat, improve plant productivity, restore and maintain ecological processes, etc.), and if smoke from such fires contribute to exceedances, then a State may target such activities for control and seek exclusion of such data under the EER. In order to seek such an exclusion, it must be shown that either Basic Smoke Management Practices (BSMPs) were utilized or a Smoke Management Program was in place. Many states do not have the resources to operate a Smoke Management Program or have not identified this as a priority, thus BSMPs can be a viable and useful alternative, especially for private landowners. In support of this, NRCS and the Forest Service recently published a Technical Note on Basic Smoke Management Practices (<http://www.airquality.nrcs.usda.gov> – See "Highlights").

Of further concern, the terminology, "wildfires and wildland fire use fires," found in the EER is not the generally accepted terminology among fire managers or federal land managers (FLMs). FLMs have terminology that brings clarity and specificity relieving states of a responsibility of creating their own interpretation of what those terms mean.

Recommendation: The USDA/NRCS should engage EPA in the beginning discussions of the changes to this policy rather than waiting to respond to a draft guidance. Through its Forest Service, USDA has decades of experience with prescribed burns and as many years putting out unwanted fires caused by fuel build up. This expertise should be leveraged to develop the most beneficial guidance possible for agricultural producers and the public at large.

Recommendation: When EPA releases the next revision of the *Air Quality Policy on Wildland and Prescribed Fires* policy, the AAQTF Air Quality Standards Subcommittee will make comments and work with USDA to coordinate with their comments on the draft.

Recommendation: USDA/NRCS should encourage EPA to use generally accepted terminology among fire managers in future rules, policies, or guidance regarding fires or burn activities. An example would be federal land managers' terminology of what is used to describe fires, land mass, and other similar terminology.

Issue #4: Prescribed fires are specifically listed in the EER language as an activity for which a State can request a determination for an exceptional event. One of two actions on the part of States must precede this request. A state must implement either a Smoke Management Program or have ensured that the burner employed basic smoke management practices.

Recommendation: The USDA, through its Forest Service, should offer its experience and technology expertise to States to either develop Smoke Management Programs or to assist States and/or other entities in identifying basic smoke management practices.