MARICOPA ASSOCIATION of GOVERNMENTS

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July 19, 2012

TO: Members of the MAG Air Quality Technical Advisory Committee

FROM: Oddvar Tveit, Tempe, Chair

SUBJECT: MEETING NOTIFICATION AND TRANSMITTAL OF TENTATIVE AGENDA

Thursday, July 26, 2012 - 1:30 p.m.
MAG Office, Suite 200 - Saguaro Room
302 North 1st Avenue, Phoenix

A meeting of the MAG Air Quality Technical Advisory Committee has been scheduled for the time and place noted above. Members of the Air Quality Technical Advisory Committee may attend the meeting either in person, by videoconference or by telephone conference call. Those attending by videoconference must notify the MAG site three business days prior to the meeting. If you have any questions regarding the meeting, please contact Chair Tveit or Lindy Bauer at 602-254-6300.

Please park in the garage underneath the building, bring your ticket, and parking will be validated. For those using transit, Valley Metro/Regional Public Transportation Authority will provide transit tickets for your trip. For those using bicycles, please lock your bicycle in the bike rack in the garage.

In 1996, the Regional Council approved a simple majority quorum for all MAG advisory committees. If the MAG Air Quality Technical Advisory Committee does not meet the quorum requirement, members who arrived at the meeting will be instructed a legal meeting cannot occur and subsequently be dismissed. Your attendance at the meeting is strongly encouraged. If you are unable to attend the meeting, please make arrangements for a proxy from your entity to represent you.

Pursuant to Title II of the Americans with Disabilities Act (ADA), MAG does not discriminate on the basis of disability in admissions to or participation in its public meetings. Persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting Jason Stephens at the MAG office. Requests should be made as early as possible to allow time to arrange the accommodation.

TENTATIVE AGENDA

	COMMITTEE ACTION REQUESTED
1. Call to Order	
2. Call to the Audience An opportunity will be provided to members of the public to address the Air Quality Technical Advisory Committee on items not scheduled on the agenda that fall under the jurisdiction of MAG, or on items on the agenda for discussion but not for action. Members of the public will be requested not to exceed a three minute time period for their comments. A total of 15 minutes will be provided for the Call to the Audience agenda item, unless the Air Quality Technical Advisory Committee requests an exception to this limit. Please note that those wishing to comment on action agenda items will be given an opportunity at the time the item is heard.	2. For information.
3. Approval of the April 26, 2012 Meeting Minutes	3. Review and approve the April 26, 2012 meeting minutes.
4. Update on the MAG 2012 Five Percent Plan for PM-10 On May 23, 2012, the MAG Regional Council adopted the MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area. The new MAG 2012 Five Percent Plan for PM-10 contains a wide variety of existing control measures and projects that have been implemented to reduce PM-10 and a new measure designed to reduce PM-10 during high risk conditions, including high winds. On May 25, 2012, the Arizona Department of Environmental Quality adopted the plan and officially transmitted it to the Environmental Protection Agency (EPA). Currently, EPA is reviewing the plan in preparation for the completeness determination, which is	4. For information and discussion.

required by August 14, 2012. The submittal of the new plan and a completeness determination by EPA will stop the sanctions clocks that were triggered when the prior Five Percent Plan was withdrawn. If EPA finds that the plan is incomplete, the first sanction of tighter controls on major industries (two to one offsets) could be imposed. To avoid a Federal Implementation Plan, the Environmental Protection Agency must approve the MAG 2012 Five Percent Plan for PM-10 by February 14, 2013. The region will also need at least three years of clean data as measured by the air quality monitors for attainment of the PM-10 standard (2010, 2011, and 2012).

5. <u>Update on PM-10 Exceedances and Exceptional Events</u>

The region needs three years of clean data as measured by the monitors for EPA to determine that the PM-10 standard has been met. It is critical for the MAG member agencies, business and industry, and the public to maintain aggressive efforts to prevent exceedances at the monitors and throughout the region. To date, there have been nine exceedance days in 2012. In addition, the Arizona Department of Environmental Quality now has consultant assistance to prepare the documentation required for exceptional events. An update will be provided. Please refer to the enclosed material.

5. For information and discussion.

6. <u>Revised Draft EPA Exceptional Events Guidance</u>

On July 6, 2012, the Environmental Protection Agency published a notice of availability and public comment period for the Draft Guidance to Implement Requirements for the Treatment of Air Quality Monitoring Data Influenced by Exceptional Events and associated attachments. These documents clarify key provisions and respond to questions and issues that have arisen since EPA promulgated the Exceptional Events Rule. These documents are updated versions of the draft guidance previously issued by EPA in May 2011. Comments must be

6. For information and discussion.

received by September 4, 2012. A presentation will be provided. Please refer to the enclosed information.

7. EPA Proposal to Revise the Air Quality Standards for Particulate Matter

On June 14, 2012, EPA proposed to strengthen the National Ambient Air Quality Standards for PM-2.5 fine particulate pollution and to retain the existing standards for PM-10 coarse particulate pollution. The notice of proposed rulemaking was published in the Federal Register on June 29, 2012. Comments must be received by August 31, 2012. A presentation will be provided. Please refer to the enclosed information.

7. For information and discussion.

8. Update on the MAG 2013 Carbon Monoxide Maintenance Plan

In accordance with the Clean Air Act, MAG is in the process of preparing a second carbon monoxide maintenance plan for the years 2016 through 2025. An update will be provided on the MAG 2013 Carbon Monoxide Maintenance Plan for the Maricopa County Area. The plan is required to be submitted to EPA by April 8, 2013.

8. For information and discussion.

9. EPA Final Approval of the MAG 2007 Eight-Hour Ozone Plan

On June 13, 2012, EPA published a final rule to approve the MAG 2007 Eight-Hour Ozone Plan. The plan demonstrates attainment of the 1997 eight-hour ozone standard of 0.08 parts per million by June 15, 2009.

9. For information and discussion.

10. Call for Future Agenda Items

The next meeting of the Committee has been tentatively scheduled for **Thursday, August 23, 2012 at 1:30 p.m. if necessary**. The Chairman will invite the Committee members to suggest future agenda items.

10. For information and discussion.

MINUTES OF THE
MARICOPA ASSOCIATION OF GOVERNMENTS
AIR QUALITY TECHNICAL ADVISORY COMMITTEE MEETING

Thursday, April 26, 2012
MAG Office
Phoenix, Arizona

MEMBERS ATTENDING

Oddvar Tveit, Tempe, Chairman
Elizabeth Biggins-Ramer, Buckeye, Vice Chair
Sue McDermott for Kristen Sexton, Avondale
Jon Sherrill for Jim Weiss, Chandler
Jamie McCullough, El Mirage
Jessica Koberna for Kurt Sharp, Gilbert
Doug Kukino, Glendale
Cato Esquivel, Goodyear
* Scott Bouchie, Mesa
William Mattingly, Peoria
Philip McNeely, Phoenix
Tim Conner, Scottsdale
Antonio DeLaCruz, Surprise
Mark Hannah, Youngtown
Ramona Simpson, Queen Creek
* American Lung Association of Arizona
Wendy Crites for Kristin Watt, Salt River Project
* Brian O'Donnell, Southwest Gas Corporation
Mark Hajduk, Arizona Public Service Company
Gina Grey, Western States Petroleum Association
Dawn M. Coomer, Valley Metro/RPTA
* Dave Berry, Arizona Motor Transport Association
Jeannette Fish, Maricopa County Farm Bureau
Steve Trussell, Arizona Rock Products Association
Amy Bratt, Greater Phoenix Chamber of Commerce
Amanda McGennis, Associated General Contractors
Spencer Kamps, Homebuilders Association of Central Arizona
Mannie Carpenter, Valley Forward
Kai Umeda, University of Arizona Cooperative Extension
Beverly Chenausky, Arizona Department of Transportation
Eric Massey for Diane Arnst, Arizona Department of Environmental Quality
*Environmental Protection Agency
Jo Crumbaker, Maricopa County Air Quality Department
* Duane Yantorno, Arizona Department of Weights and Measures
* Ed Stillings, Federal Highway Administration
Mary Springer for Judi Nelson, Arizona State University
Christopher Horan, Salt River Pima-Maricopa Indian Community

*Members neither present nor represented by proxy.
#Participated via telephone conference call.
+Participated via video conference call.

