

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Parts 50 and 51**

**[EPA-HQ-OAR-2005-0159; FRL- ]**

**RIN 2060-AN40**

**Treatment of Data Influenced by Exceptional Events**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final Rule.

**SUMMARY:** This action finalizes a rule to govern the review and handling of air quality monitoring data influenced by exceptional events. Exceptional events are events for which the normal planning and regulatory process established by the Clean Air Act (CAA) is not appropriate. In this rulemaking action, EPA is finalizing the proposal to: implement section 319(b)(3)(B) and section 107(d)(3) authority to exclude air quality monitoring data from regulatory determinations related to exceedances or violations of the National Ambient Air Quality Standards (NAAQS) and avoid designating an area as nonattainment, redesignating an area as nonattainment, or reclassifying an existing nonattainment area to a higher classification if a State adequately demonstrates that an exceptional event has

caused an exceedance or violation of a NAAQS. The EPA is also requiring States to take reasonable measures to mitigate the impacts of an exceptional event.

**DATES:** This final rule is effective **[Insert date 60 days after publication in the Federal Register]**.

**ADDRESSES:** The EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2005-0159. All documents in the docket are listed on the [www.regulations.gov](http://www.regulations.gov) web site. Although listed in the index, some information is not publicly available, i.e., confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through [www.regulations.gov](http://www.regulations.gov) or in hard copy at the OAR Docket, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave., NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Air and Radiation Docket and Information Center is (202) 566-1742.

**FOR FURTHER INFORMATION CONTACT:** General questions

regarding the final rule should be addressed to Mr. Larry D. Wallace, Ph.D., Office of Air Quality Planning and Standards, Air Quality Policy Division, Mail Code C539-01, Research Triangle Park, N.C. 27711; telephone (919) 541-0906, and e-mail address [wallace.larry@epa.gov](mailto:wallace.larry@epa.gov).

Questions concerning technical and analytical issues related to this final rule should be addressed to Mr. Neil Frank, Office of Air Quality Planning and Standards, Air Quality Assessment Division, Mail Code C304-01, Research Triangle Park, N.C. 27711; telephone (919) 541-5560, and e-mail address [frank.neil@epa.gov](mailto:frank.neil@epa.gov).

**SUPPLEMENTARY INFORMATION:**

**I. General Information**

A. Does This Action Apply to Me?

Regulated Entities. This final rule will affect State and local air quality agencies. This rule may also affect Tribal air quality agencies that have implemented air quality monitoring networks or have authority to implement air quality programs.

This list is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This list gives examples of the types of entities EPA is now aware could potentially be regulated by this action. Other types of entities not

listed could also be affected. To determine whether your facility, company, business, organization, etc., is regulated by this action, you should examine the applicability criteria in section IV of this preamble. If you have any questions regarding the applicability of this action to a particular entity, consult the people listed in the preceding section.

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**II. Preamble Glossary of Terms and Acronyms**

The following are abbreviations of terms used in the preamble.

ARM	Approved Regional Methods
AQS	Air Quality System
BACM	Best Available Control Measures
CAA	Clean Air Act

CAAA	Clean Air Act Amendments
EPA	Environmental Protection Agency
FEM	Federal Equivalent Methods
FIP	Federal Implementation Plan
FR	Federal Register
FRM	Federal Reference Methods
NAAQS	National Ambient Air Quality Standards
NEAP	Natural Events Action Plan
NEPA	National Environmental Policy Act
NTTA	National Technology Transfer Advancement Act of 1995
OAQPS	Office of Air Quality Planning and Standards
OMB	Office of Management and Budget
PM	Particulate matter
PM <sub>10</sub>	Particles with a nominal mean aerodynamic diameter less than or equal to 10 micrometers
PM <sub>10-2.5</sub>	Particles with a nominal mean aerodynamic diameter greater than 2.5 micrometers and less than or equal to 10 micrometers
PM <sub>2.5</sub>	Particles with a nominal mean aerodynamic diameter less than or equal to 2.5 micrometers
RACM	Reasonably Available Control Measures

SIP	State Implementation Plan
SAFE-TEA-LU	Safe Accountable Flexible Efficient- Transportation Equity Act- A Legacy for Users
SMP	Smoke Management Program
TAR	Tribal Authority Rule
TIP	Tribal Implementation Plan
UMRA	Unfunded Mandates Reform Act
USDA	U.S. Department of Agriculture
VCS	Voluntary Consensus Standards

### **III. Background and Purpose of This Rulemaking**

#### **A. Legislative Requirements**

We<sup>1</sup> are finalizing a rule to govern the review and handling of air quality monitoring data influenced by exceptional events. As discussed below, these are events for which the normal planning and regulatory process established by the CAA is not appropriate. 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, required EPA to publish the proposed rule in the Federal Register no later than

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<sup>1</sup> The U.S. Environmental Protection Agency.



March 1, 2006.<sup>2</sup> Further, EPA must issue this final rule no later than 1 year from the date of proposal. The EPA published the proposed rule on March 10, 2006 (See 71 FR 12592).

In this final rule, EPA is establishing procedures and criteria related to the identification, evaluation, interpretation, and use of air quality monitoring data related to any NAAQS where States petition EPA to exclude data that are affected by exceptional events.

Section 319 defines an event as an exceptional event if the event affects air quality; is an event that is not reasonably controllable or preventable; is an event caused by human activity that is unlikely to recur at a particular location or a natural event; and is determined by EPA to be an exceptional event. The statutory definition of exceptional event specifically excludes stagnation of air masses or meteorological inversions; a meteorological event involving high temperatures or lack of precipitation; or air pollution relating to source noncompliance.

Section 319(b)(3)(B)(i) requires a State air quality agency to demonstrate through "reliable, accurate data that

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<sup>2</sup> All subsequent references to section 319 of the CAA in this proposal are to section 319 as amended by SAFE-TEA-LU unless otherwise noted.

is promptly produced" that an exceptional event occurred.<sup>3</sup> Section 319(b)(3)(B)(ii) requires that "a clear causal relationship" be established between a measured exceedance of a NAAQS and the exceptional event demonstrating "that the exceptional event caused a specific air pollution concentration at a particular location." In addition, section 319(b)(3)(B)(iii) requires a public process to determine whether an event is an exceptional event. Finally, section 319(b)(3)(B)(iv) requires criteria and procedures for a Governor to petition the Administrator to exclude air quality monitoring data that is directly due to exceptional events from use in determinations with respect to exceedances or violations of the NAAQS.

The term exceedance refers to a measured or modeled concentration greater than the level of one or more for a pollutant. The NAAQS are also set with particular averaging periods (e.g., 3 years for ozone and PM<sub>2.5</sub>) such that a violation of the NAAQS for ozone and PM<sub>2.5</sub> requires an average annual concentration level specified by appendix

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<sup>3</sup> While this document refers primarily to States as the entity responsible for flagging data impacted by exceptional events, other agencies, such as local or Tribal government agencies, may also have standing to flag data as being affected by these types of events, and the criteria and procedures that are discussed in this rulemaking also apply to these entities.

I and N to 40 CFR 50 to be greater than the level of the NAAQS. Public comments favored the consideration of data contributing to both exceedances and violations for data exclusion under this Rule. As discussed in section V.C, exceedances of any NAAQS will be eligible for consideration for data exclusion and any data contributing to violations of daily or sub-daily standards will also be eligible for consideration (e.g. 8-hour or 24-hour standards). Data contributing to annual violations without being exceedances themselves are considered too close to background air quality levels for exclusion under this Rule.

Section 319 also contains a set of five principles for EPA to follow in developing regulations to implement section 319:

- (i) protection of public health is the highest priority;
- (ii) timely information should be provided to the public in any case in which the air quality is unhealthy;
- (iii) all ambient air quality data should be included in a timely manner in an appropriate Federal air quality database that is accessible to the public;
- (iv) each State must take necessary measures to safeguard public health regardless of the source of

the air pollution; and

(v) air quality data should be carefully screened to ensure that events not likely to recur are represented accurately in all monitoring data and analyses (42 U.S.C. 7619(b)(3)(A)).

In adopting revisions to section 319, Congress sought to provide statutory relief to States to allow them to avoid being designated as nonattainment or to avoid continuing to be designated nonattainment as a result of exceptional events in appropriate circumstances. To accomplish this goal, Congress enumerated certain minimum requirements for this rulemaking. In addition, Congress provided certain statutory principles for EPA to follow in promulgating regulations to exclude data affected by exceptional events.

B. Historical Experience Concerning Exceptional and Natural Events

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 entitled, "Guideline for the Interpretation of Air Quality

Standards," Guideline No. 1.2-008 (revised February 1977).<sup>4</sup>

In July 1986, EPA issued the guidance entitled, "Guideline On the Identification and Use of Air Quality Data Affected By Exceptional Events" (the Exceptional Events Policy). 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 PM<sub>10</sub> (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.<sup>5</sup> Appendix K of that rule allows for special consideration of data determined to be affected by an exceptional event. Section 2.4 of appendix K authorizes EPA to discount from consideration in making attainment or

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<sup>4</sup> "Guideline for Interpretation of Air Quality Standards," U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, N.C. OAQPS No. 1.2-008 (Revised February 1977). The guidance indicated the need for a data flagging system which would require the submittal of detailed information establishing that a violation was due to uncontrollable natural sources and that the information could be used in decision making related to the feasibility of modifying control strategies.

<sup>5</sup> Federal Register (52 FR 24667), July 1, 1987.

nonattainment determinations air quality data that are attributable to "an uncontrollable event caused by natural sources" of PM<sub>10</sub>, or "an event that is not expected to recur at a given location." Section 2.4 of appendix K, together with EPA guidance contained in the Exceptional Events Policy, describes the steps that should be taken for flagging PM<sub>10</sub> data that a State believes are affected by an exceptional or natural event.

In 1990, section 188(f) was added to the CAA. This section of the CAA provided EPA authority to waive either a specific attainment date or certain planning requirements for serious PM<sub>10</sub> nonattainment areas that are affected by nonanthropogenic sources. In response to section 188(f), and in consideration of the CAA consequences for areas affected by elevated concentrations caused by natural events, in 1996 EPA issued a policy to address data affected by natural events entitled, "Areas Affected by PM<sub>10</sub> Natural Events," (the PM<sub>10</sub> Natural Events Policy).<sup>6</sup>

On July 18, 1997, EPA issued a revised NAAQS for ozone and a new NAAQS addressing PM<sub>2.5</sub>. For ozone, the revised NAAQS provided for an 8-hour averaging period (versus 1

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<sup>6</sup> Memorandum from Mary D. Nichols, Assistant Administrator for Air and Radiation, to EPA Regional Offices entitled, "Areas Affected by PM<sub>10</sub> Natural Events," May 30, 1996.

hour for the previous NAAQS), and the level of the standard was changed from 0.12 ppm to 0.08 ppm (62 FR 38856). For the PM<sub>2.5</sub> NAAQS, EPA established both a new 24-hour standard and a new annual standard. In that Federal Register, EPA also promulgated appendices I and N to 40 CFR 50. Appendices I and N provided the methodologies for determining whether an area is in attainment of the 8-hour ozone and PM<sub>2.5</sub> NAAQS respectively, using ambient air quality data. Section 1.0 of appendix I, related to the ozone standard, addresses the treatment of data determined to be influenced natural events, and section 1.0(b) of appendix N, related to the PM<sub>2.5</sub> standard, provides that EPA may give special consideration to data determined to be affected by an exceptional or natural event.

Appendices K, I, and N, which are parts of the NAAQS for the affected pollutants as described above, provide that, while States must submit all valid ambient air quality data to EPA's Air Quality System (AQS) database for use in making regulatory decisions, in some cases it may be appropriate for EPA to exclude, discount, weight, or make adjustments to data that have been appropriately flagged from calculations in determining whether or not an area has attained the standard. These decisions are to be made on a case-by-case basis using all available information related

to the event in question, and are required to be made available to the public for review. It should also be noted that, while it would be desirable to be able to adjust the daily value to exclude only those portions of the data that are attributable to the exceptional event, due to technical limitations, such subtraction has not been possible, and EPA's historical practice has been to exclude a daily measured value in its entirety when that value is found to be largely caused by an exceptional event.

Following the promulgation of the 8-hour ozone and the PM<sub>2.5</sub> NAAQS, EPA provided additional guidance to States on how to address data affected by exceptional and natural events.<sup>7</sup> That guidance 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 PM<sub>10</sub> Natural Events Policy; and (3) The Interim Air Quality

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<sup>7</sup> "Guideline on Data Handling Conventions for the PM NAAQS," United States Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, N.C. 27711, EPA-454/R-98-017, December 1998.

"Guideline on Data Handling Conventions for the 8-hour Ozone NAAQS," United States Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, N.C. 27711, EPA-454/R-99-008, April 1999.



Policy on Wildland and Prescribed Fires, Memorandum from Richard D. Wilson, Acting Assistant Administrator for Air and Radiation, to EPA Regional Administrators, May 15, 1998. The Interim Air Quality Policy on Wildland and Prescribed Fires addressed the treatment of air quality monitoring data that are affected by wildland and prescribed fires that are managed for resource benefits.<sup>8</sup>

#### **IV. This Final Action**

##### A. To Whom and to What Pollutants Does This Rule Apply?

Under the statutory scheme established by the CAA, States are primarily responsible for the administration of air quality management programs within their borders. This includes the monitoring and analysis of ambient air quality and submission of monitoring data to EPA, which are then stored in EPA's AQS database. The EPA retains an important oversight responsibility for ensuring compliance with CAA requirements. With respect to the treatment of air quality monitoring data, States are responsible for ensuring data quality and validity and for identifying measurements that

they believe warrant special consideration, while EPA is responsible for reviewing and approving or disapproving any requests for such consideration. Therefore, this final rule applies to all States; to local air quality agencies to whom a State has delegated relevant responsibilities for air quality management, including air quality monitoring and data analysis; and, as discussed below, to Tribal air quality agencies where appropriate. This rule governs EPA's actions in reviewing and approving or disapproving the relevant actions taken or requested by States. Where EPA implements air quality management programs on Tribal lands, this rule would govern those actions as well.

