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# ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

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Henry R. Darwin  
Director

VIA Electronic Mail

June 30, 2011

Ms. Gina McCarthy, Assistant Administrator  
Office of Air and Radiation  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, N.W.  
Washington, D.C. 20760

Re: Comments to the Exceptional Event Guidance Documents

Dear Ms. McCarthy,

The Arizona Department of Environmental Quality (ADEQ) has long been a proponent for changes to EPA's Exceptional Events Rule (EER). The opportunity to comment on the *Draft Guidance on the Implementation of the Exceptional Events Rule* that EPA released on May 2, 2011, prior to a more public process, moves us closer to the partnership that was envisioned in the drafting of the original EER, and we thank you for that opportunity.

ADEQ supports EPA's overall efforts to add clarity to the agency's interpretation of the existing rule and the creation of a process for reviewing exceptional events along with deadlines for action. We also agree with the guiding principle that States should not be held accountable for exceedances due to events that were beyond their control at the time of the event. Exclusion of exceptional events that overwhelm reasonable control measures from regulatory decisions enables the state to focus its resources on sources of pollution that can be controlled.

While the draft guidance represents much needed progress, it is ultimately limited in its usefulness, as guidance can not carry the weight of rule. The process described in the guidance is useful for ensuring consistency amongst the Regional Offices, but it provides little relief for States should EPA miss a deadline or otherwise fail to follow the process outlined in the guidance. In addition, several of the approaches in EPA's guidance, including proposed changes to the "But For" test and historical fluctuations appear to require rule revisions before the guidance can be fully implemented. ADEQ maintains that additional rulemaking remains necessary.

ADEQ also supports the comments submitted by the Western States Air Resources Council (WESTAR). ADEQ is a member of WESTAR so those specific comments are not repeated in this letter. Instead, this letter contains ADEQ's comments about how the proposed guidance will impact the review of Exceptional Events within its jurisdiction.

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I. Conceptual Model

ADEQ agrees that a narrative summary at the beginning of a demonstration package which explains how the event unfolded will provide context for the data and analysis provided in the demonstration.

II. Weight of the Evidence

ADEQ appreciates EPA's recognition that evidence has weight, and that the evidence must support a demonstration and EPA's ultimate conclusion regarding an Exceptional Event. ADEQ is not certain, however, that a "weight of the evidence" approach goes far enough to protect the interests of the states. It is unclear what evidence actually holds weight with EPA. In ADEQ's experience, many hundreds of hours of work have been cast aside based upon the EPA's own interpretation of the evidence that was submitted. Instead, ADEQ recommends that EPA's concurrence be based upon a "preponderance of the evidence."

III. "High Wind" Threshold

In the guidance, EPA has set the threshold for the minimum sustained wind speeds sufficient to entrain particles from stable surfaces for western states at 25 miles per hour. A footnote provides reference that this value was "based on studies conducted on natural surfaces." EPA has also indicated that State and Local agencies would have the opportunity to submit local data regarding alternative threshold wind speeds sufficient to overwhelm reasonable controls for review to EPA. ADEQ requests that EPA identify in the guidance, the literature, methods, and analytical process that EPA used to define the 25 mile per hour threshold. This type of baseline would help agencies that want to conduct relevant local studies to submit alternative wind speed thresholds more appropriate for specific areas.

In addition, conversations with EPA staff have indicated that this threshold will not be used in making the determination that an event does or does not qualify as an exceptional event, but would instead be used to determine the rigor of analysis necessary to make the demonstration that an exceedance qualifies as an exceptional event. The draft guidance states that "...the most comprehensive controls analysis will be for events that have wind speeds well below 25 mph and recur (note: these may represent concurrable cases less often)..." ADEQ maintains that EPA should consider the merits of each exceptional event on a case-by-case basis. Including notes such as these in the guidance gives the appearance that EPA will not provide an objective review of each case. ADEQ recommends that EPA change the guidance such that it is clear that the 25 mile per hour or other negotiated threshold will be used only to assess the amount of documentation necessary to support an exceptional event demonstration.