OTHERS PRESENT

Lindy Bauer, Maricopa Association of Governments
Dean Giles, Maricopa Association of Governments
Taejoo Shin, Maricopa Association of Governments
Matt Poppen, Maricopa Association of Governments
Julie Hoffman, Maricopa Association of Governments
Kara Johnson, Maricopa Association of Governments
Adam Xia, Maricopa Association of Governments
Feng Liu, Maricopa Association of Governments
Cathy Arthur, Maricopa Association of Governments
Randy Sedlacek, Maricopa Association of Governments
Joe Gibbs, City of Phoenix
Mitch Wagner, Maricopa County Department of Transportation
Scott DiBiase, Pinal County Air Quality
John Meyer, City of Mesa
Joonwon Joo, Arizona Department of Transportation
Kathleen Sommer, Maricopa County Air Quality Department
Sam Tsrown, City of Scottsdale
Mike Gillespie, Town of Gilbert
Rusty Van Leuven, Arizona Department of Agriculture

1. Call to Order

A meeting of the Maricopa Association of Governments (MAG) Air Quality Technical Advisory Committee (AQTAC) was conducted on April 26, 2012. Oddvar Tveit, City of Tempe, Chair, called the meeting to order at approximately 1:35 p.m. Jon Sherrill, City of Chandler; Jamie McCullough, City of El Mirage; Mannie Carpenter, Valley Forward; Gina Grey, Western States Petroleum Association; Mark Hannah, Town of Youngtown; and Antonio DeLaCruz, City of Surprise, attended the meeting via telephone conference call.

2. Call to the Audience

Mr. Tveit stated that according to the MAG public comment process, members of the audience who wish to speak are requested to fill out comment cards, which are available on the tables adjacent to the doorways inside the meeting room. Citizens are asked not to exceed a three minute time period for their comments. Public comment is provided at the beginning of the meeting for nonagenda items and nonaction agenda items. Mr. Tveit noted that no public comment cards had been received.

3. Approval of the February 23, 2012 Meeting Minutes

The Committee reviewed the minutes from the February 23, 2012 meeting. William Mattingly, City of Peoria, moved and Phil McNeely, City of Phoenix, seconded, and the motion to approve the February 23, 2012 meeting minutes carried unanimously.

6. 2010 Implementation Status of Committed Measures in the MAG 2007 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area

Cathy Arthur, Maricopa Association of Governments, noted the order of agenda items has been changed since agenda item six precedes the development of the Draft MAG 2012 Five Percent Plan for PM-10 which will be discussed next. In addition, some of the measures in the 2010 implementation status report are used as contingency measures in the Draft MAG 2012 Five Percent Plan for PM-10. She provided a report on the 2010 Implementation Status of the Committed Measures in the MAG 2007 Five Percent Plan for PM-10.

Ms. Arthur stated that she has provided an implementation status report of the committed measures in the MAG 2007 Five Percent Plan for PM-10 for previous years. On May 23, 2007, the MAG Regional Council requested that the committed measures in the MAG 2007 Five Percent Plan for PM-10 be tracked and that MAG issue a report each year on the status of implementation. Ms. Arthur noted that if the MAG AQTAC, the MAG Management Committee and the MAG Regional Council approve the 2010 implementation status report, the report will be made available to the Governor's Office, the Legislature, the Arizona Department of Environmental Quality (ADEQ), and the Environmental Protection Agency (EPA).

Ms. Arthur provided an overview of the MAG 2007 Five Percent Plan for PM-10. She discussed that the 2007 plan was submitted, on time, to EPA in December 2007, as required by the Clean Air Act. The plan was voluntarily withdrawn by ADEQ on January 25, 2011 to address technical approvability issues identified by EPA. Ms. Arthur indicated that the 2007 plan contained 53 committed measures and most continue to be implemented. She discussed that an implementation status report has been given for years 2008 and 2009, and 2010 is the last report. Ms. Arthur discussed that three years of

clean data is required at the monitors in order to demonstrate attainment. She stated that the control measure commitments are important with regard to keeping the monitors clean.

Ms. Arthur indicated that the tracking forms were sent out in August 2011 to assist member agencies in reporting progress of the implemented measures. She noted that completed forms were received from Maricopa County, ADEQ, and the municipalities by mid-December. MAG held a workshop in September 2011 on tracking implementation of measures in the plan. Ms. Arthur mentioned that MAG has held five workshops on this matter.

Ms. Arthur discussed the implementing entities and the number of measures tracked. She indicated that Maricopa County has 40 measures, the State has 14, and local governments have 16. Ms. Arthur stated that 25 measures were quantified for numeric credit in the 2007 plan to meet the five percent reduction target and to demonstrate attainment. She indicated that 11 measures were quantified for numeric credit as contingency measures. Ms. Arthur noted that 17 of the 53 measures in the plan were not quantified.

Spencer Kamps, Homebuilders Association of Central Arizona, asked what determined the measures that were used to meet the five percent reduction target. Ms. Arthur responded that the measures were categorized into either meeting the five percent reduction requirement or to meet the contingency requirement. She stated that there are no definitions in determining the requirement for which the measure would be applied. It is a matter of meeting both requirements.

Steve Trussell, Arizona Rock Products Association, inquired if the contingency measures account for surplus. Ms. Arthur replied that any credit taken above the five percent reduction requirement is used as a contingency measure. She indicated that some measures are difficult to quantify, which is why 17 measures were not quantified. Ms. Arthur noted that the Draft MAG 2012 Five Percent Plan for PM-10 had challenges with quantifying some measures as well. She noted that EPA was distinct in requesting studies to support the reductions for the measures. Ms. Arthur stated that the 2012 plan was limited in what measures could be used for credit. Mr. Kamps asked if 36 measures were being used to quantify credit in the plan. Ms. Arthur responded that credit was taken for 36 measures, a majority, in the 2007 plan.

Ms. Arthur stated that the measures that exceeded the benefits and commitments have helped to show the necessary reductions for contingency measures in the 2012 plan. She gave an overview of measures that exceeded commitment. She stated that measure 26, paving or stabilizing public dirt roads/alleys, has lead to 181 miles of public dirt roads being paved or stabilized in 2008, 2009, and 2010. Ms. Arthur noted that this was 77 more miles than the committed amount. She indicated that in 2008 through 2010, 465 miles of dirt alleys were paved or stabilized. Ms. Arthur added that 92 miles of dirt alleys were paved or stabilized above the commitments.

Ms. Arthur noted that measure 27, limiting speeds to 15 miles per hour (mph) on high traffic dirt roads, experienced 13 miles more than the commitments. She stated that there were a total of 37 miles of high traffic dirt roads with 15 mph speed limit signs posted in 2008 through 2010.

Ms. Arthur stated that measure 28, pave or stabilize unpaved shoulders, received 567 curb miles more than the commitments. She mentioned that 959 curb miles of dirt shoulders were paved or stabilized in 2008 through 2010.

Ms. Arthur discussed that the County and one local government adopted ordinances regarding measure 45, which prohibits use of leaf blowers on unstabilized surfaces.

Ms. Arthur stated that measure 53, repaving or overlaying paved roads with rubberized asphalt, implemented by the Arizona Department of Transportation (ADOT), had 13 miles of highway repaved with rubberized asphalt in 2008. She noted that this was 8 miles more than the commitment.

Ms. Arthur discussed measures that were not implemented in the 2007 MAG Five Percent Plan for PM-10. She indicated that measure five, establish a certification program for Dust Free Developments as an industry standard, was not implemented due to budgetary constraints of the implementing identity, ADEQ. Measure 20, provide incentives to retrofit nonroad diesel engines and encourage early replacements with advanced technologies, was not implemented since the Legislature did not establish the fund to provide incentives to retrofit nonroad engines. Measure 39, modeling cumulative impacts, was partially implemented and the draft policy developed by Maricopa County Air Quality Department (MCAQD) and ADEQ was distributed for public review in February 2010. Measure 42, the Arizona State Legislature provide funding to ADEQ for four agriculture dust compliance officers for a total of five inspectors, was not implemented. However, two additional inspectors were funded in the State Legislative budget bill, but expenditure authority for these new positions is no longer available to ADEQ. Ms. Arthur noted that in 2010 the Arizona Department of Agriculture's Agricultural Best Management Compliance Assistance Group performed 107 on-site visits, drafted 4,148 consultation letters, and participated in 12 outreach and training events. Ms. Arthur added that despite lack of funding for measure 42, work from the Arizona Department of Agriculture was being done.

Ms. Arthur discussed that a majority of the implementation results meet or exceed the 2007 Five Percent Plan commitments. She stated that as a result of this, violations of the PM-10 standard have declined. Ms. Arthur mentioned that in 2005 and 2006 the region experienced violations of the standard due to stagnant conditions. She commented that measures in the 2007 plan have successfully controlled stagnation violations and there have been no stagnation violations since the 2007 plan was submitted. Ms. Arthur noted that 2009, 2010, and 2011 may be clean years at the monitors due to no stagnation exceedances. She indicated that 2009 had seven exceptional events and 2011 had 21 exceptional events. Ms. Arthur stated that if EPA concurs with the exceptional event documentation, the region will have three years of clean data. She stated that MAG will continue to track PM-10 concentrations at the monitors and report them to the Committee.

