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"This substantive policy statement is advisory only. A substantive policy statement does not include internal procedural documents that only affect the internal procedures of the agency and does not impose additional requirements or penalties on regulated parties or include confidential information or rules made in accordance with the Arizona Administrative Procedure Act. If you believe that this substantive policy statement does impose additional requirements or penalties on regulated parties you shall petition the agency under A.R.S. § 41-1033 for a review of the statement."

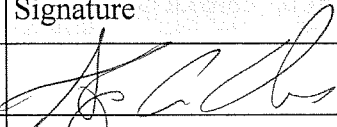
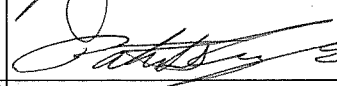
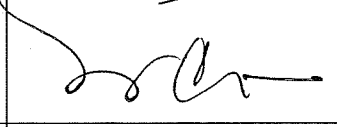
AIR QUALITY EXCEPTIONAL AND NATURAL EVENTS POLICY	Policy Number	2009.002
	Revision No.	002
	Effective Date	

1.0 Revision History

1.1 Revision Table

Date	Rev. No.	Change	Ref. Section
[date approved]	002	Revised for EPA Rule	2009.001
January 10, 2006	001	Reformat and revise	0159.000
April 28, 1999	000	New Policy Drafted	n/a

1.2 Approval Signatures

Title	Name	Signature	Date
Director	Stephen A. Owens		6/22/07
Deputy Director	Patrick J. Cunningham		6/21/2007
Affected Division Director(s)	Nancy C. Wrona Air Quality		6/20/07

2.0 Purpose

This policy sets forth the requirements and procedures that are to be followed in the event of occurrences of air quality exceptional, fire, and natural events in Arizona that should be excluded from determination of compliance with the National Ambient Air Quality Standards (NAAQS) or determination of eligibility for the Limited Maintenance Plan (LMP) Option. Information contained herein includes a review of the statutory requirement, definitions of terms used in the policy, brief descriptions of existing U.S. Environmental Protection Agency (EPA) exceptional and natural air quality event rule and fire policies usable for ADEQ policy development, roles and responsibilities in the air quality regulatory process, and the procedures for determining the occurrence of these events. The Technical Criteria Document for Determination of Natural and Exceptional Events in Arizona (TCD) sets forth specific criteria for evaluation.

3.0 Persons Affected

3.1 General Public

3.2 Sources of air pollution

3.3 State and local government entities

4.0 Policy

The policy of ADEQ is to ensure that:

- 4.1 The substantive policy statements required by A.R.S. § 49-424, paragraph 3, for identifying air quality exceptional events that take into consideration Arizona's unique geological, geographical and climatological conditions and other unusual circumstances are developed and updated as appropriate with the planning agency, certified pursuant to A.R.S. § 49-406, and the county air pollution control department or district.

Procedural and substantive requirements are met to exclude certain ambient air monitoring data from consideration by EPA in its determinations concerning attainment of the NAAQS and designations and classifications of air quality planning areas, and its determinations of LMP Option eligibility when control measures would not have prevented exceedance of NAAQS; or LMP eligibility criteria; and that the public is educated and notified in advance of expected exceptional events to enable them to minimize exposure to air pollutants, in accordance with EPA's Treatment of Data Influenced by Exceptional Events Final Rule (40 FR13560) and Fire Policies.

The TCD is updated periodically.

4.2 Arizona Geographic, Geological and Climatological Conditions.

Arizona land forms reside in the Basin and Range and Colorado Plateau physiographic province classifications. In general terms, the northeastern 40 percent of the State is the Colorado Plateau, and the remaining 60 percent of the State's land area is defined as Basin and Range. The Mogollon Rim, an escarpment of approximately 1,000 to 1,500 feet of vertical relief, defines the

boundary between the two province classifications, tending to the west-northwest from the center of the eastern State boundary with New Mexico. Elevations range from more than 12,000 feet above sea level on mountaintops near Flagstaff to the 7,000 foot level for the Colorado Plateau, and descending to the lowest point around 100 feet above sea level near Yuma in the southwestern corner of the State.