At present, only the NAAQS for ozone and particulate matter (PM) contain provisions which allow for the special handling of air quality data affected by exceptional and natural events (40 CFR part 50, appendices K, I, and N). The language of section 319 of the CAA is broad in terms of making its provisions applicable to events that "affect air quality" and to exceedances or violations of "the national

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<sup>8</sup> Following the promulgation of this rule, it is EPA's intention to begin the process to revise the "Interim Air Quality Policy on Wildland and Prescribed Fires" in calendar year 2007 to update the policy and to ensure that the policy is consistent with this final rulemaking action. In addition, it is EPA's intent that agricultural prescribed burning will be addressed when this policy is updated and will also address basic smoke management

ambient air quality standards" (42 U.S.C. 7619(b)(1)(A)(i), (b)(3)(B)(iv)). Thus, its provisions can apply to the NAAQS for any criteria pollutant. Because the NAAQS established for other criteria pollutants do not currently contain provisions permitting the discounting or exclusion of data due to exceptional events, we are only applying the provisions of this rule initially to ozone and PM.<sup>9</sup> As we review and consider the need for revisions to the NAAQS for other pollutants, we will include provisions to address exceptional events in those NAAQS in accordance with section 319, as appropriate at that time. Because issuance of a new or revised NAAQS will necessitate the initiation of the designation process, EPA believes that the NAAQS rules are an appropriate place to make provisions for exceptional events in the evaluation of air quality data. In the interim, where exceptional events result in

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practices.

<sup>9</sup> Section IV.G of the preamble to the Proposed Rule discussed special considerations relevant to a new NAAQS for PM<sub>10-2.5</sub> proposed by EPA on December 20, 2005. This proposed standard would have drawn a distinction between coarse particles of urban versus non-urban origin, which raised new issues about the handling of exceedances of the coarse particle standard caused by exceptional events. However, in EPA's final rule on the PM NAAQS, issued September 21, 2006, EPA retained the existing 24-hour PM<sub>10</sub> standard instead of promulgating the proposed PM<sub>10-2.5</sub> standard. Thus, section IV.G. of the preamble to the Proposed Rule is no longer relevant and has been removed from this Preamble.

exceedances or violations of NAAQS that do not currently provide for special treatment of the data, we intend to use our discretion as outlined under section 107(d)(3) not to redesignate affected areas as nonattainment based on these events. We also intend to use our discretion under this rule to address determinations for the ozone standard related to the treatment of data influenced by both exceptional and natural events. Currently, appendix I, only addresses the treatment of data determined to be influenced a stratospheric ozone intrusion and other natural events, but does not address the handling of data influenced by other exceptional events.

B. How Does This Rule Relate to Indian Tribes?

Under the CAA and the Tribal Authority Rule (TAR), eligible Indian Tribes may develop and submit Tribal Implementation Plans (TIPs) for EPA approval, to administer requirements under the CAA on their reservations and other areas under their jurisdiction. However, Tribes are not required to develop TIPs or otherwise implement relevant programs under the CAA. The EPA has stated that it will continue to ensure the protection of air quality throughout the nation, including in Indian country, and will issue Federal Implementation Plans (FIPs) as necessary or appropriate to fill gaps in program implementation in

affected areas of Indian country (63 FR 7254, 7265; February 12, 1998).

In cases where a Tribal air quality agency has implemented an air quality monitoring network, which is affected by emissions from exceptional events, the criteria and procedures identified in this final rule may be used to exclude or discount data for regulatory purposes. Certain Tribes may implement all relevant components of an air quality program for purposes of meeting the various requirements of this rule. In some cases, however, a Tribe may implement only portions of the relevant program and may not be in a position to address each of the procedures and requirements associated with excluding or discounting emissions data (e.g., a particular Tribe may operate a monitoring network for purposes of gathering and identifying appropriate data, but may not implement relevant programs for the purpose of mitigating the effects of exceptional events required under this rule). The EPA intends to work with Tribes on the implementation of this rule, which may include appropriate implementation by EPA of program elements ensuring that any exclusion or discounting of data in Indian country areas with air quality affected by exceptional events comports with the procedures and requirements of this rule.

C. Comments Submitted on the Proposed Rule

The proposed rule on the "Treatment of Data Influenced by Exceptional Events" was issued on March 10, 2006 (71 FR 12592). We received 98 letters from commenters representing 587 comments from private citizens, State and local governments, industry, environmental groups, and Federal agencies. Sections V, VI, VII, and VIII of this notice describe the primary elements and requirements concerning the process for the handling of data influenced by exceptional events. Each section summarizes the relevant issues and options discussed in the proposed rule and provides the final decisions related to the issues for each section. In this preamble, we have provided responses to certain significant comments to elaborate or provide clarification for EPA's decision on an issue discussed in the relevant section of the rule. We have developed a response to comments document which addresses all of the timely comments received on the proposed rule. Following the promulgation of this rule, the response to comments document will be placed into the docket of this rulemaking action for public review (See Docket no. EPA-HQ-OAR-2005-0159).

D. What is an Exceptional Event?

In accordance with the language in section 319, EPA is

defining the term "exceptional event" to mean 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 EPA through the process established in these regulations to be an exceptional event.

It is important to note that natural events, which are one form of exceptional events according to this definition, may recur, sometimes frequently (e.g., western wildfires). For the purposes of this rule, EPA is defining "natural event" as an event in which human activity plays little or no direct causal role to the event in question. We recognize that over time, certain human activities may have had some impact on the conditions which later give rise to a "natural" air pollution event. However, we do not believe that small historical human contributions should preclude an event from being deemed "natural." In adopting section 188(f) of part D, subpart 4, of the 1990 amendments to the CAA, Congress recognized and provided for distinctions between these types of events with respect to

waiver of applicable requirements and the extension of otherwise applicable attainment dates for the PM<sub>10</sub> standard. In approving section 188(f) of the CAA, the House committee of jurisdiction discussed a circumstance in which recurring emissions from a source should be considered to be anthropogenic. The House report noted EPA statements that, in the cited case, high concentrations of dust from a lakebed were due to human activity, i.e., the long-term diversion of water from a lake. (see Public Law 101-549, CAA Amendments of 1990 House Report No. 101-290(1), May 17, 1990; and discussion of Mono Lake, California therein). Also, EPA recognized, in recently acting to retain PM<sub>10</sub> as a measure of coarse particulate, that in some instances exceedances of this NAAQS "may be caused in whole or in part, by exceptional events, including natural events such as windstorms... (and that) an exceedance may be treated as an exceptional event even though anthropogenic sources such as agricultural and mining emissions contribute to the exceedance." (71 FR 61216; October 17, 2006).

In this final rule, EPA also defines the term "exceedance" with respect to compliance with the NAAQS and establishes criteria for determining when an event can be said to "affect air quality." We are not finalizing more detailed requirements for determining when an event is "not



reasonably controllable or preventable” because we believe that such determinations will necessarily be dependent on specific facts and circumstances that cannot be prescribed by rule.

E. Examples of Exceptional Events

The EPA believes that the following types of events meet the definition of exceptional events, as defined above. This means that air quality data affected by these types of events may qualify for exclusion under this rule provided that all other requirements of the rule are met. By providing the examples listed below, EPA is not determining that such events are the only types of events that may qualify for exclusion under the rule as exceptional events. Other events that meet the statutory criteria for an exceptional event as defined in this rule may also qualify for exclusion. The AQS user documentation contains a list of other similar events that may be flagged for special consideration.

(<http://www.epa.gov/ttn/airs/airsaqs/manuals/qualifiers.htm>).<sup>10</sup>

In addition, in the sections below, we have provided responses to certain significant comments received during

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<sup>10</sup> The EPA will be revising the list of events contained in the AQS database following the promulgation of this rule to ensure that the list is consistent with the requirements of the rule.

the comment period for the proposed rule regarding the examples of events that may meet the definition of an exceptional event in order to elaborate upon or provide clarification about what constitutes an exceptional event.

1. Chemical Spills and Industrial Accidents

Emissions that result from accidents such as fires, explosions, power outages, train derailments, vehicular accidents, or combinations of these may be flagged as an exceptional event.

Comments and Responses:

Comment: Several commenters stated that "Chemical Spills and Industrial Accidents" should generally not be considered exceptional events. Commenters stated that most industrial accidents and chemical spills are reasonably controllable and preventable with proper planning and mitigation efforts. These commenters stated that allowing for accidents or spills that could have been avoided is inconsistent with the CAA.

Response: It is EPA's belief that air quality data that has been affected by emissions from chemical spills, industrial accidents, or structural fires may be flagged by a State as an exceptional event and reviewed by EPA for exclusion on a case-by-case basis to determine whether it meets the criteria for exceptional events as defined in

this rule. In particular, data influenced by chemical spills or industrial accidents must be demonstrated to have "affected air quality" and must be demonstrated to be due to circumstances that were not reasonably controllable or preventable and are events that are unlikely to recur in a particular location. The EPA agrees with the commenters that industrial or point source emissions due to malfunctions or non-compliance would not be considered exceptional events and should be addressed through the normal State Implementation Planning process.

## 2. Structural Fires

Structural fires include any accidental fire involving a manmade structure.

### Comments and Responses:

Comment: Several commenters indicated that "Structural Fires" should generally not be considered exceptional events. Commenters stated that these types of events should be considered as emissions from anthropogenic sources and handled within the form of the respective air quality standards where a certain number of exceedances of the standards are allowed over a 3-year period. Commenters assert that structural fires, lasting for several hours, are unlikely to cause an area to reach the level of nonattainment. In cases where structural fires are

determined to be the cause of a monitored violation of the NAAQS, commenters stated that EPA should adopt a case-by-case review of these events.

Response: The definition of structural fires under this rule pertains to any accidental fire involving a manmade structure. The EPA believes that structural fires could be an exceptional event under this rule, provided all other requirements of the rule are met, because they could "affect air quality," could be an event that is not "reasonably controllable" or "preventable," and could be events that are caused by human activity that are unlikely to recur at the same location. However, EPA agrees with the commenters that these types of events, as well as other similar types of events, should be reviewed on a case-by-case basis to determine whether they meet the criteria for an exceptional event as defined by this rule.

### 3. Exceedances Due to Transported Pollution

Transported pollution, whether national or international in origin, and whether from natural or anthropogenic sources, may cause exceedances eligible for exclusion under this rule, as long as all of the criteria and requirements related to exceptional events are met as defined in this rule. For example, States may flag, and EPA may exclude, data associated with fires occurring

outside of the borders of the United States, such as forest fires in Mexico, Central America, and Canada; or transport events such as African dust and Asian dust which contribute significantly to ambient concentrations of a pollutant in an area, leading to exceedances or violations of a NAAQS. 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 States. 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.

Comments and Responses:

Comment: Several commenters expressed concern over EPA allowing the exceptional events rule to be used to exclude data that has been affected by emissions emanating from sources outside the borders of the United States.

Response: States may flag data that has been affected by sources emanating from outside the United States that meet the criteria for an exceptional event as

defined under this rule, including requirements for causation and documentation. In cases where an area is impacted by emissions from sources outside of the United States which do not meet the criteria for an exceptional event under this rule, and these emissions contribute to an area being designated as nonattainment, the emissions may be addressed under section 179B of the CAA related to "International Border Areas." Section 179B provides that where a State is required to submit a State Implementation Plan (SIP) to address issues related to a nonattainment designation, EPA may approve the SIP for the area provided that the plan (1) meets all the applicable requirements called for under the CAA, other than the requirement that the plan demonstrate attainment or maintenance of the NAAQS, and (2) the SIP must demonstrate that the affected area would be able to attain the standard by the applicable attainment date "but for" emissions emanating from outside the United States.

#### 4. Exceedances Due to a Terrorist Attack

Emissions that result from a terrorist attack such as smoke from fires, dust, explosions, power outages, train derailments, vehicular accidents, or combinations of these may be flagged as an exceptional event.

Comments and Responses:

No comments were received on this topic.

5. Natural Events

The natural events addressed by this final rule are:

- (1) natural disasters and associated cleanup activities;
- (2) volcanic and seismic activities; (3) high wind events;
- (4) wildfires and wildland fire use fires; and (5)

stratospheric ozone intrusions. The EPA will consider other types of natural events on a case-by-case basis.

a. Natural Disasters and Associated Clean-up Activities

For the purpose of flagging, major natural disasters such as hurricanes and tornadoes for which State, local, or Federal relief has been granted, and clean-up activities associated with these events, may be considered exceptional events. The EPA believes that for a major natural disaster, a timeframe up to 12 months is a reasonable time period to allow for clean-up activities associated with these types of activities. In cases where the damage caused by the event is so substantial that a 12-month period is inadequate to address the clean up that is necessary, a State may submit a request to EPA for an extension of the 12-month time period. The EPA will grant requests for extensions of the time period related to such events on a case-by-case basis if the States submit adequate supporting information concerning the reason for

the extension as well as the length of time being requested for the extension.