Mr. Tveit requested a motion to recommend forwarding the 2010 Implementation Status of Committed Measures in the MAG 2007 Five Percent Plan for PM-10 in the Maricopa County Nonattainment Area to the Arizona Department of Environmental Quality, the Governor's Office, Arizona Legislature, and the Environmental Protection Agency. Amanda McGennis, Associated General Contractors, moved and Jeanette Fish, Maricopa County Farm Bureau, seconded, and the motion carried unanimously.

4. Draft MAG 2012 Five Percent Plan for PM-10

Lindy Bauer, Maricopa Association of Governments, provided an overview of the Draft MAG 2012 Five Percent Plan for PM-10. She thanked the Committee for all the work they have done on the plan as well as the public and private sectors for working together. She also thanked the Arizona Department of Environmental Quality, Maricopa County Air Quality Department, and the Arizona Department of Transportation for partnering and collaborating with MAG on the Draft MAG 2012

Five Percent Plan for PM-10. Ms. Bauer thanked the stakeholders group lead by Representative Amanda Reeve, that contributed valuable input throughout the process.

Ms. Bauer discussed the Draft MAG 2012 Five Percent Plan for PM-10. She stated that the new 2012 Plan includes a wide variety of existing control measures and projects that have already been implemented. Ms. Bauer added that this plan is unique in that credit is being taken for measures that have already been implemented. She commented that EPA has come to find that the withdrawn 2007 plan worked. Therefore, in July 2011, EPA indicated that MAG may resubmit the plan. While the prior 2007 Five Percent Plan was withdrawn, the control measures continue to be implemented and are now being resubmitted. Ms. Bauer mentioned a table in the Executive Summary and Chapter Four of the 2012 plan that lists the statutes, mostly from Senate Bill 1552, that require the control measures. She noted that the measures control a wide variety of sources including: trackout, open burning, unpaved shoulders, unpaved roads, vacant lots, earthmoving, all terrain vehicles, weed abatement, leaf blower, street sweepers, and nonmetallic mineral processing.

Ms. Bauer stated that MAG closely monitors the air quality data provided by MCAQD and ADEQ. She noted that in 2009 there were seven days of exceptional events. EPA has unofficially indicated that 2009 may be a clean year and only a few of the events may be questioned. Ms. Bauer indicated that 2010 was a clean year since there was only one exceedance and no violations of the PM-10 standard. She discussed that of the 22 exceedance days in 2011, 21 were exceptional events. Ms. Bauer stated that exceptional events will need to be documented for EPA to concur that the region has three years of clean data.

Ms. Bauer presented the 2008 PM-10 Periodic Emissions Inventory developed by MCAQD which serves as a foundation for the 2012 Plan. She noted that the PM-10 total for the nonattainment area in the 2008 PM-10 Emissions Inventory is 48,148 tons per year.

Ms. Bauer discussed that the 2012 Five Percent Plan takes credit for measures in the withdrawn MAG 2007 Five Percent Plan that were implemented. She stated that credit is being taken for increased rule effectiveness for Maricopa County Rules 310, 310.01, and 316. Ms. Bauer indicated that these rules cover a wide variety of sources and that these region-wide rules are very important. She thanked the private sector for their tremendous progress to increase the rule effectiveness. Ms. Bauer noted that Rule 310, which covers earthmoving activity, has a rule effectiveness of 94 percent. The private sector trained and worked with representatives to achieve this rule effectiveness rate. Ms. Bauer stated that Rule 310.01, which covers vacant lots/unpaved parking lots, has a rule effectiveness of 97 percent. She indicated that Rule 316, which covers sand and gravel operations, has a rule effectiveness of 73 percent. Ms. Bauer stated that the private sector has done an excellent job and she commended them for the increase in rule effectiveness.

Ms. Bauer indicated that the 2012 Plan is also taking credit for PM-10 certified street sweeping of freeways; ADOT has a contract dated February 20, 2010. In addition, the plan is taking credit for PM-10 certified street sweepers purchased in 2007 to 2009 with federal Congestion Mitigation and Air Quality Improvement (CMAQ) funds; road, alley, and shoulder paving and stabilization projects completed by local governments between 2008 and 2011; speed limit reductions, 15 mph on dirt roads, implemented in 2008 through 2011; and rubberized asphalt overlays completed by ADOT.

Ms. Bauer discussed that the 2012 Five Percent Plan includes one new measure: the Dust Action General Permit. The Legislature passed a bill in 2011 that established the Dust Action General Permit.

ADEQ is forecasting high risk days five days in advance. Ms. Bauer stated that sources that are regulated, but do not have a permit are expected to implement one best management practice (BMP) before and during a high risk event. Ms. Bauer indicated that if a source does not implement at least one BMP during a high risk event, and it is discovered by the ADEQ Director, the organization may be required to obtain a permit.

Ms. Bauer stated that the Clean Air Act 189(d) requires five percent reductions per year until attainment is reached, which for the 2012 Plan is years 2008 through 2012. The total PM-10 emissions for the base year, 2007, is 59,218 tons. The total PM-10 emissions for 2012, with measures applied, including increased rule effectiveness, is 43,130 tons. This is then tested to determine if the requirements are met. Ms. Bauer indicated that the annual five percent reduction requirement is multiplied by the 2007 base year emissions, 59,218 tons, which equals 2,961 tons. The 2,961 ton reduction target is then multiplied by 5 years (2008-2012) which equates to a total of 14,805 tons needed to meet the requirements. The actual tons reduced by the 2012 Five Percent Plan is 16,089 tons, which represents nine percent excess.

Ms. Bauer noted that the Clean Air Act has a contingency requirement. She identified that contingency measures are emission reductions above and beyond the credit used to demonstrate the annual five percent reductions and model attainment. Ms. Bauer indicated that the contingency measures for this region have always been implemented early to attain the standard as quickly as possible. The tons required in 2012 for the contingency requirement is an additional 3,218 tons. Ms. Bauer stated that total 2012 PM-10 reductions including PM-10 certified street sweeping and paving/stabilization/speed limit reduction projects completed in 2008 through 2011 is 3,439 tons. The contingency requirement is met in 2012 with 221 tons more than required.

Ms. Bauer presented the Contingency Projects Completed in 2008-2011: Paving/Stabilization/Speed Limit Reductions. She mentioned that the documentation of these projects is detailed so that the plan can take credit for the measures. Ms. Bauer stated that 862 total miles of roads/alleys were paved or stabilized. She indicated that 1,158 total miles of shoulders were paved or stabilized. Ms. Bauer added that documentation from the municipalities has been provided to MAG for all of these completed projects. She stated that collectively these projects reduced PM-10 emissions by 2,939 tons.

Ms. Bauer presented the Contingency Projects Completed in 2008-2011: PM-10 Certified Street Sweeping. She stated that the 2012 Five Percent Plan takes credit for 25 new PM-10 certified street sweepers purchased in 2007-2009. Ms. Bauer indicated that more than 25 street sweepers were purchased; however, many were replacement street sweepers for other PM-10 certified sweepers. The plan only takes credit for new street sweepers. Ms. Bauer noted that the 25 new street sweepers purchased in 2007-2009 equates to 499 tons of PM-10 emission reductions. The 499 tons plus the reductions from the other contingency projects completed in 2008 through 2011 demonstrate that the contingency requirement is exceeded by 221 tons.

Ms. Bauer called attention to the PM-10 nonattainment area total emissions figure of 48,148 tons from the 2008 PM-10 Emissions Inventory. She stated that the 2012 PM-10 Emissions Inventory with the Five Percent Plan measures and contingency projects totals 39,691 tons for the PM-10 nonattainment area.

Ms. Bauer stated that in conclusion the Draft MAG 2012 Five Percent Plan for PM-10 meets the annual five percent reduction requirement, meets the contingency requirement, and demonstrates attainment in 2012 for two high wind days-May 4, 2007 and June 6, 2007. She indicated that an extension of the attainment date from June 6, 2012 to December 31, 2012 has been requested. The extension is being requested so that the Dust Action General Permit can be implemented for an entire year in order to demonstrate attainment. Ms. Bauer noted that the Dust Action General Permit went into effect December 30, 2011. She discussed the importance of three years of clean data at the monitors-at a minimum for years 2010, 2011, and 2012. Ms. Bauer also mentioned the importance of the exceptional event documentation. She thanked ADEQ for their efforts in documenting exceptional events. Ms. Bauer commented on the daunting task and indicated that ADEQ is in the process of hiring consultant assistance for the documentation. She stated that MAG is also ready to assist ADEQ in any way possible.