IV. 1-5 Minute Average Wind Data

Requiring agencies to use sustained wind speed data on the order of 1-5 minute averages adds burdens to monitoring programs. Most meteorological data collected by agencies is in the form of hourly averages. While adjusting data logger programs to capture 1-5 minute averages is possible, this will increase data storage, staff time, and complexity of data review and quality assurance. For a single monitor, standard hourly averaged wind speed data collection result in the collection of 8,760 data points per year. Collecting and storing 5-minute averages in addition to the hourly averages would result in 175,200 additional data points each year. Collecting and storing 1-minute averages would result in more than half a million additional data points per meteorological monitor each year. EPA's stated preference is to use meteorological information that is close to a monitor. For robust monitoring networks like those in the Maricopa County non-attainment area, more than 10 million additional data points would be captured in any given year. Should EPA use 1-5 minute averages as a measure of sustained winds, ADEQ recommends that EPA provide a conversion calculation from hourly average to the selected averaging time interval. Otherwise, ADEQ recommends the use of a comparable hourly average wind speed threshold.

V. Recurrence

ADEQ agrees with EPA's statement in the Draft Question and Answer document that "[a] natural event would not have to be infrequent to qualify as an exceptional event under the EER. Frequent events with natural triggers that have a contribution from anthropogenic activities that are reasonably controlled could be eligible exceptional events, provided the events meet the demonstration requirements for the technical criteria."

Some areas, particularly in the West, experience high wind events more frequently than do other areas. The arid Southwest may also have a higher number of natural dust sources available for transport during high wind events than do other parts of the country. In the High Wind guidance, EPA explains that the analysis of air pollution controls within the area will require additional justification if the frequency of such events is more than one time per year based upon a three year average. ADEQ questions the value of this approach.

While ADEQ, and many other planning authorities, are likely to conduct due diligence by screening exceedances and documenting candidate exceptional events around the time that they occur, EPA has indicated that review of such documentation will not occur until there is a regulatory decision associated with the submitted documentation. Should fewer than three exceedances occur during a three year period, then there is no regulatory decision to be made, and EPA is unlikely to review the information that is submitted. If EPA does not review the exceptional event information that has been submitted, there is essentially no value to any streamlined process, as any effort in documenting an

exceptional event would likely be wasted. Conversely, should there be more than three exceedances during a three-year period, EPA's guidance indicates that a streamlined approach for demonstrating an exceptional event would not be available to the State, thereby stripping any value from a streamlined approach.

Using a three-year average approach also adds uncertainty to the analysis of any exceptional event, as it requires a State to take a calculated risk that an event will not recur more than three times during the three-year period. If a State submits a streamlined exceptional event documentation for an event during the first two years of a three-year period, and then experiences multiple exceedances due to wind events in the final year, the guidance appears to indicate that the State would be precluded from using the streamlined approach for the events that occurred during the first two years of the three-year period. It is possible that a State would be required to resubmit the exceptional event documentation with additional analyses for the first two years, or face the potential for non-concurrence based upon the use of the streamlined documentation approach that would have been allowable at the time of submission. While well intentioned, the High Winds guidance does not appear to provide States with any relief.

ADEQ maintains that recurring exceedances due to natural windblown dust events should not require a much greater burden of proof than do events that do not involve recurring exceedances. The recurring nature of these events does not make them any more reasonably controllable or preventable, especially when the particulate matter sources are easily identifiable as either natural (non-anthropogenic) or outside of the jurisdiction of control for an exceeding monitor. ADEQ recommends that EPA not use recurrence of high wind events as a threshold for determining the extent of documentation needed to make the demonstration. Streamlining should be based on the merits of each event..

#### VI. High Winds Events Analysis

ADEQ agrees that definitions of natural and anthropogenic windblown emissions developed in the *Western Regional Air Partnership (WRAP) Fugitive Dust Handbook* are appropriate for use in analysis of high wind events. In addition, several recent studies have added to the understanding of supply-limited dust emissions through aerodynamic entrainment as compared to saltation events. ADEQ supports the analysis and recommendations provided by the Maricopa Association of Governments on this issue.