Comments and Responses:

Comment: Several commenters indicated that EPA should limit the time period associated with clean-up activities due to a natural disaster. One commenter indicated that the exceptional events rule as proposed would allow States to apply the term "natural disaster" very broadly to include circumstances that would circumvent the intent of the CAA. For example, declaring an episode of high summer temperatures to be a natural disaster could potentially allow a State to exclude high ozone levels which commonly occur during hot weather.

Response: A time period up to 12 months for clean up activities is permitted for major natural disasters, such as hurricanes and tornadoes, for which State, local, or Federal relief has been granted, may be flagged for exclusion as exceptional events under this rule. The clean-up activities associated with these types of events may also be flagged for exclusion as being due to an exceptional event. Given the nature of a major natural disaster, the 12-month time period allowed for clean-up activities following such disaster is a reasonable time period, and is consistent with the time period being



allowed for volcanic and seismic activities under this rule. The period of high summer temperatures noted in the comment would not represent a major natural disaster, as described above, subject to the 12-month clean-up period.

b. Volcanic and Seismic Activities

Ambient concentrations of particulate matter for which volcanic or seismic activity caused or significantly contributed to high levels of particulate matter in an affected area will be treated as natural events. While generally not occurring frequently, volcanic and seismic activity can affect air quality data related to the particulate matter NAAQS for an extended period of time after an event. Volcanic activities can contribute to ambient concentrations in several ways: it may influence concentrations of particulate matter due to primary emissions (e.g., ash), and emissions of precursor pollutants (e.g., sulfur dioxide) that contribute to the secondary formation of particulate matter. Seismic activity (e.g., earthquakes) can also contribute to ambient particulate matter concentrations by shaking the ground, causing structures to collapse, and otherwise raising dust which may lead to exceedances or violations of the NAAQS.

Comments and Responses:

Comment: Several commenters indicated that the rule

should provide sufficient flexibility for data to be excluded where the duration of the event may last for a long period of time. An example of such an event is where volcanic activities last for several days.

Response: The EPA agrees with the commenters and notes that the rule allows for States to flag data and submit documentation related to events such as long-term volcanic and seismic activities. States may also submit requests to EPA to extend the time period up to 12 months for major natural disasters, for clean up activities following volcanic and seismic events. States are encouraged to submit supporting information related to the reasons for the requested extension and the length of time being requested for the extension.

c. High Wind Events

High wind events are events that affect ambient particulate matter concentrations through the raising of dust or through the re-entrainment of material that has been deposited. In some locations, concentrations of coarse particles like  $PM_{10}$  are most likely affected by these types of events, although  $PM_{2.5}$  standards may be exceeded under such circumstances as well. Section VII.B. also includes a discussion of this issue.

Comments and Responses:

Comment: Several commenters suggested that EPA replace the term "high winds" with the term "wind-generated dust" because (1) it places the emphasis on the natural mechanism, (2) dust may become entrained at relatively low wind velocities, and (3) the change will eliminate confusion between the wind speeds associated with a natural event and wind speeds needed to qualify for a "high wind" exceptional event under EPA's 1986 guidance.

Response: The EPA is retaining the term "high wind" event because it accurately connotes the type of natural event that should be excluded under this rule, as well as the action which caused the exceedance or violation of the standard. The term also serves as an indicator concerning the level of wind which caused the exceedance or violation of the standard and indicates that it was unusually high for the affected area during the time period that the event occurred. Therefore, States must provide appropriate documentation to substantiate why the level of wind speed associated with the event in question should be considered unusual for the affected area during the time of year that the event occurred. The EPA will evaluate such instances on a case-by-case basis, including factors such as

historically typical windspeed levels for the season of the year that the event is claimed.<sup>11</sup>

d. Wildland Fires

Federal land managers have afforded recognition to several different types of wildland fires (i.e., wildfire, wildland fire use fire and prescribed fire), depending on their causal circumstances and the role that such fires play in the affected ecosystems. Prescribed fire is addressed more fully in the following section.

The question of what is a natural versus an anthropogenic fire has particular significance when considering the impacts of wildland fires (wildfire, wildland fire use fire and prescribed fire) on air quality and how these impacts should be regarded under this rule. A "wildfire" is defined as an unplanned, unwanted wildland fire (such as a fire caused by lightning), and include

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<sup>11</sup>As described elsewhere in the preamble, EPA is adopting a weight of evidence approach to demonstrate that an exceptional event caused an exceedance or violation. Therefore, in instances where the level of the wind speed results in exceedances or violations of particulate matter, for data affected by these events to be considered for exclusion under the weight of evidence approach, a clear causal relationship must be demonstrated between the exceedances measured at the air quality monitoring site and the high wind event in question. EPA will consider in the weight of evidence analysis winds that produce emissions contributed to by anthropogenic activities that have been controlled to the extent possible through use of all reasonably available reasonable and appropriate measures.

unauthorized human-caused fires (such as arson or acts of carelessness by campers), escaped prescribed fire projects (escaped control due to unforeseen circumstances), where the appropriate management response includes the objective to suppress the fire. In contrast, a "wildland fire use" fire is the application of the appropriate management response to a naturally-ignited (e.g., as the result of lightning) wildland fire to accomplish specific resource management objectives in predefined and designated areas where fire is necessary and outlined in fire management or land management plans.

Using these definitions, we believe that both wildfires and wildland fire use fires fall within the meaning of "natural events" as that term is used in section 319. Therefore, ambient particulate matter and ozone concentrations due to smoke from a wildland fire will be considered for treatment as an exceptional event if the fire is determined to be either a wildfire or wildland fire use fire.

Comments and Responses:

Comment: In general, commenters strongly supported exempting wildfires as exceptional events under the rule.

Response: The EPA acknowledges support for the proposal to classify wildfires as a potential exceptional

event. As noted above, the Agency states that wildland fires will be excluded as exceptional events if they meet the criteria and requirements of the exceptional events rule.

Comment: The Agency received comments both supporting and opposing the proposal allowing wildland fire use fires to qualify as an exceptional event.

Response: After reviewing Congress' revisions to section 319, the various Agency policies cited in the proposal, and comments received, the Agency has determined that wildland fire use fires may also qualify as an exceptional event. However, these types of fires must also meet certain criteria. For example, these fires must occur on lands that have been designated in fire management or land management plans as areas where fires are necessary and desirable to accomplish specific resource management objectives.

Comment: Many commenters supported EPA's commitment to update the 1998 Interim Air Quality Policy on Wildland and Prescribed Fires to be consistent with this rule.

Response: The Agency plans to begin revising this policy in 2007 as part of its overall Fire Strategy after promulgation of this rule.

e. Stratospheric Ozone Intrusions

Stratospheric ozone intrusion is considered to be a natural event. A stratospheric ozone intrusion occurs when a parcel of air originating in the stratosphere, which is at an average height of 20 km or 12.4 miles, is transported directly to the surface of the earth. Stratospheric ozone intrusions are very infrequent, localized events of short duration. They are typically associated with strong frontal passages and, thus, may occur primarily during the spring season.

Comments and Responses:

Comment: One commenter stated that EPA should update its approach to stratospheric events, establish criteria by which such events may be determined, and credit States for the impact of intrusion events on non-compliant ozone monitor readings.

Response: Stratospheric ozone intrusion is identified as a natural event under 40 CFR part 50, appendix I, for ozone, and will be considered for treatment as an exceptional event.

6. Prescribed Fire

A "prescribed fire" is defined as any fire ignited by management actions to meet specific resource management objectives. According to existing Federal policy, prior to

ignition a prescribed fire must have an approved prescribed fire plan and must meet the National Environmental Policy Act (NEPA) requirements (where applicable) (see National Wildland Fire Coordination Group Glossary of Wildland Fire Terminology, 2003). For purposes of section 319, a prescribed fire cannot be classified as "natural," given the extent of the direct human causal connection, however, a prescribed fire may meet the statutory criteria defined in section 319 of "affect[ing] air quality," being "unlikely to recur at a particular location" and is "not reasonably controllable or preventable." The determination of whether a prescribed fire can be considered an exceptional event should be made on a case-by-case basis taking into account the factors described below.

A prescribed fire carried out for resource management objectives is frequently designed to restore essential ecological processes of fire and mimic fire under natural conditions. As such, a prescribed fire's expected frequency can vary widely, depending on the natural fire return interval of a particular landscape or wildland ecosystem. The natural fire return interval can range from once every year to less frequently than once in more than 200 years. Thus, in many, though not all cases, it may be possible to demonstrate that the likelihood of recurrence



is sufficiently small enough to show that a prescribed fire under these conditions meets the "unlikely to recur at a particular location" requirement of the statutory language.

A prescribed fire may also meet the condition of "not reasonably controllable or preventable" by examining whether there are reasonable alternatives to the use of fire in light of the needs and objectives to be served by it. For instance, there may be a significant build-up of forest fuels in a particular area that if left unaddressed would pose an unacceptable risk of catastrophic wildfire, which could result in adverse impacts of much greater magnitude, duration, and severity than would result from careful use of prescribed fire. A particular ecosystem may also be highly dependent on a natural fire return interval to maintain a sustainable natural species composition. Alternatively, pest or disease outbreaks in an area may be such that there are no reasonable alternatives to prescribed fire. In some cases, other legal requirements may preclude the use of mechanical fuel reduction methods such as in designated wilderness or National Parks. Where such ecological conditions exist, or where mechanical or other treatments are not reasonably feasible for reasons that include, but are not limited to, a lack of access, or severe topography, we believe that prescribed fire

qualifies as being "not reasonably controllable or preventable." Thus, we believe that a prescribed fire, conducted by Federal, State, Tribal or private wildland managers or owners, under the conditions described above may qualify as an exceptional event.

In addition, one of the principles contained in SAFE-TEA-LU, section 6013(b)(3)(A), includes the principle that States must take necessary measures to safeguard public health regardless of the source of air pollution. We believe it reasonable to tie the qualifying criteria for an anthropogenically generated prescribed fire to State accountability for public health protection. Consistent with historical practice governed by the guidance contained in the "Interim Air Quality Policy on Wildland and Prescribed Fires," issued on May 15, 1998, EPA approval of exceedances linked to a prescribed fire used for resource management purposes is contingent on the State certifying that it has adopted and is implementing a Smoke Management Program (SMP) as described in that policy. A State SMP establishes a basic framework of procedures and requirements for managing smoke from a prescribed fire managed for resource benefits. A SMP is typically developed by a State or Tribe with cooperation and participation by wildland managers, both public and

private, and the general public. As reflected in the Interim Air Quality Policy on Wildland and Prescribed Fires, States are provided flexibility on the structure of a SMP. Thus, a SMP can be extensive and detailed, or simply identify the basic smoke management practices for minimizing emissions, and controlling impacts from a prescribed fire.<sup>12</sup> In the proposal to this rule, EPA proposed to continue the use of that approach. We also proposed to expand the criteria for contingent approval to a prescribed fire where, in lieu of a SMP, basic smoke management practices, that minimize emissions and control impacts, are being employed by burners. In order to protect public health in areas where a SMP has not been adopted, in the final rule, the Agency has elected to expand, on a case-by-case basis, the qualifying criteria by which a prescribed fire may qualify as an exceptional event. In those cases, the Agency will judge on a case-by-case basis whether the State has ensured that appropriate

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<sup>12</sup> Basic smoke management practices could include, among other practices, steps that will minimize air pollutant emissions during and after the burn, evaluate dispersion conditions to minimize exposure of sensitive populations, actions to notify populations and authorities at sensitive receptors and contingency actions during the fire to reduce exposure of people at such receptors, identify steps taken to monitor the effects of the fire on air quality, and identify procedures to ensure that burners are using basic smoke management practices.

basic smoke management practices have been employed in determining whether the prescribed fire qualifies as an exceptional event. If an exceptional event occurs using the basic smoke management practices approach, the State must undertake a review of their approach to ensure public health is being protected and must include consideration of development of a SMP.

Comments and Responses:

Comment: Several commenters supported classifying prescribed fire as qualifying as an exceptional event. However, some commenters indicated that there should be limitations placed on when this type of fire should be considered as an exceptional event. A number of commenters also disapproved of allowing prescribed fire to be considered as an exceptional event because they believe that this type of fire is anthropogenic and does not meet the statutory definition of exceptional event. Some commenters also favored expanding the criteria for contingent approval to include instances where basic smoke management practices are used in lieu of a SMP, while other commenters did not favor this expansion.

Response: The EPA believes that a prescribed fire may be excluded as an exceptional event under this rule only in cases where the event meets the criteria for an exceptional

event as defined in this rule, if documentation is submitted to show that the fire meets the requirement, as described above, of "affect[ing] air quality," being "not reasonably controllable or preventable" and "unlikely to recur at location" and provided the other requirements of the rule including, among others, the schedules and procedures for flagging and demonstration are met. In those instances where a prescribed fire meets the criteria for an exceptional event, the State must also provide appropriate documentation to show that a certified SMP was in place or that the burner employed basic smoke management practices and that the appropriate practices were being followed at the time that the event occurred. Because a prescribed fire is an anthropogenic source of emissions for purposes of section 319, even though it may qualify as an exceptional event, a State can attempt to limit the health impact of a prescribed fire through the thoughtful development and implementation of a SMP or ensuring that basic smoke management practices were employed that minimize emissions and control impacts from prescribed fires.