Ms. Bauer provided an overview of the Draft MAG 2012 Five Percent Plan schedule. She noted that on March 12, 2012 the draft plan became available for public review. Ms. Bauer added that parts of the draft plan have been presented to the Committee in previous meetings. She stated that the Draft MAG 2012 Five Percent Plan for PM-10 public hearing was held on April 12, 2012. Ms. Bauer indicated that Ms. Arthur will discuss the comments received on the draft plan and the response to comments were provided at each place. Ms. Bauer stated that today a recommendation is being requested from this Committee on the draft plan. The next step would be the MAG Management Committee on May 9, 2012. The Draft MAG Five Percent Plan would then proceed to the MAG Regional Council meeting on May 23, 2012. Following Regional Council adoption of the plan, on May 25, 2012, MAG would submit the plan to ADEQ who would submit the plan to the Environmental Protection Agency. Ms. Bauer stated that by August 14, 2012 EPA will need to make a completeness determination on the plan which will stop the 18 month and 24 month sanction clocks that began when the plan was withdrawn. She indicated that by February 14, 2013 EPA needs to approve the plan to stop the imposition of a federal implementation plan. Ms. Bauer again thanked everyone for their efforts on the Draft MAG 2012 Five Percent Plan for PM-10.

Ms. Arthur provided an overview of the responses to comments received. She indicated that a public hearing was conducted on Thursday, April 12, 2012 for the MAG 2012 Five Percent Plan for PM-10. Ms. Arthur indicated that two individuals testified at the hearing. Ms. Arthur added that written comments were received from the Arizona Center for Law in the Public Interest. She stated that she will provide a summary of the comments received and the response to comments.

Ms. Arthur summarized a testimonial comment from Jerry Greenburg. The comment stated that Mr. Greenburg lives in a nice neighborhood in Chandler and he is having trouble breathing. He has observed vacant lots to the north of his neighborhood that blow dust into his neighborhood of Twelve Oaks, Stellar Air Park. He realized that his neighborhood was surrounded by dirt lots. He called the City and County and made formal complaints and responses were received. The comment included that people are allowed to dump construction dirt and construction debris on vacant lots, and also allow vacant lots to be bare dirt. He asked why vacant lot owners are being coddled. Ms. Arthur thanked ADEQ and Maricopa County for assisting in the response to comments. The response states that fugitive dust produced by vacant lots is regulated under Maricopa County Air Pollution Control Rule 310.01. The rule requires the owner and/or operator of a vacant lot to keep the soil stabilized at levels that pass test specifications in the rule. Control measures commonly utilized include dust suppressants, vegetative ground cover, and gravel coverage. MCAQD encourages residents to call and report problems with vacant lots or dust creating activities. The phone number and website were

identified. Vehicles traveling or parking on vacant lots are also restricted by both County and local government ordinances. The City of Chandler has an ordinance that restricts vehicular use and parking on vacant lots. A phone number for the City of Chandler Code Enforcement is provided. MCAQD operates a monitoring network with a number of monitors sited to measure particulate matter at the neighborhood scale where residents live. Monitoring data is summarized annually by location in a network review report which also summarizes its compliance inspection and enforcement activity. Both documents are available on the Maricopa County Air Quality Department website.

Ms. Arthur summarized a testimonial comment from Mr. Greenburg. The comment stated that he has a new grandson who was born at Chandler Regional Hospital. Mr. Greenburg stated that he had witnessed a tractor with a plow on it raising clouds of dust a half mile from where his grandson was born. He called the City the next day and they said they would talk to him about it. Ms. Arthur stated the response to comments included that ADEQ is responsible for controlling dust emissions from agricultural activities in Area A. Under Senate Bill 1552 passed by the Arizona Legislature in 2007, farmers are required to implement two BMPs to reduce PM-10 emissions for tillage and harvest, non-cropland, and cropland. Additional information on the BMPs can be obtained at the Arizona Department of Environmental Quality website. To issue a complaint of high dust generation by a tractor or vacant parcel, call ADEQ.

Ms. Arthur summarized a testimonial comment from Sandy Bahr who represents the Sierra Club of Arizona. The comment from Ms. Bahr indicated that she has raised the issue about MAG not being the right entity for leading the air quality effort. Ms. Bahr indicated that politically MAG is a difficult place to get clean air when the purpose of the organization is about transportation and facilitating expenditure of federal highway dollars. Ms. Arthur summarized the response to Ms. Bahr's comment. The response states that MAG serves as the designated Regional Air Quality Planning Agency for the Maricopa area. The regional air quality plans are prepared through a coordinated effort with the Arizona Department of Environmental Quality, Arizona Department of Transportation, Maricopa County Air Quality Department, and Maricopa Association of Governments. Over time, significant progress has been made to improve air quality due to the implementation of the aggressive measures in the MAG regional air quality plans by the State and local governments. The MAG region has met the federal air quality standard for: carbon monoxide, one-hour ozone, and the 1997 eight-hour ozone standard. In addition, the MAG region meets the fine particulate standard of PM-2.5. The Revised MAG 1999 Serious Area Particulate Plan for PM-10 was one of the first in the nation and included 77 aggressive measures to reduce coarse particulate matter. On July 25, 2002, EPA approved that plan which was heralded by EPA as one of the most comprehensive in the country. Every city and town within the nonattainment area and Maricopa County have implemented dust control measures to reduce PM-10. In addition, the MAG Regional Council has allocated $24.9 million in Congestion Mitigation and Air Quality Improvement Funds over the last 12 years to purchase clean, dust-reducing street sweepers. Ms. Arthur stated that air quality is an important issue to the Maricopa Association of Governments.

Ms. Arthur stated that a testimonial comment from Ms. Bahr included that the region seeks to identify 21 of the 22 exceedances for 2011 as exceptional events. Ms. Bahr indicated that when one has that many exceptional events, they fail to be exceptional. The response to this comment stated that the data flagged as "exceptional" must have been affected by an exceptional event, which is defined as 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 EPA to be an exceptional event. For the Maricopa County PM-10 nonattainment area,

exceptional events are generally caused by high winds. In 2010, there was only one exceedance of the PM-10 standard at one monitor in the nonattainment area, which did not occur on a windy day. In 2011, the PM-10 standard was exceeded on 21 of 22 days during either strong frontal system winds or summer monsoon thunderstorms. ADEQ is in the process of preparing documentation that meets the EPA Exceptional Event Rule (EER) requirements and justifies that the 21 exceedances were unavoidable due to the uncontrollable meteorological conditions that occurred during 2011. In addition, EPA acknowledged that natural events like high winds need not be rare in order to qualify as an exceptional event. Ms. Arthur quoted EPA, *"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)"* (72 FR 13563). Because 2011 had an unusually high amount of dust storms does not preclude those dust storms from being considered as exceptional events under the current definition of exceptional events in EPA's EER.

Ms. Arthur summarized a testimonial comment from Ms. Bahr that the plan is to demonstrate best available control measures and maximum measures. Ms. Bahr indicated that she did not see where this was demonstrated in the plan. Ms. Arthur stated that the response to this comment included that the MAG 2012 Plan is designed to meet the requirements in Section 189(d) of the Clean Air Act. Section 189(d) indicates that, in the case of a Serious PM-10 nonattainment area in which the PM-10 standard is not attained by the attainment date, which for Maricopa County was 2006, the State shall submit plan revisions which provide for attainment of the PM-10 standard and demonstrate five percent reductions per year based on the most recent emissions inventory. The Best Available Control Measure (BACM) and Most Stringent Measure (MSM) demonstrations are required under Section 189(b)(1) and 188(e) of the Clean Air Act. On July 25, 2002, the Environmental Protection Agency approved the Revised MAG 1999 Serious Area Plan for PM-10 that included the BACM/MSM demonstrations. On August 14, 2008, EPA again took final action to approve the BACM and the MSM demonstrations in the Revised MAG 1999 Serious Area Plan for PM-10.

Ms. Arthur summarized a testimonial comment from Ms. Bahr where she inquires how a contingency measure can be classified as contingency if it is already implemented. Ms. Arthur summarized the response to the comment. She stated that Section 172(c)(9) of the Clean Air Act requires that nonattainment plans contain contingency measures. Such measures are to be undertaken without further action by the State or the EPA Administrator. EPA encourages early implementation of contingency measures to reduce emissions as expeditiously as practicable. Ms. Arthur stated that the contingency requirement is met in the MAG 2012 Five Percent Plan by quantifying the benefits of PM-10 reduction projects that were implemented early; projects for the MAG 2012 Plan were completed in 2008 through 2011.