#### VII. Treatment of Fire Related Exceptional Events

ADEQ requests that EPA clarify the relationship between wildfires and "areas burned by anthropogenic fires." As you are no doubt aware, fires of all kinds are a significant issue in the West. Despite the efforts of many thousands of firefighters, wildfires have already burned more than 850,000 acres in Arizona this year alone. Investigations of the causes of fires may not be complete by the deadline for submittal of exceptional event documentation. In some instances, the fire that started the wildfire may have been a

campfire that was not completely extinguished. Natural conditions, including several successive days of high wind, can then cause such fires to spread rapidly. EPA's guidance appears to suggest that this kind of a fire may not be eligible for treatment as an exceptional event because the initial start was caused by anthropogenic sources. As a result, air quality planning authorities would be required to submit State Implementation Plans (SIPs) that would have no ability to address the underlying issue, the illegal abandonment of a smoldering fire. ADEQ recommends that EPA recognize that emissions from large scale wildfires are beyond an agency's control whether or not the initiating event was natural or human caused. The demonstration should not only consider the ignition event but also the other factors (wind conditions, humidity, fuel type, fuel moisture, etc.) that contributed to the extent and progression of the wildfire.

#### VIII. Not Reasonably Controllable or Preventable

ADEQ is concerned that the draft guidance does not provide any certainty regarding what control measures qualify as reasonable control measures during an exceptional event. Instead, the guidance appears to indicate that the more often an event occurs, the less exceptional it becomes, even though the event is overwhelming the control measures that are in a SIP. This becomes even more problematic as the availability of additional controls is exhausted through the Reasonably Available Control Measures (RACM), Best Available Control Measures (BACM) and Most Stringent Measures (MSM) analyses required in moderate and serious PM<sub>10</sub> nonattainment areas.

The SIP approval process pursuant to Section 110, Part C and Part D of the Clean Air Act is the appropriate process for determining the reasonableness of control measures based on the classification of the planning area. ADEQ contends that control measures that are reasonable within a serious PM<sub>10</sub> non-attainment area may not be reasonable in a moderate PM<sub>10</sub> non-attainment area.

ADEQ recognizes that the excessive recurrence of exceedances of the standard would be cause for reconsidering the control strategy in place. In order to offer States more certainty, it is recommended that EPA consider rule changes that would allow a State and EPA to agree (perhaps through a mechanism such as a High Wind Action Plan) that the selected control measures are reasonable for a period of three to five years. During that time, a State would not need to review the controls that were in place at the time of the event(s) in order to benefit from the use of the exceptional events rule. After that time period, should exceedances persist or excessively recur, the State and EPA could review the control measures in the SIP. If additional controls are deemed to be necessary, EPA could use the provisions of Clean Air Act Section 110(k)(5) to call for an update to the SIP. If no additional controls appear reasonable or necessary at that time, EPA and the State could enter into an additional three to five year agreement that the controls in place are reasonable for that area thereby streamlining exceptional event analyses and providing longer-term certainty for air quality planning areas.

IX. Exceedances at Rural Monitors

Many of the examples provided in the draft guidance regarding the extent of analysis necessary to demonstrate that an exceedance is an exceptional event are in urban areas where there are dense real-time monitoring networks, pre-established source emission inventories and a network of meteorological instruments that can be used to provide 1-5 minute wind data. Many of the rural monitoring sites such as those operated by ADEQ still have filter-based monitors that are not capable of providing hourly particulate matter concentration data. Some are in remote locations without meteorological instrumentation and are too far from National Weather Service or other meteorological stations to provide documentation of the clear causal relationship that is required. Violations at these sites are often single site violations. Should ADEQ infer from the draft guidance that installation of continuous particulate matter monitors and meteorological stations at each rural PM monitoring site is necessary in-order to have sufficient data to be able to meet the clear causal relationship requirements?

Additionally, concentrations of particulate matter from filter-based monitors are not known for several weeks after the event. Has EPA considered how a control analysis for rural sites for which direct inspection and enforcement data specific to before, during and after the event are not available?

Finally, many of the filter-based monitors run on the one-in-six day sampling schedule. Therefore, a single day exceptional event has significant regulatory implications. The guidance is heavily weighted to areas that have extensive amounts of real-time data. Many of the analytical examples that are provided in the guidance can not be conducted for rural and filter based monitors due to lack of available data. Therefore, ADEQ recommends that EPA include a section in the proposed guidance along with comparable examples that represent EE demonstrations in an area with a single filter-based monitor and for which meteorological data within the direct vicinity are not available.