**V. The Management of Air Quality Data Affected by Exceptional Events**

The EPA proposed that, in order to exclude air quality data from consideration for regulatory purposes, States must follow the procedures, timelines, and other requirements described in the proposed rule. Under the Final Rule, if an event is determined to be a qualifying exceptional event according to section IV.D, a State, Tribe, or designated local agency may petition EPA to classify the event as exceptional and submit a demonstration to justify data exclusion.<sup>13</sup> For data exclusion, States must clearly identify, or "flag," data they believe to be influenced by such events. The demonstration to justify data exclusion shall provide evidence that: (a) the event qualifies in accordance with section IV.D and with EPA policies and guidance for certain events as described in section IV.E, (b) there is a clear causal relationship between the measurement under consideration and the event that is claimed to have affected the air quality in the area, (c) the event is associated with an unusual measured concentration beyond typical fluctuations including background, and (d) that

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<sup>13</sup>Although a single qualifying exceptional event may affect air quality for multiple days and at multiple monitors, the discussions below consider an individual demonstration as justifying exclusion of a single AQS data point. The EPA encourages State submittals to package demonstrations about single exceptional events to expedite the review process.

there would have been no exceedance or violation but for the event.

The SAFE-TEA-LU requirements for exclusion of data from exceptional events are: (1) the occurrence of the exceptional event must be demonstrated by reliable and accurate data; (2) the State must show that there is a "clear causal relationship" between the NAAQS exceedances and the event; (3) there must be a public review process related to the exceptional event determination; and (4) the rule must set criteria and procedures for States to petition EPA to exclude data directly affected by an exceptional event. The sections below describe how each of these requirements must be met.

The sections below address the flagging of data as exceptional events that are determined to have affected air quality, submittal of demonstrations to request data exclusion, public review, and the schedule and timing for these processes. After an exceptional event occurs (judged according to section IV.D) and an agency determines that the event affected ambient air quality, flagging may occur according to section V.A. Section V.B describes the evaluation of whether or not the event affected ambient air quality. Section V.C describes the necessary "but-for"

test that data would have complied with the applicable standard but for the occurrence of the exceptional event. Section V.D explains the schedules and procedures for the flagging and demonstration submittals, section V.E discusses the applicability to hourly readings, section V.F states the requirements for determination submittals if the agency requests EPA to exclude the data from consideration for regulatory purposes, and section V.G describes the public review requirements. Some commenters suggested that all data occurring from exceptional events should be flagged, and EPA will allow these flags for informational purposes, even if the data do not qualify for exclusion. If EPA concurs on the exclusion of data from qualifying exceptional events, the data will be excluded from regulatory consideration but will still count toward data capture requirements.

A. Flagging of Data in the AQS Database

1. Background

Air quality data are required, pursuant to 40 CFR 58.16, to be submitted to EPA by each State on a calendar quarterly basis, with submissions due not later than 90 days after the end of a quarterly reporting period. Once air quality data have been submitted to EPA, it is possible to "flag" specific values for various purposes. "Data



flagging" refers to the act of making a notation in a designated field of an electronic data record. The principal purpose of the data flagging system in the AQS database is to identify those air quality measurements for which special attention or treatment is warranted. These include, but are not limited to, those measurements that are influenced by exceptional events.

The preamble to the proposed rule stated: "In the case of exceptional events, States place the initial flag on the data in the AQS database. Following an evaluation of the supporting documentation, EPA will decide whether to concur with the flag; concurrence will be marked by the placement of a second flag in the AQS database by EPA. Once EPA has concurred on the flag, the data will be excluded from regulatory decisions such as determinations of attainment or nonattainment."

"While the flagging of data by the State is the first step in an exceptional events demonstration, it is insufficient by itself to allow for the exclusion of data. In order to have EPA concur on a flag, States must meet the additional requirements described below. As stated previously, the State has the responsibility to document both the occurrence of the event and the causal connection to the monitoring data under consideration. Because the

initial step of flagging the data is a relatively simple one, States may flag many more days than the number of days for which they ultimately submit documentation to support exclusion.”

## 2. Final Rule

In the case of exceptional events, States and Tribes place the initial flag on the data in the AQS database, but EPA determines the available flags.<sup>14</sup> States may also delegate authority to local agencies to submit flags and documentation. In any event, States should work with their local agencies for the identification and review of exceptional events and consider requests to flag data from those agencies. At the time the flag is inserted into the AQS database, the State must also provide an initial description of the event in the AQS comment field. This initial description should include such information as the direction and distance from the event to the air quality monitor in question, as well as the direction of the wind on the day in question. The flags, and the initial event description, must be inserted into the AQS database prior

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<sup>14</sup> It is EPA's intention, for purposes of consistency with this rule, to review the list of exceptional events that are currently in the AQS database following the promulgation of the rule.

to July 1st following the year in which the event occurred. Schedules for demonstrations are discussed in section V.D.

Following an evaluation of the supporting documentation, EPA will make a decision concerning whether to concur with the flag; concurrence will be marked by the placement of a second flag in the AQS database by EPA. If EPA has concurred on the flag, the data will be excluded from regulatory determinations such as determinations related to attainment or nonattainment, or determinations concerning SIP development. The EPA will use the second flag to indicate the following conditions: EPA concurrence, EPA non-concurrence, and documentation submitted with EPA decision pending.

While flagging of the data in the AQS database by the affected State, local, or Tribe authority is the first step in an exceptional events demonstration, it is insufficient in and of itself to allow for the exclusion of data. In order for EPA to concur on an exceptional events flag, States, Tribes, and local agencies must meet the additional requirements described below. As explained, the State, Tribe, or local agency has the responsibility to document the occurrence of the event in question, to demonstrate that the event qualifies as an exceptional event in accordance with section IV.D, is consistent with EPA

policies and guidance for certain events as described in section IV.E, has provided for public review in accordance with section V.G., and to document the causal connection between the measurement under consideration and the event that is claimed to have affected the air quality in the area. The State, Tribe, or local agency must also demonstrate that the event is associated with an unusual measured concentration beyond typical fluctuations including background, and that there would have been no exceedance or violation "but for" the event. Because the initial step of flagging the data is a relatively simple one, States, Tribes, and local agencies may flag more days than the number of days for which they ultimately intend to submit demonstrations to justify data exclusion.

### 3. Comments and Responses

Comment: One commenter supported flagging data related to any fire that caused an exceedance.

Response: This Rule does not preclude a State, Tribe, or Local agency from flagging any data allegedly influenced by exceptional events. However, for the data to qualify as an exceptional event and to exclude it from regulatory decisions, the data must meet all of the criteria described in this Rule and all the procedures delineated must be followed.

B. What Does It Mean for an Event To "Affect Air Quality"?

1. Background

It is important to recognize that any emissions-producing event has the potential to have some influence on downwind air quality. Indeed, on any given day, measured air quality at any given location will reflect the influences of a variety of activities, including both natural and anthropogenic emissions from both local as well as remote upwind sources. Given the directive in section 319(b)(3)(B)(ii), that a clear causal connection must exist between the "measured exceedances" and the exceptional event, EPA believes that it would be unreasonable to exclude data affected by an exceptional event simply because of a trivial contribution of an event to air quality. Furthermore, we believe that it would be unreasonable to exclude more significant, but routine background air quality impacts, as this would disregard an important part of the public's exposure to air pollution upon which EPA's air quality standards are based. The effect of such exclusion would be an inappropriate reduction in the stringency of the NAAQS, rather than providing specific relief under the circumstances provided in section 319 for which States should not be designated

nonattainment or be required to prepare costly SIP control strategies.

Neither section 319, nor its legislative history, provides precise guidance on what should be considered when determining whether an event "affects air quality" and thus qualifies to be considered for exclusion or special treatment. However, section 319(b)(3)(B)(ii) and (iv) provides that there must be a "clear causal relationship" between a measured exceedance of a standard and the event to show that the event "caused a specific air pollution concentration;" and it must be shown that the data in question are "directly due" to an exceptional event. Moreover, one of the principles provided by section 319(b)(3)(A) indicates that the protection of public health is the highest priority. For these reasons, we proposed three conditions under which an event may qualify as "exceptional" for purposes of special regulatory consideration: its air quality impact must (1) fall both above the level of the applicable standard (i.e., must be an "exceedance" as required by section 319), (2) be significantly beyond the normal fluctuating range of air quality, including background air quality concentrations, and (3) should be large enough such that without it there would have been no exceedance.

We next provided several alternative approaches to determining whether and when air quality is "affected by" exceptional events and requested comment on which of these approaches was most suitable for demonstrating such impacts. These approaches primarily applied to condition (2) above. Two of the approaches involved statistical comparisons of existing flagged data. The final rule most closely reflects the third proposed option with some modifications. This option considered a case-by-case evaluation of the data against historical, seasonally adjusted air quality levels. Finally, the proposed rule provided details regarding what is meant by an exceedance (1) and the "but-for" condition (3). These are discussed in detail in section V.C.

## 2. Final Rule

Under the Final Rule, the demonstration to justify data exclusion must provide a justification that: (a) the event qualifies in accordance with section IV.D. and if applicable, with EPA policies and guidance for certain events as described in section IV.E, (b) there is a clear causal relationship between the measurement under consideration and the event that is claimed to have affected the air quality in the area, (c) the event is associated with an unusual measured concentration beyond

typical fluctuations including background, and (d) there would have been no exceedance or violation but for the event (discussed in section V.C). The second and third criteria establish that the event affected air quality.

The second criterion that the event caused an air quality impact may be shown through a number of methods including, but not limited to, modeling and speciation analysis. The third criterion distinguishes common events from those that are exceptional and may be accomplished through the presentation of historical evidence.

The final rule permits a case-by-case evaluation, without prescribed threshold criteria, to demonstrate that an event affected air quality. This demonstration would be based on the weight of available evidence, but must consider the historical frequency of such measured concentrations. While a State may determine the specific approach to use for such analysis, it must compare contemporary concentrations with the distribution of all measured data during the past several years. The evidence that an event affected air quality may be presented on a seasonal or other temporal basis to best compare contemporary concentrations with the distribution of historical values. For consistency with data reporting and computation of NAAQS statistics, a calendar quarter basis



is suggested. Baseline data may also be defined differently for each event type (e.g., April and May data may be the most relevant information for statistical comparison with certain dust events).

The general statistical approach of using all measured data during the past several years is independent of historical flagging practices and allows States to accurately represent events not likely to recur by including all monitoring data in analyses.

In addition, the magnitude of the measured concentration on days affected by exceptional events relative to historical, temporally adjusted air quality levels can guide the level of necessary analysis and documentation to demonstrate that the event affected air quality. For extremely high concentrations relative to historical values (e.g., concentrations greater than the 95<sup>th</sup> percentile), a lesser amount of documentation or evidence may be required to demonstrate that the event affected air quality. The closer the event concentration is to typical levels (e.g., values less than the historical 75<sup>th</sup> percentile), the stronger the necessary evidence would have to be to justify exclusion of data for regulatory purposes. This weight of evidence approach is most nearly

analogous to our historical treatment of exceptional events.

### 3. Comments and Responses

Comment: One commenter noted that EPA's proposed rule concedes that the third option would "provide the least definitive guidance to assist States in their evaluations," and "may make it difficult for EPA regions to be consistent when determining whether to concur on a flag." Moreover, "the case-by-case approach allows for consideration of days with ambient concentrations which are not necessarily among the highest concentrations that have been historically observed. While such days are unlikely to impact short-term standards, discounting such days can certainly have an impact on an annual average concentration." The commenter asserted that EPA's description of the proposed case-by-case evaluation makes the case for rejecting that option because it fails to provide the guidance mandated by section 319, and is so vague as to be arbitrary.

Response: The EPA disagrees with the commenter that this option fails to provide guidance and is so vague as to be arbitrary. The EPA has explained above the criteria that it will use in making its case-by-case evaluations. The commenter's concern that the event must represent concentrations that are not typically observed is addressed

by the third criterion that the event must be associated with an unusual measured concentration beyond typical fluctuations including background. Demonstration of the magnitude of the measured concentrations with respect to historical frequency under similar conditions will provide a new level of consistency across monitoring locations.

Comment: If an area exceeds the NAAQS, one commenter stated that use of a 95<sup>th</sup> percentile criterion better ensures that the definition of an exceptional event is met (i.e., unlikely to recur at a particular location).

Response: The EPA recognizes that extreme concentrations (e.g., corresponding to values greater than the 95<sup>th</sup> percentile of historical values) are more likely associated with exceptional events. With the final rule, we are not assuming that such values are definitely exceptional. In fact, some extreme concentrations may be associated with various emission sources and atmospheric conditions which are unrelated to a causal connection to the claimed exceptional event. Instead, the frequency of occurrence relative to historical concentrations would be used as an important part of the overall weight of evidence to demonstrate the exceptional nature of the claimed air quality impact.

C. Use of a "But For" Test

1. Background

There may be instances in which exceptional events may have a significant impact on air quality on days when concentrations are already above the applicable standard in the absence of the influence of such events. In such cases, it is important to preserve and consider all valid air quality data influenced by such activities, which properly fall within the responsibilities of States to manage for purposes of air quality attainment and maintenance. For this reason, we proposed to require that air quality data may not be excluded except where States show that exceedances or violations of applicable standards would not have occurred "but for" the influence of exceptional events.

In other words, to the extent that it is possible to determine that the resulting air quality concentrations and appropriate design values for an area would be above the level of the standards even without the influence of the exceptional event, the air quality data for the day(s) in question should not be excluded. However, consideration of the impacts of exceptional events on air quality values for control strategy planning purposes may be appropriate, and States are encouraged to consult with the appropriate EPA regional office to further discuss this issue.