Ms. Arthur summarized a testimonial comment from Ms. Bahr. The comment from Ms. Bahr indicated that she is aware of changes relative to the BMPs for agriculture, but she thinks there are questions about whether the BMPs are truly enforceable. The response to comments states that ADEQ is responsible for controlling dust emissions from agricultural activities in Area A. Additional information on agricultural BMPs is available on the ADEQ website.

Ms. Arthur summarized written comments received from the Arizona Center for Law in the Public Interest (ACLPI) and the responses. She indicated that the ACLPI letter was signed by Joy E. Herr-Cardillo dated April 12, 2012. Ms. Arthur summarized a comment from the ACLPI letter indicating that an updated BACM/MSM analysis should be included in the 2012 Five Percent Plan. The response to this comment states that the MAG 2012 Five Percent Plan is designed to meet the requirements in Section 189(d) of the Clean Air Act. In the case of a Serious PM-10 nonattainment

area in which the PM-10 standard is not attained by the attainment date, the State shall submit plan revisions which provide for attainment of the PM-10 standard and demonstrate five percent reductions per year based on the most recent inventory. The Best Available Control Measure and Most Stringent Measure demonstrations are required under Section 189(b)(1) and 188(e) of the Clean Air Act. On July 25, 2002, the Environmental Protection Agency approved the Revised MAG 1999 Serious Area Plan for PM-10 that included the BACM/MSM demonstrations. On August 14, 2008, EPA again took final action to approve the BACM and the MSM demonstrations in the Revised MAG 1999 Serious Area Plan for PM-10.

Ms. Arthur stated that the following comments provided by ACLPI address the 2008 PM-10 Emissions Inventory. A comment provided by ACLPI stated that in its proposed disapproval of the 2007 Draft Five Percent Plan, EPA found that the 2005 emissions inventory relied upon by the state to be insufficiently accurate because it overestimated the baseline emissions for construction and other sources. In the current plan, MAG is relying upon a 2008 periodic emissions inventory which, like the 2005 inventory, was prepared by MCAQD. At first glance, the recent inventory appears to address EPA's concerns as it shows emissions from residential construction to be a smaller percentage of the overall emissions. However, a comparison of the two inventories reveals a discrepancy that MAG does not appear to either acknowledge or explain, the drastic reductions in the estimated emissions overall total. In the 2005 inventory, total PM-10 emissions in the nonattainment area were calculated to be 84,753 tons per year. The 2008 inventory puts that total at 48,148 tons per year - a reduction of more than 40 percent in just three years. Since the inventory is the principal basis for calculating the five percent annual reduction required under the Clean Air Act, it is important to the public health that the amount of current emissions are not understated. Ms. Arthur stated that the response to these comments include that MCAQD and EPA staff worked together to revise the 2008 emissions inventory finalized in June 2011. Ninety-two percent of the reduction in total PM-10 emissions from the 2005 emissions inventory to the 2008 emissions inventory can be attributed to four factors: (1) a decrease in the number of acres permitted for construction activities and increases in compliance with Maricopa County Rule 310, (2) a reduction in the material burned by wild fires, (3) annual variations in meteorological data and use of a new and improved methodology to estimate windblown dust emissions, and (4) decreases in PM-10 emissions from paved roads due to application of a new AP-42 equation released by EPA in January 2011. Ms. Arthur noted that she will discuss each of these factors in more detail.

Ms. Arthur discussed the first factor which is a decrease in the number of acres permitted for construction activities and increases in compliance with Maricopa County Rule 310. She stated that one reason for the reduction in PM-10 emissions is the significant decline in construction activity that took place between 2005 and 2008. In 2005, MCAQD issued construction permits for 68,664 acres in Maricopa County; in 2008, this number was reduced to 42,130 acres, a 39 percent decline in three years. Ms. Arthur commented that MCAQD staff worked closely with EPA to improve the methodology used to quantify rule effectiveness. The rule effectiveness rate for construction activities in the 2005 emissions inventory was 51 percent; using the new methodology, the rule effectiveness rate for construction activities in the 2008 emissions inventory is 90 percent. Ms. Arthur indicated that this represents a 76 percent increase in compliance with Rule 310 between 2005 and 2008. Reduction in the inventory due to construction rule effectiveness is 24,166 tons per year which represents 66 percent of the 92 percent decrease in total PM-10 emissions between 2005 and 2008.

Ms. Arthur stated that the second factor was wild fires. She added that wild fires in 2008 decreased significantly from 2005. Ms. Arthur commented that Maricopa County estimated that wild fires produced 4,860 tons of PM-10 emissions in 2005. She noted that the estimated PM-10 emissions in 2008 was 424 tons. Due to the significant reduction in material burned in the nonattainment area between 2005 and 2008, the PM-10 emissions for wild fires are 91 percent lower in the 2008 emissions inventory. Ms. Arthur explained that the second factor regarding wild fires explains another 12 percent of the 92 percent decrease.

Ms. Arthur indicated that the third factor relates to windblown dust. She noted that PM-10 windblown dust emissions in the 2005 emissions inventory are 7,380 tons for the nonattainment area, compared with 4,815 tons in the 2008 emissions inventory. Ms. Arthur added that for the revised 2008 emissions inventory, MAG developed a new PM-10 emissions estimation methodology using the latest scientific research on windblown dust in the arid southwest. The windblown dust estimates in the 2008 emissions inventory are based on 2008 wind speed and precipitation data from 34 meteorological stations and the most recent land use data (2009) available for the nonattainment area. The new methodology produces a more accurate estimate of the contribution of windblown dust to the 2008 emissions inventory. Ms. Arthur noted that this windblown dust methodology accounts for seven percent of the decrease in total PM-10 emissions between 2005 and 2008.

Ms. Arthur discussed the fourth factor: an updated version of the AP-42 equation issued in January 2011 by EPA that estimates particulate emissions from vehicles traveling on paved roads. She added that the reduction in emissions attributable to the updated AP-42 equation is 51 percent between 2005 and 2008. Ms. Arthur noted that credit was not taken for all the reduction benefit since the reduction in paved road PM-10 emissions is partially offset by increases in emissions from exhaust, tire wear, and brake wear due to the use of the new EPA MOVES2010a mobile source emissions model. There were also increases in emissions for vehicles traveling on unpaved roads. The net difference represents seven percent of the 92 percent decrease.

Ms. Arthur stated that the preceding four factors contribute to a 92 percent reduction in total PM-10 emissions between the 2005 emissions inventory and the 2008 emissions inventory. She indicated that the remaining eight percent can be attributed to factors such as increased rule effectiveness for Rules 310.01 and 316, as well as decreased industrial activity. Ms. Arthur indicated that the annual five percent reductions in total PM-10 emissions were not based on 48,148 tons (2008 emissions), but the higher 2007 emissions level of 59,218 tons. Ms. Arthur stated that the five percent reductions calculated in the Draft MAG 2012 Five Percent Plan are not understated.

Ms. Arthur noted that the next ACLPI comment is in regard to reliance upon EPA's concurrence on exceedances claimed as exceptional events. The comment received stated that ACLPI is concerned that the attainment demonstration in the 2012 Five Percent Plan, like the 2007 Five Percent Plan, relies upon the concurrence by EPA regarding exceptional events. The likelihood of eliminating all of these exceedances as exceptional events would appear both remote and contrary to the public interest. Therefore, a plan that proposes to achieve "attainment" simply by whitewashing over severely unhealthful conditions is both irresponsible and contrary to the public interest. Ms. Arthur summarized the response to the comment. She noted that ADEQ aided in this response. The response stated that on March 22, 2007, EPA adopted the Exceptional Events Rule. In the implementing rules, EPA allows States to request the exclusion of data showing exceedances or violations of the national ambient air quality standard that are directly the result of an exceptional event, provided the State submits a demonstration justifying the exclusion of the data. Through the development of the

proposed Five Percent Plan, ADEQ, MAG and MCAQD have evaluated the exceedances that occurred in 2009 and 2011, and have compared them to the requirements in EPA's EER, as well as EPA's Draft 2011 Exceptional Events Guidance document. Based upon that analysis it was concluded that the overwhelming majority of exceedances that occurred during 2009 and 2011 were the direct result of events that could not be prevented or that overwhelmed the controls required by the existing non-attainment area plans. On March 14, 2012, ADEQ submitted to EPA documentation demonstrating that the PM-10 exceedances recorded between July 2 and July 8, 2011, were the result of exceptional events. EPA's decision regarding this documentation is expected by July 2012. ADEQ, MCAQD, and MAG have concluded that there is a relatively low risk of nonconcurrence. Finally, recognizing that the public is still exposed to these high concentrations of PM-10, regardless if they are reasonably preventable or controllable, ADEQ is required by Arizona Revised Statute § 49-424(11) to develop and disseminate air quality dust forecasts for the Maricopa County PM-10 nonattainment area. These forecasts are required to identify the risk of dust generation for the next five consecutive days, and must be posted on ADEQ's web site, at a minimum, five days each week. In addition to the dust forecasts, ADEQ also publishes a forecast that predicts the air quality index for the upcoming days, and issues health watches and high pollution advisories on days where exceedances of the PM-10 standard are expected to occur. ADEQ has taken the additional step of making these forecasts available to any interested party via electronic mail.