X. Transport from Sources Outside of an Area's Jurisdiction

One of the guiding principles for the development of the draft guidance document is that "states should not be held accountable for exceedances due to events that were beyond their control at the time of the event". The draft guidance, however, does not discuss how events that involve in-state transport from sources outside of one county or non-attainment area that cause exceedances at monitors within another should be handled. This is a significant issue in Arizona where there are multiple air quality planning authorities within the State. ADEQ contends that it is inappropriate to penalize a non-attainment area for exceedances that are attributable to the transport of dust from areas beyond their jurisdiction or control, and that exceedances from these sorts of events should be excludable via the Exceptional Events Rule. In addition to intrastate transport, the Arizona also experiences interstate transport and international transport. Holding these exceedances against non-attainment areas will not result in practical controls that

will prevent the problem from recurring, and only penalizes the sources within the non-attainment area that have already made significant efforts to reduce and prevent the emissions of PM<sub>10</sub>. ADEQ is concerned that there is currently no EPA methodology or mechanism to deal with these situations and recommends that EPA include specific guidance on how intra-state, interstate, and international transport of air pollution should be addressed.

XI. Control of Natural Sources

The draft guidance appears to indicate that it is important for submitting agencies to indicate whether natural sources could have been reasonably controlled. ADEQ opposes any suggestion that natural, undisturbed, non-anthropogenic sources should require controls. Such controls on natural sources might inherently disturb those sources, rendering them anthropogenic sources in EPA's view. ADEQ recommends that EPA revise the draft guidance to make it clear that there is no requirement to investigate whether natural sources could have been controlled during an event.

XII. Processing Timeframes

ADEQ shares EPA's goal of implementing the EER in a manner that uses resources most efficiently, and appreciates the introduction of a proposed process for submission, review and decision regarding exceptional events packages. Resource management depends on streamlined processing of the most clear-cut packages, to allow EPA and the state to spend the bulk of their resources working together on more complicated exceedance events. Recent litigation has focused on EPA's failure to meet statutory deadlines in the past, which has resulted in duplicate work for both States and EPA in the form of updates and supplements that must be redeveloped and re-reviewed. Timely decisions will enable ADEQ staff to develop appropriate air quality plans and explain them to stakeholders, including the general public, with certainty that the planning area at issue is either in attainment or non-attainment based upon EPA's decisions regarding exceptional events. While this process is an improvement, ADEQ believes that additional changes are necessary.

ADEQ questions the value of the Letter of Intent. The EER already requires States to provide an initial description of a flagged event no later than July 1<sup>st</sup> of the calendar year following the year in which the flagged measurement occurred [see 40 CFR § 50.1(c)(2)(iii)]. If EPA determines that a Letter of Intent is necessary, ADEQ recommends that letter be submitted annually, not after each event occurs, so as to eliminate unnecessary work.

During a May 11, 2011, briefing EPA indicated that up to five people, including other Regions, would be responsible for reviewing each exceptional event demonstration. ADEQ contends that this amount of review will lead to unnecessary delay and recommends that the number of layers of review be reduced to three including: the

assigned staffer, the staff supervisor, and a coordinating manager in each Regional Office. Issuance of a guidance document to the Regions should be sufficient to ensure consistency between Regional Offices in handling exceptional events.

ADEQ also requests that the concept of regulatory action in draft Section 5 “if needed for regulatory action” include determinations of eligibility and continuing eligibility for Limited Maintenance Plans as well as Clean Data Findings. EPA review of exceptional event demonstrations under these conditions are important regulatory actions due to the additional effort a State must include in a typical Maintenance Plan, or in revisions to a non-attainment area SIP. ADEQ also notes that concurrence or non-concurrence determines the design value for the affected planning area, which in turn has an effect on permitting decisions.

ADEQ supports the described completeness determination letter to the state within 120 days after receipt of the exceptional event documentation package, consistent with completeness determinations for State Implementation Plan (SIP) submittals. ADEQ supports EPA’s final decision on concurrence at the earliest opportunity, to facilitate submittal of SIP revisions appropriate to the official attainment status of the affected planning area, but is concerned about the need for 18 months to make such a decision. Since regulatory actions will hinge on exceptional event demonstrations, ADEQ recommends that EPA’s decision time be reduced from 18 to no more than 6 months after the receipt of a complete exceptional events demonstration. ADEQ recommends that any completeness and decision deadlines be added to the Exceptional Events Rule itself. Otherwise, the guidance appears to set aspirational goals rather than enforceable deadlines for action on State submissions.