## 2. Final Rule

The EPA will maintain the proposed "but-for" requirement that air quality data may not be excluded except where States, Tribes, or local agencies show that exceedances or violations of applicable standards would not have occurred "but for" the influence of exceptional events. Through analyses, it is possible to demonstrate that an exceedance or violation would not have occurred but for the event [See sample "but-for" analysis in memo to docket, Husar *et al.* 2006, (<http://www.regulations.gov>, EPA-HQ-OAR-2003-0061-0733 thru 0733,5)]. This analysis does not require a precise estimate of the estimated air quality impact from the event. The weight of evidence demonstration can present a range of possible concentrations which is not as technically demanding as justifying a specific adjustment to a measured value.

Because there are two standards for PM<sub>2.5</sub>, clarification is needed regarding the measurements that contributed to an exceedance or a violation that are eligible to be excluded. This rule is limited to values above the annual standard for PM<sub>2.5</sub> because this simplifies the process for determining which values are eligible for flagging according to the intent of section 319. The short-term PM<sub>2.5</sub> NAAQS is based on a 3-year average of the

annual 98<sup>th</sup> percentile of 24-hour values. Therefore, it is possible that one or two of these annual concentration values may be below the level of the NAAQS while the 3-year average is above the level of the NAAQS. Because three annual 98<sup>th</sup> percentile concentration values are included in the determination of a short-term PM<sub>2.5</sub> NAAQS violation, individual measurements below the NAAQS may contribute to a violation.

On the other hand, the annual PM<sub>2.5</sub> NAAQS is also a standard based on a 3-year average. However, violations of the annual standard that are caused by measurements which are not exceedances of that standard will be difficult to distinguish from typical air quality concentrations including background. To accommodate the 3-year form of the PM<sub>2.5</sub> NAAQS, this rule will allow measurements whose concentrations are greater than the level of the annual NAAQS to be flagged as being affected by exceptional events for the purposes of contributing to an exceedance or violation of the PM<sub>2.5</sub> NAAQS. Thus, we provide the following clarification that individual measured values greater than the annual PM<sub>2.5</sub> NAAQS will be considered "exceedances" under this rule and therefore eligible to be considered for exclusion for comparisons to either the annual or 24-hour NAAQS.

### 3. Comments and Responses

Comment: One commenter stated that, while some of those measurements may not individually be above the NAAQS, taken together they might be sufficient to put an area in violation of an annual standard. Any "but for" determination must take into account the aggregate of exceptional events that occurred within the applicable NAAQS period.

Response: The rule acknowledges that it is possible that an event can affect multiple days. The "but for" provision allows for data exclusion if but for the entire event there would have been no exceedance or violation. Therefore, for those events that can be shown to affect air quality on multiple consecutive days, measurements for the entire period are eligible for data exclusion, provided that at least one measurement day during the episode is an exceedance as defined by this rule and the air quality impact on each day are considered exceptional.

Comment: One commenter cautioned EPA about using the phrase "to the extent it is possible to determine" because a "bright line" distinction between the contribution from natural and anthropogenic sources often does not exist.

Response: We agree with this comment and for this reason we will permit a weight of evidence-based approach

to demonstrate that there would not have been an exceedance or violation but for the event.

D. Schedules and Procedures for Flagging and Requesting Exclusion of Data

1. Background

In establishing procedures and time tables for States to request, and EPA to grant, exclusion of data affected by exceptional events, we are guided by two competing considerations: ensuring States have adequate time and opportunity to compile and evaluate all relevant and available information in support of such requests; and making determinations in a timely manner so that all pertinent and valid air quality data would be appropriately considered in regulatory determinations. To assist EPA in determining the best approach to managing the data flagging process and submissions of demonstrations for the final rule, we proposed three alternatives for public review and comment. Public comments showed that each option had desirable aspects, and these are incorporated into the final rule.

2. Final Rule

A multi-step process will be established for identification of data and submission of demonstrations. The process is designed to ensure that States, Tribes, and



local agencies have adequate opportunity to compile and present evidence of exceptional and natural events but also ensures timely submittals in order to make regulatory decisions and ensure the protection of human health through NAAQS determinations. The steps include State flagging, annual State submission of an initial event description, State submission of a demonstration to justify data exclusion and EPA review followed by approval or disapproval. Where air quality in an area is influenced by a relatively small set of emission sources with well-defined emission profiles and limited pollutant species, a demonstration that an air quality measurement influenced by a particular event merits exclusion may be relatively simple to make. In other cases, such as where the number and types of sources contributing to measured air quality concentrations are extremely complex and varied, making it more difficult to distinguish between the effects of routine activities and unusual ones, more time and effort will be needed for a State, Tribe, or local agency to provide an adequate demonstration in support of its request.

States, Tribes, and local agencies are encouraged to flag the data that they believe to be affected by exceptional events at the time of submission of the air

quality data to EPA's AQS database, in accordance with the schedule described in 40 CFR 58.16, which is generally no later than 90 days after the end of the calendar quarter. This includes both flagging of data and insertion of the initial event description into the AQS comment field. This constitutes notification of the appropriate EPA Regional Office concerning the State's intention to seek exclusion of data. This approach would ensure that the flagging process remains consistent with the timeline set forth in rules governing data submission requirements. The EPA recognizes that laboratory analyses may delay these submissions and therefore is extending the required time period for submission to 180 days after the end of the calendar year (i.e., all flags, along with initial event descriptions, for a calendar year must be reported by July 1 of the following year).

We encourage States, Tribes, and local agencies to submit the demonstration to justify data exclusion annually for exceedances of short-term NAAQS by July 1. However, the demonstration to justify data exclusion must also be submitted no later than 12 months prior to a regulatory decision. For all flagged events, the demonstration to justify data exclusion must be submitted within 3 years of the calendar quarter following an event, but no later than

12 months prior to a regulatory decision. This period should be used primarily to support NAAQS compliance with annual averages and violations of the short-term standard that were not anticipated. For nonattainment designations, this would occur with the Governor's letter recommending the list of nonattainment areas. We also recognize that special circumstances could dictate more expedited data delivery, flagging, and minimal demonstrations (e.g., PM<sub>2.5</sub> designations using 2002-2004 data). The submitted demonstration to justify data exclusion as well as the EPA responses and the rationale for the EPA decision will be made publicly available through EPA. The reason for providing the 3-year timeframe is that for ozone and PM, decisions regarding whether or not an area is attaining the applicable standard are based on the most recent 3 years of air quality data. Providing 3 years for submission of demonstrations would provide States, Tribes, and local agencies with an opportunity to evaluate whether the influence of one or more exceptional events will be relevant to determinations of attainment or nonattainment before undertaking the effort of preparing and submitting demonstrations.

Once EPA receives a State's demonstration, EPA generally will undertake to review the demonstration and

provide a concurrence or nonconcurrence on the flag in the AQS database within 60 days. The EPA expects that, in most cases, this time period should be enough time to review and provide a concurrence or non-concurrence related to a State's request to exclude data affected by an exceptional event. However, for more complex demonstrations, EPA may require additional time to make its decision and will notify the State of the additional time required.

### 3. Comments and Responses

Comment: One commenter supported arguments on why the proposed rule must include a procedure for retrospective flagging that addresses the full set of the State's needs so that the end result is that the State can flag any and all events impacted by natural events.

Response: With the Final Rule, EPA requires annual submittal of flags. States may, if they so choose, submit them sooner. This schedule ensures that data are collected and retained shortly after the event and identification of potential (non-routine) events is done in a timely fashion to ensure that appropriate corrective actions can be taken. States would only maintain minimal documentation supporting the decision to flag the data. The full demonstrations, however, can come later, in order to allow States time to focus efforts on those events that are determined to have

an impact on attainment. The Agency notes that the Exceptional Events Rule does not apply to routine natural events that are part of background air quality.

Comment: One commenter was concerned that a State may have failed to flag data impacted by a natural event because the data values were below the current NAAQS, only to find the State threatened with nonattainment after NAAQS revisions.

Response: For data collected before the effective date of this rule, States may include a demonstration to justify data exclusion with the Governor's recommendation letter on nonattainment areas, provided that there was notice and opportunity for public comment. After considering this and other comments, for PM<sub>2.5</sub> data collected during calendar years 2004-2006, that the State identifies as resulting from an exceptional event, EPA is permitting the State to flag and submit an initial description of the event provided that these are submitted no later than October 1, 2007. In cases where the State is able to show that this time period is inadequate, a State may submit a request for an extension and EPA will grant this request for an extension up to but no later than December 1, 2007. This procedure should accommodate States concerned about potential PM<sub>2.5</sub> nonattainment areas using

the 2004-2006 data sets. The EPA may consider a similar exemption of the schedules for submittal of data for future revision of standards.

Comment: One commenter stated that EPA should also make allowances for those situations when a State neglects to flag a value or submit documentation within the required timeframes. In these cases, the commenter asserted that EPA should provide some type of petitioning process.

Response: If a State fails to meet the schedule for flagging or document submittal, late petitions will not be considered. Policy decisions, SIP planning, and dissemination of data should not be delayed or altered based on a State's failure to submit documentation or follow the regulatory procedures in a timely manner.

E. Exclusion of Entire 24-Hour Value as Opposed to a Partial Adjustment of the 24-Hour Value

1. Background

In general, EPA's historical practice has been to exclude a daily measured value in its entirety when an exceptional event causes that value, and we retained this approach in the proposed rule. With this approach, a determination is made that emissions from the event are largely responsible for the resultant ambient air pollutant concentration. For example, if the observed concentration

is  $200 \mu\text{g}/\text{m}^3$  for  $\text{PM}_{2.5}$  and is associated with a nearby forest fire, then EPA is likely to concur with the claim that the event was responsible for the ambient concentration. The measured value would be excluded in its entirety from the data used to judge attainment (as per 40 CFR 50, appendix N), although the measurement would still count towards meeting minimum data capture requirements.

We believe it would be desirable to adjust the daily value to exclude only those portions of the data that are attributable to the exceptional event in question, and to retain the remainder of the day's measurement if appropriate and accurate methods were available to make such adjustments. For example, if an area affected by a wildfire had a measured 24-hour  $\text{PM}_{2.5}$  concentration of  $50 \mu\text{g}/\text{m}^3$  and the estimated event impact was  $30 \mu\text{g}/\text{m}^3$ , then the expected value that would have occurred but for the event would have been  $20 \mu\text{g}/\text{m}^3$ . Normal air quality for this location might be  $16 \mu\text{g}/\text{m}^3$  and, therefore, the "but-for" concentration of  $20 \mu\text{g}/\text{m}^3$  is above average. Discounting the entire event day could, therefore, inappropriately bias a determination of nonattainment with the annual  $\text{PM}_{2.5}$  NAAQS (currently set at  $15 \mu\text{g}/\text{m}^3$ ). We are currently seeking to develop and evaluate new analytical methods that would allow us to discount only the portion of the daily value

attributable to the exceptional event. However, at present, we are not aware of the existence of precise and universally applicable techniques that are administratively and technically feasible and that could support partial adjustment of air quality data except perhaps in limited cases, such as where the number and type of pollutant species and contributing sources are relatively less complex or potentially when sufficient spatial, temporal, meteorological and chemical data are available [See memo to docket, Husar *et al.* 2006, (<http://www.regulations.gov>, EPA-HQ-OAR-2003-0061-0733 thru 0733.5)]. When we determine that techniques for adjustment of air quality data are sufficiently well-demonstrated for use in exceptional events determinations, we will publish a notice of proposed rulemaking to seek comment on the appropriateness and scope of such use and its impact on the requirements set forth in this rule for determining an exceptional event.

## 2. Final Rule

We are retaining in this rule EPA's historical practice to exclude a daily measured value in its entirety when that value is found to be caused by a qualifying exceptional event that affected air quality in accordance with the conditions described in sections V.B and V.D. If precise and universally applicable techniques that are



administratively and technically feasible and that could support partial adjustment of air quality data become available in the future, EPA will, through a rulemaking, propose, and as appropriate, finalize a technique for partial adjustment of data as well as any other matters in this rule which may be affected by the availability of this technology.

One exception may be made to this exclusion of the entire daily value for monitoring locations with hourly measurements by Federal Reference Methods (FRM), Federal Equivalent Methods (FEM), and/or Approved Regional Methods (ARM) where such data are submitted routinely to AQS. For example, in cases where stratospheric ozone intrusion occurs, those hourly (but not sub-hourly) measurements affected by the intrusion may be excluded in order to calculate the ozone measurements for the day. The individual hours are to be excluded however, if the resulting calculated NAAQS averaging time value exceeds the level of the standard, not just if the individual hourly values exceed that level. Thus, in the case of ozone, the resulting 8-hour average must exceed 0.08 ppm, and the resulting 24-hour average must exceed 15.0  $\mu\text{g}/\text{m}^3$  for  $\text{PM}_{2.5}$ . Incomplete data substitution protocols shall also be considered when evaluating the original and revised NAAQS

averaging time value. In other words, an 8-hour ozone period is considered valid when fewer than six valid hours are present if one half the minimum detection limit can be substituted for the missing hours and the resultant 8-hour value still exceeds 0.08 ppm; a daily (24-hour) PM<sub>2.5</sub> value is considered valid when fewer than eighteen valid hours are present if zeroes can be substituted for the missing hours and the resultant 24-hour value still exceeds 15.0 µg/m<sup>3</sup>.

### 3. Comments and Responses

Comment: One commenter supported value adjustment rather than exclusion when, and only when, such adjustment can be accomplished by the application of various quantitative or semi-quantitative approaches. When this is not possible, the value in question should be replaced with a long-term seasonal mean value.