Ms. Arthur summarized the next comment from the Arizona Center for Law in the Public Interest. The comment stated that the plan does not adequately demonstrate that the Dust Action General Permit and the agricultural permit requirements satisfy the BACM and MSM requirement. The response states that since 2007, the most common factor associated with PM-10 exceedances in Maricopa County was elevated wind speed. In reviewing other PM-10 control programs, ADEQ, MCAQD and MAG were unable to identify another comprehensive State Implementation Plan (SIP) program that was specifically designed to control dust on high wind days. ADEQ agreed to legislation that requires the Department to issue a pollution forecast that identifies the risk of dust generation. Based upon ADEQ's forecast, all owners or operators of dust generating activities within Maricopa County are required to implement air pollution controls as soon as practicable before and during a day forecast to be at high risk of dust generation. In addition to these controls, the permit also adds additional monitoring, record keeping and reporting requirements that enhance the enforceability of these control measures. With respect to the Agricultural Best Management Practices (Ag BMP) program, portions of the current program have already been approved into the SIP and those commitments remain on-going. This Section 189(d) plan did not rely on any improvements to the previously approved Ag BMP program to achieve the required annual five percent emissions reductions or to demonstrate that the plan results in attainment. As a result, the improvements that were made to the program in 2007, 2009, 2010 and 2011, have not been included as part of this SIP revision. Because of the statewide applicability of this program, ADEQ will submit the program as a separate, independent revision to the State Implementation Plan.

Ms. Arthur summarized an ACLPI comment on the enforceability of control measures. The comment stated that, in recent years, when citizens have brought actions to enforce control measures that the State is responsible for implementing, the State has invoked the Eleventh Amendment in an effort to avoid the enforcement of its obligation to comply with the SIP. The comment also identified the belief that when the State or one of its subdivisions assumes responsibility for the implementation of specific control measures, the commitment should include an unequivocal consent to federal jurisdiction if enforcement is sought under the citizen suit provision. The response states that, as noted in the comment, the legal strategy employed by Arizona did not preclude injunctive relief and it did not

affect the enforceability of the SIP by either EPA or affected citizens. Because the merits of each lawsuit must be reviewed on a case-by-case basis, the response to the lawsuit must address the merits of each case, and the defense strategy in question did not affect the enforceability of the SIP, it is not prudent to unnecessarily limit future defense strategies.

Cato Esquivel, City of Goodyear, asked if the goal was to share all the response to comments. Mr. Tveit stated that an overview of the comments on the MAG 2012 Five Percent Plan and the responses is being provided so that the Committee can make a recommendation on the plan. Mr. Esquivel stated that the response to comments has been provided to the Committee for review and questions. He stated that he understands the hard work that has gone into the response to comments, but he inquired if the question portion could commence. Mr. Tveit asked Ms. Arthur how many comments she has yet to summarize. Ms. Arthur stated that most of the ACLPI comments are in the technical section of the response to comments, which she has not discussed. She stated that prior Committee meetings have reviewed all of the comments; however, she noted that there is not usually this many technical questions. Mr. Tveit asked Ms. Arthur to present any further response to comments that are of importance and then the Committee can proceed to the question portion of the agenda item. Ms. Arthur asked if anyone had questions on the response to comments.

Mark Hajduk, Arizona Public Service Company, asked Ms. Bauer if the 18 month and 24 month sanction clocks started on January 25, 2011. Ms. Bauer responded that the sanction clocks started on February 14, 2011; EPA published a notice in the Federal Register on this date and made it effective on that date.

Mr. Tveit inquired how the one percent rule effectiveness was calculated for the Dust Action General Permit. Ms. Arthur replied that this rule effectiveness rate only applies to Rule 310.01, unpaved/vacant lots. She stated that the one percent increase in rule effectiveness was sufficient to aid in demonstrating modeling attainment. Ms. Arthur noted that the one percent equates to 149 tons which helped model attainment for one of the days that was being modeled. She mentioned that the Dust Action General Permit is important to both achieve attainment at the monitors and model attainment.

Mr. Tveit requested a motion to recommend the adoption of the Draft MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area. Eric Massey, Arizona Department of Environmental Quality, moved and Doug Kukino, City of Glendale, seconded.

Mr. Kamps inquired what analysis was used to determine the contingency measures for the 2012 Five Percent Plan. Ms. Arthur responded that contingency measures in the 2007 Five Percent Plan were more arbitrary, however the 2012 Plan contingency measures are not. She stated that the increases in rule effectiveness were the only measures that supplied sufficient benefit to meet the five percent reduction per year requirement. The benefit for contingency projects completed in 2008 through 2011 totaled 3,439 tons, which is just over one year of benefit. She noted that five years of benefit were needed. Ms. Arthur indicated that MCAQD worked closely with EPA to define a specific method to quantify rule effectiveness and the increases in rule effectiveness alone provided enough benefit for the five percent reduction per year requirement for five years. Mr. Kamps asked about the measures that do not have rule effectiveness. Ms. Arthur replied that a lot of those measures are contingency measures. She gave the examples of paving unpaved roads, shoulders, and alleys. Mr. Kamps inquired about leaf blowers. Ms. Arthur stated that EPA was clear that credit could not be taken for measures, even though implemented, unless there were studies supporting actual PM-10 reductions. Ms. Arthur indicated that the only measures used for credit were those that have been completed and

where the PM-10 reductions are supported. Ms. Arthur stated that EPA was involved in developing the rule effectiveness methodology and MAG has comprehensive data supporting the completed contingency projects. She stated that no credit was taken for leaf blowers since there is no data to demonstrate the effectiveness of leaf blowers in reducing PM-10 emissions. Mr. Kamps asked specifically what analysis was used to distinguish the difference between an implemented measure and a contingency measure. Ms. Arthur stated that all of the measures in the 2012 plan are those for which EPA could be convinced that the benefits occurred. She indicated that EPA is convinced that rule effectiveness increased due to dramatic increases in compliance rates between 2007 and 2010. Mr. Kamps stated that there are committed measures that do not have rule effectiveness. Ms. Arthur noted that the 2007 Five Percent Plan had 53 measures and only four were not implemented. She added that there are quite a few measures that are being implemented for which credit is not taken in the 2012 Plan because EPA requires studies to support the claimed PM-10 reductions. Mr. Massey responded that the Draft 2012 Plan achieves the required five percent emissions reductions for years 2008, 2009, 2010, 2011, and 2012 and the plan also achieves approximately 3,400 tons of reduction in contingency. He stated that the deciding factor of what determined a five percent reduction measure versus a contingency measure was rule effectiveness. Rule effectiveness was used to demonstrate the five percent reduction and anything above and beyond was used as a contingency measure. The completed projects that paved unpaved roads, alleys, and shoulders satisfied the 3,439 ton contingency requirement. Ms. Arthur stated that there is extensive data supporting the contingency measure benefits.

Mr. Massey discussed that there are a number of committed measures in which no credit was ever calculated. He noted that these measures do have air quality benefits, but since the benefits were not quantified, an emissions reductions credit is not being taken. The committed measures show benefit at the monitors, but a quantified reduction is not taken in the MAG 2012 Five Percent Plan. Mr. Massey discussed that there were a number of controls in the 2007 Five Percent Plan that did have benefit, but that could not be quantified. Ms. Arthur also mentioned that there were some quantified benefits included in the 2007 plan, but not the 2012 plan, since EPA required additional data to support those reductions.

Mr. Tveit requested a vote on the recommendation for adoption of the Draft MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area. The motion carried with Jeanette Fish, Maricopa County Farm Bureau, abstaining.