### XIII. Streamlining

ADEQ appreciates EPA’s efforts to streamline demonstration packages as the guidance document was written. Based on the two thresholds set, however, the majority of the exceptional events in Arizona would require the most comprehensive evaluations. Under the draft guidance, ADEQ would be required to include additional analysis for back trajectories of the potential source areas, source apportionment, source-specific emission inventories and meteorological data associated with measured concentrations. Some of these analyses are beyond what can be reasonably achieved in areas where this information exists, and are likely not achievable at all in rural areas.

ADEQ has attempted to apply the new guidance to existing exceptional event analyses and has determined that considerable resources will be needed for the preparation for most, if not all, of the packages it must submit to achieve a Clean Data finding. ADEQ recognizes that EPA wants comprehensive and irrefutable evidence to show that reasonable controls were in place and the winds were sufficient to overwhelm reasonable control measures. The sliding scale approach for streamlining, however, is very heavily weighted towards requiring the more extensive analysis and is not likely to provide any

relief to ADEQ or EPA. ADEQ has offered an alternative approach to handling High Wind Action Plans, and recommends that the sliding scale approach be abandoned in deference to alternative approaches that provide additional certainty in the regulatory process.

#### XIV. Dispute Resolution

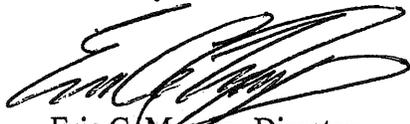
Although there have been great steps taken to address issues related to consultation and partnership, ADEQ maintains that the draft guidance still does not provide the State with any relief as it relates to dispute resolution. If EPA chooses not to concur, a State cannot appeal the decision until EPA takes "a regulatory action" that is linked to the non-concurrence. In ADEQ's view, EPA's decision to concur or non-concur is a regulatory action in and of itself, as the decision is essential to an area's status as being in attainment, maintenance or non-attainment. EPA has taken the position that a Clean Data Finding is the regulatory action, not the concurrence. EPA's non-concurrence with an exceptional event, however, renders a planning area ineligible for a Clean Data Finding and therefore ineligible for consideration as a regulatory action. The effects of EPA's non-concurrence, however, have a binding effect on the State as a nonattainment plan revision with ever more stringent control measures is required instead of a maintenance plan. As a result, EPA should provide in this guidance, and later in rule, a process for states to appeal EPA decisions related to exceptional events.

In closing, the preparation of the exceptional event demonstration packages requires extensive time and resource investments by State and Local agencies. This draft guidance appears to include more reliance on continuous ambient monitors, additional meteorological data collection, increased data storage and processing capabilities, independent research to establish appropriate local wind speed thresholds, inspection and enforcement databases capable of localized queries, meteorological expertise for evaluating weather phenomenon, expertise capable of producing event specific back trajectories and date specific source emission inventories, and possibly additional resources for the development of ever evolving High Wind Action Plans. Many agencies are at historically low staffing levels due to budgetary constraints. The complex data packages supporting exceptional event demonstrations often consist of 50-100 pages of technical data (tables, graphs, maps and diagrams). For each package prepared, hundred of hours of staff time have been invested. Most agencies are already making priority decisions on which events to pursue simply based on manpower availability.

The draft guidance seems to acknowledge that EPA has similar constraints, as it discusses how EPA will prioritize review of exceptional events, and spend the most time looking at those packages that relate to regulatory decisions. In Arizona's experience, most of the exceptional event demonstrations that are submitted are related to regulatory decisions. While this guidance was meant to streamline the process for submitting and reviewing exceptional event demonstrations, ADEQ's application of the guidance to its existing exceptional events indicates that the draft guidance, as currently written, provides little or no added efficiency for ADEQ or EPA. ADEQ appreciates EPA's efforts in this matter, and is looking forward to continue its

partnership with to better achieve the underlying goals of the draft guidance. If you have any questions, please contact me at (602) 771-2288.

Sincerely,



Eric C. Massey, Director  
Air Quality Division

cc: Deborah Jordan, EPA Region IX  
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