Response: The EPA will consider such analyses as part of the weight of evidence to judge "but-for," but will not make quantitative adjustments to reported measured values because EPA does not believe sufficient quantitative methods are available at this time.

### F. What Should States Be Required To Submit in Their Exceptional Events Demonstrations?

#### 1. Background

Section 319 requires that, in order to have a flagged value excluded from regulatory determinations, a State must make an affirmative demonstration that an event occurred (as shown by reliable and accurate data that is promptly produced) and that there is a clear causal relationship between measured exceedances or violations of a standard and the exceptional event in question to "demonstrate that the exceptional event caused a specific air pollution concentration" (42 U.S.C. 7619(b)(3)(B)(ii), (iv)).

Section 319 also indicates that regulations promulgated under the section should provide for criteria and procedures to exclude air quality monitoring data "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."

Therefore, after flagging data in the AQS database, States are expected to develop appropriate documentation to support each individual flag. As a general matter, we believe that such demonstrations should include documentation showing that the event in fact occurred and that emissions related to the event were transported in the direction of the monitor(s) where measurements were recorded; the size of the area affected by the transported emissions; the relationship in time between the event,

transport of emissions, and recorded concentrations; and, as appropriate, pollutant species-specific information supporting a causal relationship between the event and the measured concentration. The latter information could be based on available data provided by routine speciation, monitoring networks, or from selective laboratory analysis of archived particulate matter filters for the day thought to be impacted by specific events. In certain situations, such data might be useful for evaluation of impacts from exceptional events, e.g., to distinguish between impacts caused by natural fires versus impacts caused by industrial sources. States also need to show that appropriate mitigation actions were taken at the time that the event occurred, or after an event occurred in order to protect public health.

The following examples are intended to further illustrate the kinds of information that States could consider in preparing their demonstrations:

- Information demonstrating the occurrence of the event and its subsequent transport to the affected monitors. This could include, for instance, documentation from land owners/managers, satellite-derived pixels (portions of digital images) indicating the presence of fires; satellite images of the dispersing smoke and

smoke plume transport or trajectory calculations (calculations to determine the direction of transport of pollutant emissions from their point of origin) connecting fires with the receptors.

- Identification of the spatial pattern of the affected area (the size, shape, and area of geographic coverage). This could include, for instance, the use of satellite or surface measurement data.
- Information about temporal patterns (e.g., the time and duration of an event in relation to measured downwind concentrations, air quality trends over time and space). This could include, for instance, observed sequential concentration spikes at multiple locations in a downwind direction.
- Identification of the chemical composition of measured concentrations. This could include, for instance, organic or crustal material in excess of typically observed quantities to differentiate from other high concentration events.
- High wind speeds relative to historically typical levels for the season of the year in which the claimed event occurred.

This list is not exhaustive and not all of these kinds of information and/or documentation will need to be

provided in every instance. A particular instance may require more or less documentation, depending on the particular facts or circumstances in that instance. The simplest demonstrations could consist of newspaper accounts or satellite images to demonstrate that an event occurred together with daily and seasonal average ambient concentrations to demonstrate an unusually high ambient concentration level, which is clearly indicative of an exceptional impact. Such is the case with events such as volcanic eruptions and nearby forest fires. In one instance, we determined that wildfires upwind of the San Diego area very likely caused high concentrations of particulate matter measured in October 2003 based on the actual physical damage caused by fire to the ambient monitor. Depending on the nature of the event, meteorological conditions, severity and spatial extent of measured ambient concentrations (including relevant chemical components when available) relative to what typically occurs in the area, and on emissions of pollutants from the exceptional event which have similar characteristics to those of other sources in the area, additional showings could be required on a case-by-case basis. In particular, we anticipate that significantly more effort will be needed to establish that an exceptional

event caused a particular concentration in an urban area in which there are numerous and diverse sources and complex meteorology and topography, and where the emissions from the event in question may well be similar to those from other sources contributing to measured concentrations, as compared to an area that has relatively few sources, simple terrain and less complex meteorology, and where emissions associated with the event are both substantially greater than and different in composition from those of other nearby sources.

## 2. Final Rule

The demonstration to justify data exclusion will address specific monitor readings reported to the AQS database. As stated in the previous sections, a complete demonstration shall justify that: (a) the event qualifies in accordance with section IV.D. and with EPA policies and guidance for certain events as described in section IV.E, (b) there is a clear causal relationship between the measurement under consideration and the event that is claimed to have affected the air quality in the area, (c) the event is associated with an unusual measured concentration beyond typical fluctuations including background, (d) there would have been no exceedance or violation but for the event, and (e) the State has provided

an opportunity for the public to comment as required under section V.G. The level of documentation may vary by the type of event and can be guided in part by the relative magnitude of the observed concentrations. To obtain concurrence, EPA must determine that the demonstration is complete and provides a reasonable technical demonstration.

Because of the variability in the nature of exceptional events and the resulting demonstration requirements, States should consult with the appropriate EPA Regional Office early in the process of preparing their demonstrations. We are not specifying what will be required as a minimum level of documentation in all cases because facts and circumstances will vary significantly based on, among other things, geography, meteorology and the relative complexity of source contributions to measured concentrations in any particular location. We believe, however, that at a minimum, the elements of such a demonstration should include a showing that an event occurred at a time when meteorological conditions were conducive to transporting emissions from the event downwind to the monitor recording a high concentration of one or more criteria pollutants. Acceptable documentation will be determined through consultation with the EPA regional offices. However, certain minimum requirements (e.g., "but



for" test) will be necessary as discussed in the earlier sections of this rule.

### 3. Comments and Responses

Comment: In cases where high wind data cannot be found, one commenter stated that EPA should use a "weight of evidence" approach, and should recognize that not accepting a demonstration that such exceedances are exceptional events is equivalent to a determination that the exceedances were caused by recurring anthropogenic sources.

Response: The EPA agrees that a weight of evidence approach is the most appropriate for demonstrations of exceptional impact.

Comment: One commenter asserted that States should be allowed to choose not to submit any demonstration, if the flagged value does not impact a regulatory determination or if more detailed investigation indicates that the value may not have been caused by an exceptional event after all. In these cases, the agency should have the option to remove the flag.

Response: We agree that the flag can be removed in these circumstances or left for informational purposes only.

Comment: One commenter stated that EPA must provide a reasonable explanation and documentation for their decision to deny any request for the flagging of data.

Response: The EPA regional offices will work with the States, Tribes, and local agencies to ensure that proper documentation is submitted to justify data exclusion. The EPA will make the response and associated explanation publicly available.

Comment: One commenter stated that EPA must establish a technically-based appellate process for States to follow when Regional Offices do not concur with a data flag.

Response: The EPA does not believe that an appellate process is necessary because we anticipate that the States and Regional Offices will be working closely through the data and documentation submission process.

G. Public Availability of Air Quality Data and Demonstrations Related to Exceptional Events

1. Background

Section 40 CFR part 58.16 of EPA's air quality monitoring rules state that all ambient air quality data and associated quality assurance data, including metadata records and information specified by the AQS Data Coding Manual [epa.gov/ttn/airs/airsaqs/manuals/manuals.htm](http://epa.gov/ttn/airs/airsaqs/manuals/manuals.htm) must be

reported to EPA via AQS. This information includes exceptional event flags.

## 2. Final Rule

We are requiring that all relevant flagged data, along with the reasons for the data being flagged, and a demonstration that the flagged data are caused by exceptional events be made available by the State for 30 days of public review and comment. The State or designated local agency should consider the public comments prior to the final demonstration being submitted to EPA for a decision concerning whether to exclude the data from regulatory consideration. Notice and availability of such data and demonstrations must be adequate and consistent with States' administrative procedures governing similar submissions. The EPA does not require that public hearings be held on exceptional events demonstrations but leaves this matter to the States' discretion consistent with their administrative procedures. With the submission of the demonstration, the State should document that the public comment process was followed.

## 3. Comments and Responses

Comment: One commenter stated that any new rules related to the flagging of exceptional events should be consistent with prior EPA policies and provide sufficient

time for States to engage the public in the process prior to data being flagged in the AQS.

Response: The EPA believes that the data demonstration requirements of the final rule provide sufficient time to engage the public. Not only does the final rule require that the public be accorded an opportunity to comment on the State's findings, but in some instances there will be further opportunities for public review and comment at the time that EPA proposes to base specific actions, e.g., approval or disapproval of SIP revisions. Thus, we do not believe that additional public review and comment provisions are necessary or appropriate.

## **VI. Additional Requirements**

Pursuant to section 319, EPA is finalizing this rule to address data that has been influenced by exceptional events. Also, EPA is finalizing one of four options put forth in the proposed rule to address the issue of whether, and to what extent, States are required to adopt specific mitigation plans or measures to protect the public from emissions due to exceptional events. Section 319 states that in promulgating regulations under the section, EPA shall follow certain, enumerated principles and that regulations must contain certain requirements. Section 319(b)(3)(A) contains five principles, including the

principle that each State "must take necessary measures to safeguard public health regardless of the source of air pollution." In order to address this principle, EPA is finalizing its proposal to exclude trivial and more routine air quality impacts from qualifying as an exceptional event and is also finalizing a "but for" test as a precondition to qualification as an exceptional event (See: section V.C above).

A. Requirements for States to Provide Public Notification, Public Education, and Appropriate and Reasonable Measures to Protect Public Health

1. Background

The EPA proposed one approach and took comments on three alternative options concerning what actions a State should take in anticipation of, or in response to, the occurrence of an exceptional event. The options that were proposed ranged from being very detailed and prescriptive to being very flexible and less prescriptive in terms of the actions that States should take to mitigate the impact of an exceptional event on the public. While EPA does not believe that section 319(b)(3)(A) explicitly requires, in and of itself, that States must develop mitigating measures or plans, EPA solicited comment in the proposed rule on whether this subparagraph supports the use of other legal

authority to require mitigating actions or plans when an exceptional event occurs, and solicited comment on issues regarding its legal authority to require mitigation measures and plans, and the legal basis for not requiring mitigation measures or plans.

Option 1 in the proposed rule provided that in cases where exceedances of a NAAQS are caused by an exceptional event, once a State becomes aware that an exceptional event is occurring, is predicted to occur, or has occurred, the State must take reasonable and appropriate actions to:

- Provide notice to the public of the event. This may include, but is not limited to, using the media to alert the public of the event.
- Provide public education concerning the potential health risks associated with being exposed to high ambient concentrations of pollutant(s) related to the event. This may include, but is not limited to, providing information to sensitive populations related to the health risks associated with the event.
- Take appropriate and reasonable measures to abate or minimize the exposure of the public to high concentrations of air pollution associated with the exceptional event. This may include, but is not

limited to, taking reasonable and appropriate actions to implement control measures on significant contributing anthropogenic sources to reduce potential exposure of the public to emissions associated with natural events. States must review the need to implement controls on contributing anthropogenic sources on a case-by-case basis. For example, in the case of volcanic or seismic activity, this may include, but is not limited to, providing for prompt clean-up of the ash deposits related to the event to prevent re-entrainment.

Under option 1, EPA also proposed that, where a State is requesting that air quality data be excluded as an exceptional event, the State must submit, as a part of its demonstration, appropriate documentation to show that the State provided public notice and public education concerning the event in question, and that the State took reasonable and appropriate measures to abate or minimize the exposure of the public to the emissions from the event, where appropriate.

Option 2 in the proposed rule provided that, States are required to adopt a general mitigation plan to address exceptional events before the occurrence of an event as a part of the State's SIP required under section 110(a)(1) of

the CAA. Section 110(a)(1) requires States to adopt and submit to EPA, within 3 years following the promulgation of a new or revised NAAQS, a plan which provides for the implementation, maintenance, and enforcement of the standard in each air quality region within the State. Under this option, States would be required to develop and adopt the general requirements and procedures necessary for the implementation of a mitigation plan to address exceptional events as a part of its section 110(a)(1) SIP to address a new or revised NAAQS. The general plan related to exceptional events would include provisions providing for public notice, public education related to an event, and provide a requirement for a State to take reasonable and appropriate measures to mitigate the public health impacts of an exceptional event. Under this option, in cases where control measures are required to address the impacts associated with an exceptional event, the State would be required to implement appropriate measures on an episodic basis, meaning in response to a specific event that affects the air quality of a particular area.

Option 3 in the proposed rule required that, where appropriate, EPA would require a State to develop and implement a mitigation plan for an area following the occurrence of an exceptional event. This is in contrast to



option 2 above, which would require each State to adopt a plan under section 110(a)(1) of the CAA which would contain the general provisions of a mitigation plan in advance of the occurrence of any exceptional event. Under option 3, the mitigation plan would only be developed by the State following the occurrence of an exceptional event for which the State requested exclusion of the air quality data, and would not be submitted as a part of the SIP. The mitigation plan would be required to address the actions that would be taken by the State related to future similar events. The mitigation plan under this option would have the same provisions as required of plans developed under Option 2 above, including the requirements to notify the public that an event is expected to occur, or is occurring, or has occurred, to provide for public education related to the health effects associated with the event, and to identify the actions that would be taken by the State to mitigate the impact of any recurrence of the event on public health.

Option 4 provided that EPA would not require a State to develop and implement a mitigation plan for exceptional events, or to take specific mitigation measures as described in options 1-3 in order for EPA to exclude data from regulatory consideration. This approach proposed to

allow States to have the maximum degree of flexibility in determining what actions should be taken to mitigate the impacts of exceptional events, e.g., public notification, public education, efforts to reduce exposures, or other necessary measures to safeguard public health. Thus, under this proposed option States would not be obligated to take any particular actions to mitigate exposures such as those contained in Option 1, to develop and implement a formal mitigation plan as part of the SIP such as those contained in Option 2, or to develop a more formal plan with requirements not a part of the SIP such as those contained in Option 3.