5. Update on PM-10 Exceedances and Exceptional Events

Ms. Bauer provided an update on PM-10 exceedances and exceptional events. She indicated that on April 3, 2012 and April 4, 2012 there were exceedances of the PM-10 standard at the West Chandler monitor. According to ADEQ, the exceedances were due to localized agricultural activity that began around 9:00 p.m. on April 3rd and continued to approximately 1:30 a.m. on April 4th. ADEQ has indicated that the farmer was new and unaware of the agricultural best management practices. Ms. Bauer added that the farmer is now aware of the best management practices and is willing to work with the State. She thanked ADEQ, MCAQD, and the City of Chandler for their efforts on stopping the activity. She noted that both Maricopa County and the City of Chandler sent staff out to the monitor. Ms. Bauer added that ADEQ will be discussing this incident with EPA since perhaps it was an isolated event.

Ms. Bauer discussed the EPA Exceptional Event Rule. She stated that on March 2, 2012, EPA sent a letter to MAG indicating that EPA would consider the MAG comments on the draft exceptional

events guidance and the conceptional approach for streamlining the exceptional event determination process by enabling states and tribes to make the exceptional events determinations, in consultation with EPA.

7. EPA Proposed Approval of the MAG 2007 Eight-Hour Ozone Plan

Ms. Bauer provided an update on the MAG 2007 Eight-Hour Ozone Plan. She stated that on April 12, 2012, EPA published a proposed rule to approve the MAG 2007 Eight-Hour Ozone Plan that demonstrates attainment of the 1997 eight-hour ozone standard of 0.08 parts per million by June 15, 2009. Ms. Bauer indicated that there have been no violations of the standard since 2004.

8. CMAQ Annual Report

Dean Giles, Maricopa Association of Governments, presented the Congestion Mitigation and Air Quality Improvement Program Annual Report. He stated that in accordance with federal guidance, the 2011 CMAQ Annual Report describes how funds have been spent and the estimated air quality benefits. Mr. Giles indicated that the CMAQ report for the fiscal year (FY) ending September 30, 2011 was submitted to the Federal Highway Administration in the electronic format required by mid February 2012. The report was prepared by MAG in cooperation with the Arizona Department of Transportation. Mr. Giles mentioned that the CMAQ projects were reviewed by the Committee when the projects were submitted to MAG for possible inclusion in the Transportation Improvement Program (TIP). He noted that the data for calculating the estimated air quality benefits was provided by the MAG member agencies.

Mr. Giles stated that the CMAQ annual report contains 30 projects, including information on the CMAQ cost and the estimated air quality benefits for volatile organic compounds, carbon monoxide, nitrogen oxide, and PM-10 in kilograms per day. Mr. Giles noted that the first page of the report, that was included in the Committee agenda packet, lists dirt road and alley paving projects, as well as street sweepers, implemented in 2011. He added that air quality benefit for PM-2.5 is not included in the report since the area is in attainment for that pollutant.

Mr. Kamps stated that he would like to note that a majority of the PM-10 reductions are a result from paving projects, yet he estimates 50 percent of the CMAQ funds are allocated to bicycle, pedestrian, and intelligent technologies. He commented that the CMAQ annual report points out challenges this Committee has faced in allocating CMAQ monies for PM-10 reduction.

9. Update on PM-10 Certified Street Sweeper Projects for FY 2012 CMAQ Funding

Mr. Giles provided an update on the PM-10 Certified Street Sweeper Projects for FY 2012 CMAQ funding. He stated that on October 27, 2011 the AQTAC recommended a prioritized list of proposed PM-10 Certified Street Sweeper Projects for FY 2012 CMAQ funding. The Management Committee concurred with that recommendation on November 9, 2011. Mr. Giles indicated that on December 7, 2011, the Regional Council approved the prioritized list of the proposed PM-10 Certified Street Sweeper Projects for FY 2012 CMAQ funding. He noted that with the $1.3 million that was available, the first seven PM-10 certified street sweepers were funded. Mr. Giles added that additional funding was provided for the remaining street sweepers during the TIP Closeout in February 2012. He stated that there was over $539,000 of additional CMAQ funding that went toward increasing the federal participation rate to 100 percent and fund the remaining two street sweepers on the list for the City of Tempe and City of Chandler. MAG staff has notified all of the member agencies of the funding

and will also report to the MAG Management Committee and the MAG Regional Council periodically on the status of the street sweeper projects. Mr. Giles noted that MAG requests that the street sweepers be purchased within one year and ten days of the MAG authorization letter.

Ms. McGennis inquired about CMAQ funding going toward the retrofit of nonroad diesel engines and replacement with advanced technologies. Mr. Giles responded that the retrofit of nonroad diesel engines and replacement with advanced technologies is eligible for CMAQ funding. Ms. McGennis asked if only municipalities can apply for the funding or if individual companies could apply for the CMAQ funding for nonroad vehicles. Ms. Bauer replied that there are public-private partnerships that would be eligible to apply for CMAQ funding during the allocation process. Mr. Giles added that MAG requests the application be submitted through a public agency. Ms. McGennis commented that there is a fund for this measure. Ms. Bauer discussed that CMAQ funding is available for that type of project. She stated that retrofitting diesel engines assists in decreasing PM-2.5 pollution, the PM-10 reduction is much smaller.

10. Call for Future Agenda Items

Mr. Tveit requested suggestions for future agenda items. He noted that the next meeting is scheduled for Thursday, May 24, 2012. Ms. McGennis inquired if MAG will be commenting on Congressman Jeff Flake's Commonsense Legislative Exceptional Events Reform (CLEER) Act. Ms. Bauer noted that the item was not on the current agenda; however, it could be included on a future agenda. With no further comments, the meeting was adjourned at 3:00 p.m.

2012 Exceedances of the 24-Hour PM-10 Standard by Date

(Preliminary Data Through July 11, 2012)

Date	Monitor	24-Hour Avg. PM-10 Concentration in µg/m^3	Additional Information
January 21, 2012	West 43rd Ave.	209.6	Frontal system high winds. During the event, a maximum west-southwest wind speed of 32.8 mph was recorded and an hourly average of 17.9 mph.
January 22, 2012	Higley	163.3	Residual dust from January 21, 2012 frontal system high winds.
February 27, 2012	West 43rd Ave.	167.8	Frontal system high winds. Three continuous Pinal County PM-10 monitors recorded exceedances on February 27, 2012.
April 3, 2012	West Chandler	402.4	According to the Arizona Department of Environmental Quality, the exceedances on April 3, 2012 and April 4, 2012 were caused by localized agricultural activity. Concentrations began increasing between 9:00 pm and 10:00 pm on April 3, 2012 and remained elevated through approximately 1:30 am on April 4, 2012.
April 4, 2012	West Chandler	196.5	According to the Arizona Department of Environmental Quality, the exceedances on April 3, 2012 and April 4, 2012 were caused by localized agricultural activity. Concentrations began increasing between 9:00 pm and 10:00 pm on April 3, 2012 and remained elevated through approximately 1:30 am on April 4, 2012.
June 16, 2012	Buckeye	202.7	Regional dust storm from thunderstorm outflow in Pinal County. The maximum southeast wind speed reached 28 mph with gusts of 33 mph.
	Durango	187.1	
	Dysart	168.2	
	Higley	195.0	
	South Phoenix	165.6	
	West 43rd Ave.	211.6	
	West Phoenix	189.8	
June 18, 2012	West 43rd Ave.	174.5	According to the Maricopa County Air Quality Department, there was a forklift driving around on an unpaved surface during high winds immediately adjacent to the West 43rd Avenue monitor.
June 27, 2012	Central Phoenix	340.9	Regional dust storm. The maximum south wind speed reached 30 mph with gusts of 44 mph.
	Durango	221.8	
	Glendale	331.0	
	Greenwood	324.3	
	Higley	224.9	
	North Phoenix	179.2	
	South Phoenix	343.4	
	Supersite	330.1	
	Tempe	169.8	
	West Chandler	222.3	
	West 43rd Ave.	220.8	
	Zuni Hills	285.5	
July 11, 2012	Durango	218.2	Thunderstorm outflow winds in the late evening. The maximum south-southeast wind speed reached 24 mph with gusts of 33 mph.
	Greenwood	212.8	
	South Phoenix	285.5	
	West 43rd Ave.	173.2	