Arizona climatology is characterized by the potential for extremes, especially of temperature and precipitation. High temperatures above 105 degrees Fahrenheit are common in the low deserts in the summer. Low temperatures near zero degrees Fahrenheit are common in the high-elevation mountains during winter months. An entire month can pass without measurable precipitation during the desert summer, while nearly 12 inches of rain have been measured in a single 24-hour period in the Sierra Ancha mountain range of central Arizona. Wind conditions in the deserts are generally light and variable, with distinct episodes of increased wind speed when dry cold fronts move through in the spring, or as a result of thunderstorms during the summer monsoon season. Short-term high wind events called Haboobs, which create moving walls of dust that overwhelm controls of anthropogenic sources of dust, can occur as early as late June; an increased probability of these transitory events can persist into mid-September. Wind speeds are higher on average on the Colorado Plateau, but strong atmospheric temperature inversion or stagnation conditions can persist for several days at a time across all or part of the State.

5.0 Definitions

- 5.1 **Air Quality Exceptional Events:** Either an exceptional event as established in 40 CFR 50.1 (i.e., affects air quality; is not reasonably controllable or preventable; is an event caused by human activity that is not likely to recur at a particular location, or a natural event; is determined by the EPA through the process established in these regulations to be an exceptional event) or an event that can be excluded from consideration in determining eligibility for the LMP option because the event has a clear causal connection to elevated air pollutant concentrations that are not expected to recur on a routine basis or were caused by an air quality natural event.
- 5.2 **Air Quality Natural and Exceptional Events Stakeholder Groups:** A group of Arizona-based stakeholders that met three times during 1997-1998 to fulfill a statutory mandate to draft the original ADEQ policy on natural and exceptional air quality events. A second group of Arizona-based stakeholders, which met six times during 2005-2006, provided input on revising the TCD and this policy. The stakeholders met in 2007 to review minor changes to this policy to conform with EPA's Treatment of Data Influence by Natural Events; Final Rule.
- 5.3 **Air Quality Natural Events:** Events defined in EPA's EER or the TCD that have a clear causal connection to elevated air pollutant concentrations caused by emissions from natural sources or caused by meteorological conditions that are not expected to recur routinely which result in emissions that cannot reasonably

- be controlled using the SIP process. These natural events can be excluded from consideration in determinations of attainment of the NAAQS, designations, and classifications of air quality planning areas or eligibility for the LMP Option.
- 5.4 **Best Available Control Measures (BACM):** BACM are defined by EPA as techniques that achieve the maximum degree of emissions reduction from anthropogenic sources of air pollutants as determined on a case-by-case basis considering technological and economic feasibility (59 FR 42010; August 16, 1994).
- 5.5 **Data Flag:** EPA's Data Submittal and Archive Requirements for the Air Quality System (40 CFR 58.16) and the EPA Fire Policy allow the State or County Air Pollution Control Department or District to enter a special code from a list of natural or exceptional event data flags into EPA's Air Quality System (AQS) database, usually within 90 days after the end of the calendar quarter in which the event occurred.
- 5.6 **Exceedance:** Ambient air quality concentrations that exceeds either the NAAQS or the LMP eligibility criteria.
- 5.7 **Exceptional Events Rule (EER):** EPA's Treatment of Data Influenced by Exceptional Events; Final Rule (EER) (40 FR 13560; March 22, 2007) available at <http://www.epa.gov/EPA-AIR/2007/March/Day-22/a5156.htm>. According to the Exceptional Events Rule, requirements in prior policies (Guidance on Assessing the Impacts of May 1998 Mexican Fires on Ozone Levels in the United States and NEP) have been included in the EER; therefore, citation of those policies is no longer necessary.
- 5.8 **Interim Air Quality Policy on Wildland and Prescribed Fires (Fire Policy):** EPA Memorandum from Richard D. Wilson, Acting Assistant Administrator for Air and Radiation, to EPA Regional Administrators dated May 15, 1998, available at www.epa.gov/ttn/oarpg/tl/memoranda/wilson.pdf. This policy allows data to be flagged to note that the data were affected by fire, but the data will still be used to determine the design value and attainment status. A State that is addressing wildland and prescribed fires with a Smoke Management Program is eligible to submit a LMP for an area that is otherwise ineligible for the LMP Option solely as a result of fire-affected data.
- 5.9 **Limited Maintenance Plan (LMP):** EPA's Memorandum entitled Limited Maintenance Plan Option for Moderate PM10 Nonattainment Areas from Lydia Wegman, Director, EPA Air Quality Strategies and Standards Division, issued August 10, 2001, to the Regional Offices' Air Program Division Directors available at www.epa.gov/ttn/oarpg/tlpgm.html. This option streamlines planning requirements by waiving some air quality modeling and analysis.
- 5.10 **National Ambient Air Quality Standards (NAAQS):** Health-based standards that specify maximum acceptable levels of air pollutants in the ambient air. EPA has promulgated NAAQS for carbon monoxide (CO), nitrogen oxides, lead, sulfur dioxides, ozone, and particulate matter.