## 2. Final Rule

The EPA is adopting a modified version of Option 1 from the proposed rule, as described above. This option does not require States to submit formal mitigation plans; however, States must provide public notice, public education, and must provide for implementation of reasonable measures to protect public health when an event occurs.

## 3. Comments and Responses

Comment: Several commenters supported option 1 because they stated that it provides more flexibility for States to determine the appropriate measures to be

implemented related to the occurrence of an exceptional event. Other commenters supported option 1 for well defined, well understood events that are non-recurring or unlikely to recur. The majority of the commenters who commented on option 2 strongly opposed that option. The commenters indicated that option 2 would waste scarce local resources in developing a mitigation plan. Other commenters stated that issues concerning exceptional events should be dealt with outside the SIP process and section 110 of the CAA. With regard to Option 3, one commenter indicated that a preemptive plan similar to a Natural Events Action Plan (NEAP) (which includes Reasonably Available Control Measures (RACM)/Best Available Control Measures (BACM) is necessary to mitigate the poor air quality impacts associated with exceptional events. The commenter stated that BACM, not RACM, must be implemented on all contributing anthropogenic sources related to an exceptional event. Several commenters supported option 3 for addressing public health impacts related to recurring natural events. The commenters stated that mitigation plans should include BACM for contributing anthropogenic sources, not RACM. The majority of commenters who commented on option 4 stated that they supported the implementation of option 4 because it allows States the

most flexibility for developing and tailoring programs for public notification of exceptional events, the implementation of education programs on exceptional events, and implementation of reasonable measures to protect public health.

Response: States have an inherent responsibility to protect its citizens and as such to provide appropriate and reasonable actions to mitigate the impact of exceptional events on the public health. This includes alerting the public when such events occur, providing public education concerning the health effects of such events, and implementing reasonable measures to mitigate the impact of such events on public health. Consistent with this inherent responsibility, it is EPA's belief that States are in a better position to make decisions concerning what actions should be taken to protect the public when an exceptional event occurs. This being the case, States should have the necessary flexibility to take appropriate actions when exceptional events occur. The EPA is adopting a modified version of its proposed preferred option 1, which requires States to provide public notification, public education, and provides that States should take "reasonable and appropriate measures" to protect public health related to the occurrence of an event. Because

States are inherently responsible for the public health of its citizens, and are capable of making the determinations of what actions should be taken to mitigate the impact of such events on the public when they occur. The EPA has modified option 1 from the proposed rule and will not be requiring States to submit documentation concerning the actions that it took to mitigate the impact of exceptional events, in order for EPA to exclude data from regulatory consideration. As proposed in option 1, States may still make determinations regarding reasonable measures in a particular instance, which may or may not include the implementation of control measures on contributing anthropogenic sources related to an event, and are not limited to any particular measure. Therefore, under this option the implementation of RACM or BACM is not required, but a State has the necessary flexibility to determine if, and what, controls should be implemented following an event, as well as the level of control that is required. The EPA believes that this modified option 1 provides suitable flexibility to allow States to take those actions that it deems necessary and appropriate to protect public health. While section 319, as revised by SAFE-TEA-LU, does not specifically provide that States must implement mitigation plans, in developing the exceptional events

rule, EPA is required to consider the enumerated principles including the principle that States must take necessary measures to protect public health regardless of the source of air pollution. Therefore, under the modified version of option 1 adopted in this final rule, States must take reasonable and appropriate actions to protect public health.

Comment: Several commenters stated that the exceptional events rule should be consistent with the current requirements under existing policies with respect to the need for a NEAP to address recurring natural events such as high wind events.

Response: The EPA believes that it is advantageous for States to keep NEAPs in place that are currently being implemented in order to address the public health impacts associated with recurring natural events such as high wind events. However, following the promulgation of this rule, States will no longer be required to keep NEAPs in place that were not approved as a part of a SIP for an area. Where a NEAP, as well as BACM, has been approved as a part of a nonattainment SIP for an area, the NEAP, as well as the associated BACM, must remain in place. States may, however, submit a request to EPA to remove the NEAP and BACM from the SIP. The request must contain an approvable

demonstration, as required by section 110(1), which shows that the removal of the NEAP and BACM will not interfere with any applicable requirement concerning attainment or maintenance of the NAAQS for an area, reasonable further progress, or any other applicable requirement for the area.

#### **VII. Special Treatment of Certain Exceptional Events Under This Final Rule**

As stated in section IV.D above, this final rule applies to data affected by natural events (which are a subset of exceptional events) at air quality monitoring sites where it has been determined that concentrations due to these events have caused, or substantially contributed to, exceedances of the NAAQS in an affected area. This final rule applies to several types of natural events, including, but not limited to, volcanic and seismic activities, natural disasters, high wind events, certain fires, and stratospheric ozone intrusions. It also applies to transported pollution originating from national and international sources that otherwise meets the criteria and requirements for exceptional events. Some types of exceptional events have unusual characteristics that require special consideration in the context of this final rulemaking. We discuss each of these special issues, and the necessary accommodations, below.

A. Volcanic and Seismic Activities

1. Background

Volcanic and seismic activities may affect air quality for an extended period of time after the initial occurrence of the event in question. Therefore, EPA believes that it is appropriate to consider an extended timeframe for flagging and exclusion of data associated with such events. Specifically, EPA believes that emissions attributed to anthropogenic activities associated with clean-up that re-entrain volcanic ash and dust from seismic activity during the first year (12 months) following an event will be treated as due to the natural event.

2. Final Rule

The EPA is finalizing its proposal with regards to volcanic and seismic activities. The EPA will allow up to 12 months for the clean-up of ash deposits due to volcanic/seismic events. During that time period, emissions of re-entrained dust due to anthropogenic activities associated with cleanup may be treated as exceptional events. In cases where the damage caused by the event is so substantial that a 12-month period is inadequate to address the clean-up that is necessary, a State may submit a request for an extension of the 12-month time period to EPA. As stated elsewhere in this rule, EPA



will grant requests for extensions of the time period related to such events on a case-by-case basis. States are encouraged to submit supporting information concerning the reason for the extension and the length of time being requested for the extension.

B. High Wind Events

1. Background

Where high wind events result in exceedances or violations of the particulate matter standards, EPA proposed that they be treated as natural events if there is a clear causal relationship demonstrated between the exceedances measured at the air quality monitoring site and the high wind event in question, and if anthropogenic activities which contribute to particulate matter emissions in conjunction with the high wind event are reasonably well-controlled.

2. Final Rule

The EPA's final rule concerning high wind events states that ambient particulate matter concentrations due to dust being raised by unusually high winds will be treated as due to uncontrollable natural events where (1) the dust originated from nonanthropogenic sources, or (2) the dust originated from anthropogenic sources within the State, that are determined to have been reasonably well-

controlled at the time that the event occurred, or from anthropogenic sources outside the State. These events are also discussed in section IV.E.5.c above. In cases where anthropogenic sources are determined to have contributed to exceedances or violations due to high wind events at air quality monitoring sites, per our decision in this rulemaking concerning the action that States must take to mitigate the impact of exceptional events on public health (See section VI above), States must take reasonable and appropriate measures to mitigate the impact associated with the event on public health. As stated in section VI of this rule, States have the flexibility to implement reasonable measures to protect public health when an exceptional event occurs. These actions may or may not include the implementation of controls on contributing anthropogenic sources related to an event. However, where anthropogenic sources have contributed to the exceedances of the PM NAAQS at an air quality monitoring site due to a high wind event, a State must take reasonable and appropriate measures to protect public health.

Since the conditions that cause or contribute to high wind events vary from area to area with soil type, precipitation, and the speed of wind gusts, States should provide appropriate documentation which indicates what

types of circumstances contributed to the exceedances or violations at the monitoring site in question.<sup>15</sup> In this rule, EPA is not identifying a specific wind speed which should be considered when making a determination concerning whether an event should qualify as exceptional. Instead, EPA is requiring that States submit appropriate documentation which demonstrates why a particular event should be considered exceptional for the affected area. The EPA will review the documentation submitted by States

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<sup>15</sup> Section 319(b)(1)(B) states: "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 a lack of precipitation; or (iii) air pollution relating to source noncompliance." In terms of the exclusion related to "a meteorological event involving high temperatures or a lack of precipitation" EPA believes that this statutory language prohibits EPA from treating a typical dry day(s) or a dry season for an area as an exceptional event. However, EPA believes that Congress did not intend that the above quoted language to prevent a State from submitting compelling documentation which shows that severe drought conditions may have contributed to an exceptional event, but instead was designed to prevent the indiscriminate exclusion of data on days characterized by "high temperature and a lack of precipitation." Therefore, EPA is permitting States to submit documentation which shows that "severe drought" conditions may have contributed to the occurrence of a high wind event. The documentation must, however, be compelling enough to show that the conditions present at the time of the event were more substantial than a typical dry day(s) or dry season for the area in question, but were related to severe drought conditions. The EPA will review this information and make decisions concerning the exclusion of the data related to the event on a case-by-case b

concerning high wind events and will make decisions concerning whether to exclude the data as being influenced by an exceptional event on a case-by-case basis.

C. Stratospheric Ozone Intrusion

1. Background

Consideration of stratospheric ozone intrusions applies only to the 8-hour ozone standard. The occurrence of such intrusions are extremely difficult to measure or document given currently measured meteorological parameters and the locations of these measurements. The infrequency, short durations, and localized nature of such events makes it difficult to use currently available, general meteorological data, which are usually collected at isolated locations such as airports, to determine whether a stratospheric ozone intrusion has occurred. The EPA believes that it is important to differentiate between stratospheric ozone intrusion, which is an exceptional event for the purpose of flagging data, and other non-exceptional meteorological events. Although data have been identified in the past showing the result of stratospheric ozone intrusion, no standard definition or criteria have been established for concrete identification. Therefore, EPA's determination of whether a stratospheric ozone

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intrusion has occurred is a case-by-case decision based on reasonable judgment considering the season of the year, time of day, persistence, duration, type and severity of accompanying meteorological conditions associated with the ozone measurement in question, and other data showing that conditions were not conducive to local high ozone production but for this intrusion.

## 2. Final Rule

The EPA is finalizing its rule as proposed. The EPA's determination of whether a stratospheric ozone intrusion has occurred will be made on a case-by-case basis based on reasonable judgment considering the criteria as noted above. It is our intention to review this type of exceptional event during the next review of the NAAQS for ozone. A review of historical data related to the flagging of stratospheric ozone intrusion as an exceptional event shows that the event has only been flagged on a few isolated occasions.

## **VIII. Treatment of Fireworks Displays**

### A. Background

The EPA proposed to treat emissions due to fireworks displays in a manner similar to exceptional events. Some national and/or cultural traditions, such as July 4th Independence Day and the Chinese New Year, have long

included fireworks displays as important elements of their observances. While this issue is not specifically covered in CAA section 319, EPA believes that Congress did not intend to require EPA to consider air quality violations associated with such cultural traditions in regulatory determinations.

We are not aware of any information showing adverse air quality impacts caused by individual use of fireworks in relatively small quantities. However, analyses of monitoring data collected on July 4th and July 5th indicates that large fireworks displays, in combination with other sources, can in some circumstances be potentially significant sources of air pollutant emissions. For this reason, States are encouraged to take reasonable precautions to minimize exposures to emissions from fireworks displays, to explore the use of lower emitting fireworks, as well as to manage associated activities that may also have significant air quality impacts in the areas where these events are held. Such precautions may include alerting the public to the potential for short-term air quality impacts that may result from the discharge of fireworks at large displays, monitoring prevailing winds, and locating displays downwind of concentrations of people. For these reasons, where States can show that the use of

fireworks displays was integral to significant traditional national, ethnic, or other cultural events, we proposed that air quality data associated with such events could be excluded similar to exceptional events under this rule.

B. Final Rule

The EPA is finalizing the approach as stated in the proposed rule to treat emissions from fireworks similar to the treatment of exceptional events in the final rule provided that the event meets the other criteria as stated in this rulemaking. For example, the event must be determined to have affected air quality. Where a State can show that the use of fireworks is significantly integral to traditional national, ethnic, or other cultural events (e.g., July Fourth celebrations, Chinese New Year celebrations, Diwali, etc.), EPA will exclude data from regulatory determinations for monitoring stations whose exceedances or violations has been determined to be caused by emissions from fireworks displays on a case-by-case basis. As stated in other parts of the rule, States must assure that reasonable measures were taken to protect the public from the emissions created by the fireworks display. Under this rule, States are also strongly encouraged to institute educational programs that alert the public to the health effects associated with exposure to emissions from

fireworks displays.

### C. Comments and Responses

Comment: The majority of commenters who commented on this issue agreed that emissions from fireworks should be treated as an exceptional event. However, some commenters disagreed with EPA's proposal to treat fireworks as an exceptional event. Several commenters believed that fireworks are neither an exceptional event nor a natural event and that EPA should not make provisions for fireworks to be excluded as an exceptional event.

Response: In considering the intent of the SAFETEA-LU legislation, it is EPA's belief that Congress did not intend to prohibit the exclusion of data affected by emissions from fireworks related to celebrations of national or cultural traditions. It is EPA's belief that data influenced by fireworks displays should be subject to the same provisions as other exceptional events identified under this rule. Therefore, the mitigation actions described in section VI.A above would also apply to emissions related to fireworks displays.

## **IX. Statutory and Executive Order Reviews**

### A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4,



1993), this action is a significant regulatory action because it raises novel legal or policy issues arising out of legal mandates. Accordingly, EPA submitted this action to the Office of Management and Budget (OMB) for review under Executive Order 12866 and any changes made in response to OMB recommendations have been documented in the docket for this action.

B. Paperwork Reduction Act

This action does not impose an information collection burden. The information being requested under this rule is consistent with current requirements related to information needed to verify the authenticity of monitoring data submitted to EPA's AQS database, and to justify data that has been flagged as being affected by exceptional or natural events. However, the OMB has previously approved the information collection requirements regulations for ambient air monitoring contained in 40 CFR part 58, subparts A through E, under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. and assigned OMB control number 2060-0084, EPA ICR number 940.17. A copy of the OMB approved Information Collection Request (ICR) may be obtained from Susan Auby, Collection Strategies Division; U.S. Environmental Protection Agency (2822T);

1200 Pennsylvania Ave., NW, Washington, DC 20460 or by calling (202) 566-1672.

Burden means that total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An Agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in the CFR are listed in 40 CFR part 9.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements

under the Administrative Procedures Act or any other statute unless the EPA certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions. For the purpose of assessing the impacts of this final rule on small entities, small entity is defined as: (1) a small business as defined by the Small Business Administration's regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominate in its field.

Courts have interpreted the RFA to require a regulatory flexibility analysis only when small entities will be subject to the requirements of the rule. See, Michigan v. EPA, 213 F.3d 663, 668-69 (D.C. Cir., 2000), cert. den., 532 U.S. 903 (2001). This rule would not establish requirements applicable to small entities. Instead, this rule provides the criteria necessary for State, local, or Tribal air quality agencies to meet in order to properly flag data as being influenced by an

exceptional or natural event. The rule also provides information concerning what action should be taken by a State, local, or Tribal air quality agency to protect public health during and following an exceptional or natural event. Because affected States would have discretion to implement controls on sources that may need to be regulated due to anthropogenic contribution in the area determined to be influenced by an exceptional or natural event, EPA could not predict the effect of the rule on small entities.

After considering the economic impacts of this final rule on small entities, I certify that this rule will not have a significant economic impact on a substantial number of small entities.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal Agencies to assess the effects of their regulatory actions on State, local and Tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State governments, in the aggregate, or to the private sector, of

\$100 million or more in any 1 year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation of why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including Tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small government on compliance with regulatory requirements.

We have determined that this rule does not contain a Federal mandate that may result in expenditures of \$100

million or more for State, local, and Tribal governments, in the aggregate, or the private sector in any 1 year. This action simply provides the criteria for State, local, or Tribal air quality agencies to flag data to be discounted for regulatory purposes that is being influenced by exceptional or natural events. Thus, this rule is not subject to the requirements of sections 202, 203, and 205 of the UMRA.

E. Executive Order 13132: Federalism

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, or the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

This final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and

responsibilities among the various levels of government, as specified in Executive Order 13132. The CAA establishes the scheme whereby States take the lead in developing plans to meet the NAAQS. Thus, Executive Order 13132 does not apply to this rule.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

Executive Order 13175, entitled "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, November 9, 2000), requires EPA to develop an accountable process to ensure "meaningful and timely input by Tribal officials in the development of regulatory policies that have Tribal implications." This final rule does not have "Tribal implications" as specified in Executive Order 13175. The rule provides information concerning what action should be taken by a State, local, or Tribal air quality agency implementing relevant air quality programs to protect public health once EPA has provided a concurrence on data that has been flagged as being influenced by an exceptional or natural event. The CAA and the Tribal Authority Rule (TAR) give Tribes the opportunity to develop and implement CAA programs, but it leaves to the discretion of the Tribe whether to develop these programs and which programs, or appropriate elements of a program,

the Tribe will adopt through the Tribal Implementation Plan (TIP).

This rule does not have Tribal implications as defined by Executive Order 13175. It does not have a substantial direct effect on one or more Indian Tribes, because no Tribe has implemented a TIP related to the PM or the 8-hour ozone NAAQS at this time. Furthermore, this rule does not affect the relationship or distribution of power and responsibilities between the Federal government and Indian Tribes. The CAA and the TAR establish the relationship of the Federal government and Tribes in developing plans to attain the NAAQS, and this rule does nothing to modify that relationship. Because this rule does not have Tribal implications, Executive Order 13175 does not apply.

However, even though we found that this rule does not have Tribal implications, we nevertheless were aware of Tribes that had an interest in this rule. Therefore, we conducted communications and outreach related to the rule with the Tribes through discussions via conference calls with the Tribal Association. We also provided information to the Tribes on the rule via the Quarterly Tribal Air Newsletter.

G. Executive Order 13045: Protection of Children from Environmental Health and Safety Risks

Executive Order 13045: "Protection of Children From



Environmental Health and Safety Risks” (62 FR 19885, April 23, 1997) applies to any rule that (1) is determined to be “economically significant” as defined under Executive Order 12866, and (2) concerns an environmental health and safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, EPA must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by EPA.

This action is not subject to Executive Order 13045 because it is not economically significant as defined in Executive Order 12866, and because EPA does not have reason to believe that the environmental health risks or safety risks addressed by this rule present a disproportionate risk or safety risk to children. The rule provides information concerning what action should be taken by a State, local, or Tribal air quality agency to protect public health once EPA has provided a concurrence on data that has been flagged as being influenced by an exceptional or natural event.

H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use

This rule is not a "significant energy action" as defined in Executive Order 13211, "Actions That Significantly Affect Energy Supply, Distribution, or Use," (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Further, we have concluded that this rule is not likely to have any adverse energy effects.

I. National Technology Transfer Advancement Act

Section 12(d) of the National Technology Transfer Advancement Act of 1995 (NTTAA), Public Law No. 104-113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards (VCS) in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impracticable. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by VCS bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when EPA decides not to use available and applicable VCS.

This action does not involve technical standards. Therefore, EPA did not consider the use of any VCS.

J. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the Federal Register. A major rule cannot take effect until 60 days after it is published in the Federal Register. This action is not a "major rule" as defined by 5 U.S.C. 804(2). This rule will be effective **[INSERT DATE 60 DAYS AFTER PUBLICATION]**.

K. Petitions for Judicial Review

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the District of Columbia Circuit by **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this rule for the purposes of judicial review nor does it extend the time within which

a petition for judicial review must be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. See CAA Section 307(b)(2).

**List of Subjects**

**40 CFR Part 50**

Environmental protection, Air pollution control, National parks, Wilderness areas.

**40 CFR Part 51**

Environmental protection, Air pollution control, Administrative practice and procedure, Reporting and recordkeeping requirements.

**MAR 14 2007**

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Date



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Stephen L. Johnson,  
Administrator.

In consideration of the foregoing, the Environmental Protection Agency amends 40 CFR parts 50 and 51 as follows:

**PART 50 - NATIONAL PRIMARY AND SECONDARY AMBIENT AIR QUALITY STANDARDS**

1. The authority citation for part 50 continues to read as follows:

Authority: 42 U.S.C. 7401 et seq.

2. Amend §50.1 to add paragraphs (j) and (k) to read as follows:

§50.1 Definitions.

\* \* \* \* \*

(j) Exceptional event means an event that affects air quality, is not reasonably controllable or preventable, is an event caused by human activity that is unlikely to recur at a particular location or a natural event, and is determined by the Administrator in accordance with 40 CFR 50.14 to be an exceptional event. It does 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.

(k) Natural event means an event in which human activity plays little or no direct causal role.

(l) Exceedance with respect to a national ambient air

quality standard means one occurrence of a measured or modeled concentration that exceeds the specified concentration level of such standard for the averaging period specified by the standard.

3. Add §50.14 to read as follows:

§50.14 Treatment of air quality monitoring data influenced by exceptional events.

(a) Requirements. (1) A State may request EPA to exclude data showing exceedances or violations of the national ambient air quality standard that are directly due to an exceptional event from use in determinations by demonstrating to EPA's satisfaction that such event caused a specific air pollution concentration at a particular air quality monitoring location.

(2) Demonstration to justify data exclusion may include any reliable and accurate data, but must demonstrate a clear causal relationship between the measured exceedance or violation of such standard and the event in accordance with paragraph (c)(3)(iii) of this section.

(b) Determinations by EPA. (1) EPA shall exclude data from use in determinations of exceedances and NAAQS violations where a State demonstrates to EPA's satisfaction that an exceptional event caused a specific air pollution

concentration in excess of one or more national ambient air quality standards at a particular air quality monitoring location and otherwise satisfies the requirements of this section.

(2) EPA shall exclude data from use in determinations of exceedances and NAAQS violations where a State demonstrates to EPA's satisfaction that emissions from fireworks displays caused a specific air pollution concentration in excess of one or more national ambient air quality standards at a particular air quality monitoring location and otherwise satisfies the requirements of this section. Such data will be treated in the same manner as exceptional events under this rule, provided a State demonstrates that such use of fireworks is significantly integral to traditional national, ethnic, or other cultural events including, but not limited to July Fourth celebrations which satisfy the requirements of this section.

(3) EPA shall exclude data from use in determinations of exceedances and NAAQS violations, where a State demonstrates to EPA's satisfaction that emissions from prescribed fires caused a specific air pollution concentration in excess of one or more national ambient air quality standards at a particular air



quality monitoring location and otherwise satisfies the requirements of this section provided that such emissions are from prescribed fires that EPA determines meets the definition in §50.1(j), and provided that the State has certified to EPA that it has adopted and is implementing a Smoke Management Program or the State has ensured that the burner employed basic smoke management practices. If an exceptional event occurs 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.

(4) [Reserved]

(c) Schedules and Procedures. (1) Public notification.

(i) All States and, where applicable, their political subdivisions must notify the public promptly whenever an event occurs or is reasonably anticipated to occur which may result in the exceedance of an applicable air quality standard.

(ii) [Reserved.]

(2) Flagging of data.

(i) A State shall notify EPA of its intent to exclude one or more measured exceedances of an applicable

ambient air quality standard as being due to an exceptional event by placing a flag in the appropriate field for the data record of concern in accordance with the schedules for submission of data to the AQS database in 40 CFR 58.16.

- (ii) Flags placed on data in accordance with this section shall be deemed informational only, and the data shall not be excluded from determinations with respect to exceedances or violations of the national ambient air quality standards unless and until, following the State's submittal of its demonstration pursuant to paragraph(c)(3) of this section and EPA review, EPA notifies the State of its concurrence by placing a concurrence flag in the appropriate field for the data record in the AQS database.
- (iii) Flags placed on data as being due to an exceptional event together with an initial description of the event shall be submitted to EPA not later than July 1<sup>st</sup> of the calendar year following the year in which the flagged measurement occurred, except as allowed under paragraph (c)(2)(iv).
- (iv) For PM<sub>2.5</sub> data collected during calendar years

2004-2006, that the State identifies as resulting from an exceptional event, the State must notify EPA of the flag and submit an initial description of the event no later than October 1, 2007. EPA may grant an extension, if a State requests an extension, and permit the State to submit the notification of the flag and initial description by no later than December 1, 2007.

- (v) When EPA sets a NAAQS for a new pollutant, or revises the NAAQS for an existing pollutant, it may revise or set a new schedule for flagging data for the initial designation of areas for those NAAQS.

(3) Submission of demonstrations.

- (i) A State that has flagged data as being due to an exceptional event and is requesting exclusion of the affected measurement data shall, after notice and opportunity for public comment, submit a demonstration to justify data exclusion to EPA not 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. A State must submit the public

comments it received along with its demonstration to EPA.

- (ii) A State that flags data collected during calendar years 2004-2006, pursuant to paragraph (c)(2)(iv) of this section, must adopt the procedures and requirements specified in paragraph(c) (3)(i) of this section and must include a demonstration to justify the exclusion of the data not later than the submittal of the Governor's recommendation letter on nonattainment areas.
- (iii) The demonstration to justify data exclusion shall provide evidence that:
  - (A) the event satisfies the criteria set forth in 40 CFR 50.1(j);
  - (B) there is a clear causal relationship between the measurement under consideration and the event that is claimed to have affected the air quality in the area;
  - (C) the event is associated with a measured concentration in excess of normal historical fluctuations, including background; and
  - (D) there would have been no exceedance or violation but for the event

. (iv) With the submission of the demonstration, the State must document that the public comment process was followed.

(v) [Reserved.]

(A) [Reserved]

**PART 51 NATIONAL PRIMARY AND SECONDARY NATIONAL AMBIENT AIR QUALITY STANDARDS**

4. The authority citation for part 51 continues to read as follows:

Authority: 23 U.S.C. 101;42 U.S.C. 7401-7671.

5. Adding §51.920 to Subpart Y to read as follows

§51.920 Mitigation of Exceptional Events.

(a) A State requesting to exclude air quality data due to exceptional events must take appropriate and reasonable actions to protect public health from exceedances or violations of the national ambient air quality standards. At a minimum, the State must:

(1) provide for prompt public notification whenever air quality concentrations exceed or are expected to exceed an applicable ambient air quality standard;

(2) provide for public education concerning actions that individuals may take to reduce exposures to unhealthy levels of air quality during and

following an exceptional event; and

- (3) provide for the implementation of appropriate measures to protect public health from exceedances or violations of ambient air quality standards caused by exceptional events.

[Reserved]