- 5.11 **Natural Events Action Plan (NEAP):** While not required by the Exceptional Events Rule, a NEAP may be developed to assist in mitigation efforts for Natural Events. The NEAP shall include: (1) Prompt public notification programs where NAAQS are exceeded or are expected to be exceeded; (2) Provide public education programs designed to minimize public exposure to such unhealthy air pollutants surrounding an exceptional natural event; (3) Study, identify, and implement appropriate mitigation measures that will protect public health from NAAQS exceedances caused by exceptional natural events.
- 5.12 **State Implementation Plan (SIP):** Plan prepared pursuant to Clean Air Act Section 110 and Title 40 CFR Part 51 to attain and maintain the NAAQS.

6.0 Responsibilities

- 6.1 ADEQ or the County Air Pollution Control Department or District shall determine whether the LMP or EER applies to exceedances within applicable deadlines.
- 6.2 Initially, ADEQ or the County Air Pollution Control Department or District shall determine if data may be eligible for exclusion as an exceptional event, and may indicate their intention to examine the event by setting the appropriate flag in EPA's AQS database at any time after the data value is entered into the AQS database and prior to a stakeholder consultation.

If the data is flagged, ADEQ or the County Air Pollution Control Department or District shall schedule, provide public notice, and conduct meetings to present or discuss data or regulatory actions resulting from an event that is eligible for data flagging within a reasonable period of time (usually within six months after the event).

Based on feedback from stakeholders and the results of the assessment for the event, ADEQ or the County Air Pollution Control Department or District will either remove the data flag (if it is not appropriate) or prepare necessary documentation to submit to EPA for concurrence with the flagging no later than July 1st of the year following the year in which the event occurred.

- 6.3 ADEQ or the County Air Pollution Control Department or District collecting and reporting ambient monitoring data for the air quality planning area eligible for a data flag shall, after notice and opportunity for public comment, submit the final demonstration to justify data exclusion to EPA as early as practicable, but 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.
- 6.4 ADEQ or the County Air Pollution Control Department or District shall provide ongoing public health and welfare event notification programs for future natural or exceptional or fire events, as practicable.

- 6.5 The planning agency(ies) certified pursuant to A.R.S. § 49-406 responsible for the area(s) where the monitored exceedance occurred shall contribute such technical and scientific information as available, to assist ADEQ and/or the County Air Pollution Control Departments or District in conducting the analyses.
- 6.6 ADEQ or the County Air Pollution Control Department or District shall provide an annual report to a stakeholder group and others, with more frequent updates as needed.
- 7.0 Procedures
- 7.1 Trigger Mechanism: Elevated ambient air quality concentrations that occur during a candidate exceptional event or fire event that exceed any NAAQS or LMP eligibility criteria trigger the need to conduct an analysis to determine whether a data flag should be kept in AQS.
- 7.2 Scope of Analysis: ADEQ or the County Air Pollution Control Department or District shall quality-assure ambient air monitoring data, analyze data, and compile credible evidence documenting a clear causal relationship, or the lack thereof, between the measured exceedance and the event that is alleged to have elevated ambient concentrations of the air pollutant(s). The analysis should consist of a weight of the evidence demonstration that shall include scientific and technical data; air quality modeling and/or other numerical analyses of ambient monitoring data; evidence of contributing emission source characteristics; evidence of compliance with applicable air pollution control requirements by contributing anthropogenic sources, if any; evidence that mitigating measures were in place at the time of the event and were overwhelmed by the event; meteorological information; satellite imagery; photographs; information from State or Federal agencies including the Arizona Department of Agriculture, Arizona Department of Transportation, Bureau of Land Management, EPA, National Forest Service, National Oceanic and Atmospheric Administration, and National Weather Service; evidence of a regional or international event; and event-specific traffic count and/or land use activity data; and news media coverage of the event. The demonstration to justify data flagging shall include, in addition to a clear causal relationship between a measurement and an event, that the event was caused by emissions from a natural event or the event was associated with a measured concentration in excess of normal historical fluctuations, including background; and that there would have been no exceedance of the NAAQS or LMP criteria but for the event. Results of these analyses provide the basis for attributing the cause(s) of measured adverse ambient air quality conditions. Data collection and analysis procedures of ADEQ and EPA will be followed.
- 7.3 Technical Criteria Document: ADEQ has established technical criteria for identifying appropriate data and data sources and analysis of those data to define, study and provide a policy response to any Arizona Air Quality exceptional events that shall occur. Within nine months after any revision of this policy, after review by the Air Quality Natural and Exceptional Events Stakeholder Group

advising ADEQ on the formulation and revision of the TCD, ADEQ will review and revise the TCD. In addition, ADEQ will seek information and, to the extent feasible, maintain the following additional data:

- 7.3.1. Spatial and temporal soil characteristics and vegetation (plant coverage) inventories;
- 7.3.2. Precipitation, wind speed, direction, persistence, and gust strength data, as well as meteorological scale circulation maps and satellite images;
- 7.3.3. Definition of synoptic climatology categories and their associations with air pollution events;
- 7.3.4. Ongoing analysis of ambient air pollution data trends for CO, ozone, particulate matter, sulfur dioxide, and nitrogen dioxide to ascertain the frequency and magnitude of any exceptional events, fire events, and natural events in Arizona, including regional and international events that impact air quality in Arizona;
- 7.3.5. Ongoing collection and analysis of emission estimates and activity levels for emissions of these air pollutants from all source categories;
- 7.3.6. Information about transport of smoke from fires and causal connections to elevated ambient air concentrations of air pollutants;
- 7.3.7. Information about long range transport of dust, including dust from volcanic or seismic activity.

7.4 Analytical Procedures: When analysis is triggered under Section 7.1 of this policy, ADEQ or the County Air Pollution Control Department or District shall develop a written weight of the evidence analysis in accordance with this policy, following the analytical steps listed below, at a minimum:

- 7.4.1. Verification that an exceedance has occurred at one or more ambient air monitors in Arizona;
- 7.4.2. Evaluation of elevated ambient air concentrations of the same air pollutant(s) recorded at monitors in surrounding states or in Mexico to determine or rule out causal connection to a regional or international exceptional, fire or natural event;
- 7.4.3. Evaluation of surrounding anthropogenic sources of the same air pollutant(s) and compliance with required air pollution control measures immediately preceding and during the exceptional event to determine, credibly estimate, or rule out air pollutant emissions attributable to them that shall have contributed to the exceedance and to make appropriate compliance assistance and enforcement referrals;
- 7.4.4. Comparison of conditions and monitored air pollutant concentrations before and after the exceedance(s) in Arizona to the TCD and to the information compiled in accordance with Section 7.3 of this policy;

- 7.4.5. Identification, collection and evaluation of available satellite imagery, photographs, media coverage, and other credible information described in Section 7.2 of this policy to determine or rule out causal connection to an exceptional, fire or natural event.
- 7.4.6. Presentation of the draft weight of the evidence analysis to the Air Quality Natural Events Stakeholder Group for discussion and solicitation or additional relevant information and data before the applicable deadline for a data flag,
- 7.4.7. Revision of the weight of the evidence analysis based on stakeholder input.

8.0 Additional Documentation:

- 8.1 Requests for EPA Concurrence with an Arizona Air Quality Natural or Exceptional or Fire Event Data Flag:

A request for EPA Concurrence with an Arizona Air Quality Exceptional Event Data Flag shall be prepared and submitted by ADEQ or the County Air Pollution Control Department or District, within applicable deadlines not later than July 1st of the calendar year following the year in which the flagged measurement occurred, when the weight of the evidence analysis demonstrates a clear causal connection between an exceedance and exceptional event. Documentation submitted with the request shall conform with all applicable requirements.

- 8.2 Draft NEAP Implementation Plan: ADEQ or the County Air Pollution Control Department or District, in conjunction with the local planning agency certified pursuant to A.R.S. § 49-406, at its discretion, may prepare a draft NEAP that at a minimum meets the requirements of the EPA. The governing agency will then present the plan to the affected stakeholders for review and comment prior to submission to the EPA not later than 18 months following the event. Consultation with the EPA is necessary to determine if BACM would be effective if included in a NEAP for similar events in the future.

- 8.3 Public Meeting Presentation of Draft NEAP: If a draft NEAP is prepared, a draft NEAP Implementation Report shall be presented at a public meeting prior to submittal to EPA. ADEQ or the County Air Pollution Control Department or District shall provide an Annual Report to a stakeholder group and others summarizing events evaluated, events flagged and EPA concurrences or lack thereof, status of NEAP development and NEAP implementation, and events not eligible for a data flag.

- 8.4 Final NEAP Submittal: A NEAP Implementation Report shall be submitted to EPA not later than 18 months after the draft NEAP is required to be submitted to EPA by ADEQ or the County Air Pollution Control Department or District, in conjunction with the local planning agency certified pursuant to A.R.S. § 49-406.