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Dysart	June 16, 2012	168.2	Regional dust storm from thunderstorm outflow in Pinal County. The maximum southeast wind speed reached 28 mph with gusts of 33 mph.
Glendale	June 27, 2012	331.0	Regional dust storm. The maximum south wind speed reached 30 mph with gusts of 44 mph.
Greenwood	June 27, 2012	324.3	Regional dust storm. The maximum south wind speed reached 30 mph with gusts of 44 mph.
	July 11, 2012	212.8	Thunderstorm outflow winds in the late evening. The maximum south-southeast wind speed reached 24 mph with gusts of 33 mph.
Higley	January 22, 2012	163.3	Residual dust from January 21, 2012 frontal system high winds.
	June 16, 2012	195.0	Regional dust storm from thunderstorm outflow in Pinal County. The maximum southeast wind speed reached 28 mph with gusts of 33 mph.
	June 27, 2012	224.9	Regional dust storm. The maximum south wind speed reached 30 mph with gusts of 44 mph.
North Phoenix	June 27, 2012	179.2	Regional dust storm. The maximum south wind speed reached 30 mph with gusts of 44 mph.
South Phoenix	June 16, 2012	165.6	Regional dust storm from thunderstorm outflow in Pinal County. The maximum southeast wind speed reached 28 mph with gusts of 33 mph.
	June 27, 2012	343.4	Regional dust storm. The maximum south wind speed reached 30 mph with gusts of 44 mph.
	July 11, 2012	285.5	Thunderstorm outflow winds in the late evening. The maximum south-southeast wind speed reached 24 mph with gusts of 33 mph.
Supersite	June 27, 2012	330.1	Regional dust storm. The maximum south wind speed reached 30 mph with gusts of 44 mph.
Tempe	June 27, 2012	169.8	Regional dust storm. The maximum south wind speed reached 30 mph with gusts of 44 mph.
West Chandler	April 3, 2012	402.4	According to the Arizona Department of Environmental Quality, the exceedances on April 3, 2012 and April 4, 2012 were caused by localized agricultural activity. Concentrations began increasing between 9:00 pm and 10:00 pm on April 3, 2012 and remained elevated through approximately 1:30 am on April 4, 2012.
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	June 27, 2012	220.8	Regional dust storm. The maximum south wind speed reached 30 mph with gusts of 44 mph.
	July 11, 2012	173.2	Thunderstorm outflow winds in the late evening. The maximum south-southeast wind speed reached 24 mph with gusts of 33 mph.
Zuni Hills	June 27, 2012	285.5	Regional dust storm. The maximum south wind speed reached 30 mph with gusts of 44 mph.

List of Subjects in 21 CFR Part 890

Medical devices, Physical medicine devices.

Therefore, under the Federal Food, Drug, and Cosmetic Act and under authority delegated to the Commissioner of Food and Drugs, it is proposed that 21 CFR part 890 be amended as follows:

PART 890—PHYSICAL MEDICINE DEVICES

1. The authority citation for 21 CFR part 890 continues to read as follows:

Authority: 21 U.S.C. 351, 360, 360c, 360e, 360j, 371.

2. Section 890.5290 is amended by revising paragraph (c) to read as follows:

§ 890.5290 Shortwave diathermy.

* * * * *

(c) *Date PMA or notice of completion of PDP is required.* A PMA or notice of completion of a PDP is required to be filed with the Food and Drug Administration on or before [date 90 days after date of publication of the final rule in the **Federal Register**], for any shortwave diathermy for all other uses (as described in paragraph (b)(1) of this section) that was in commercial distribution before May 28, 1976, or that has, on or before [date 90 days after date of publication of the final rule in the **Federal Register**], been found to be substantially equivalent to any shortwave diathermy for all other uses (as described in paragraph (b)(1) of this section) that was in commercial distribution before May 28, 1976. Any other shortwave diathermy for all other uses (as described in paragraph (b)(1) of this section) shall have an approved PMA or declared completed PDP in effect before being placed in commercial distribution.

Dated: June 27, 2012.

Leslie Kux,

Assistant Commissioner for Policy.

[FR Doc. 2012–16487 Filed 7–5–12; 8:45 am]

BILLING CODE 4160–01–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 50 and 51

[EPA–HQ–OAR–2011–0887; FRL–9696–1]

RIN 2060–AN40

Draft Guidance To Implement Requirements for the Treatment of Air Quality Monitoring Data Influenced by Exceptional Events

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of availability and public comment period.

SUMMARY: Notice is hereby given that the EPA has posted its draft non-binding guidance titled, *Draft Guidance to Implement Requirements for the Treatment of Air Quality Monitoring Data Influenced by Exceptional Events* and associated attachments, on the agency's Internet Web site. The EPA invites public comments on this guidance document and plans to issue an updated version of the guidance after reviewing timely submitted comments. The EPA intends to hold a conference call to provide interested stakeholders with an overview of the Exceptional Events draft guidance.

DATES: Comments must be received on or before September 4, 2012. Please refer to **SUPPLEMENTARY INFORMATION** for additional information on the comment period.

ADDRESSES: *Access to the draft guidance:* Please see the EPA's Web site at *http://www.epa.gov/ttn/analysis/exevents.htm* for additional details on the draft non-binding guidance titled, *Draft Guidance to Implement Requirements for the Treatment of Air Quality Monitoring Data Influenced by Exceptional Events* and associated attachments and the conference call for interested stakeholders.

Comments: Submit your comments, identified by Docket ID No. EPA–HQ–OAR–2011–0887, by one of the following methods:

- *http://www.regulations.gov.* Follow the online instructions for submitting comments. Attention Docket ID No. EPA–HQ–OAR–2011–0887.
- *Email: a-and-r-docket@epa.gov.* Attention Docket ID No. EPA–HQ–OAR–2011–0887.
- *Fax:* (202) 566–9744. Attention Docket ID No. EPA–HQ–OAR–2011–0887.
- *Mail:* Air Docket, Attention Docket ID No. EPA–HQ–OAR–2011–0887, U.S. Environmental Protection Agency, Mail Code: 6102T, 1200 Pennsylvania Ave. NW., Washington, DC 20460. Please include a total of two copies.
- *Hand Delivery:* EPA Docket Center, 1301 Constitution Avenue NW., Room 3334, Washington, DC, Attention Docket ID No. EPA–HQ–OAR–2011–0887. Such deliveries are only accepted during the Docket Center's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA–HQ–OAR–2011–0887. The EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *www.regulations.gov* or email. The *www.regulations.gov* Web site is an "anonymous access" system, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through *www.regulations.gov,* your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If the EPA is unable to read your comment and cannot contact you for clarification due to technical difficulties, the EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, avoid any form of encryption, and be free of any defects or viruses. For additional information about the EPA's public docket, visit the EPA Docket Center homepage at *http://www.epa.gov/epahome/dockets.htm.* For additional instructions on submitting comments, go to Section II of the **SUPPLEMENTARY INFORMATION** section of this document.

Docket. All documents in the docket are listed in the *www.regulations.gov* index. Although listed in the index, some information is not publicly available, *e.g.,* 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 in *www.regulations.gov* or in hard copy at the EPA Docket Center, EPA West, Room 3334, 1301 Constitution Avenue 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 Docket is (202) 566–1742.

FOR FURTHER INFORMATION CONTACT: Beth W. Palma, U.S. EPA, Office of Air

Quality Planning and Standards, Air Quality Policy Division, Mail Code C539–04, Research Triangle Park, NC 27711, telephone (919) 541–5432, email at *palma.elizabeth@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. Instructions for Submitting Public Comments

What should I consider as I prepare my comments for the EPA?

1. *Submitting CBI.* Do not submit this information to the EPA through *www.regulations.gov* or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD–ROM that you mail to the EPA, mark the outside of the disk or CD–ROM as CBI and then identify electronically within the disk or CD–ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2. Send or deliver information identified as CBI only to the following address: Roberto Morales, U.S. EPA, Office of Air Quality Planning and Standards, Mail Code C404–02, Research Triangle Park, NC 27711, telephone (919) 541–0880, email at *morales.roberto@epa.gov,* Attention Docket ID No. EPA–HQ–OAR–2011–0887.

2. *Tips for Preparing Your Comments.* When submitting comments, remember to:

- Identify this notice by docket number and other identifying information (subject heading, **Federal Register** date, and page number).
- Follow directions—The agency may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number in the guidance.
- Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.
- Describe any assumptions and provide any technical information and/or data that you used.
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- Provide specific examples to illustrate your concerns, and suggest alternatives.
- Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
- Make sure to submit your comments by the comment period deadline identified.

II. Background

The purpose of this document is to solicit public comments on the EPA's recently posted draft non-binding guidance on the implementation of the March 22, 2007, Exceptional Events Rule (72 FR at 13560). These documents are available online at *http://www.epa.gov/ttn/analysis/exevents.htm* or within the associated docket, EPA–HQ–OAR–2011–0887.

The draft guidance consists of an overview document, titled *Draft Guidance to Implement Requirements for the Treatment of Air Quality Monitoring Data Influenced by Exceptional Events* and its attachments: Attachment 1, *Draft Exceptional Events Rule Frequently Asked Questions;* Attachment 2, *Draft Guidance on the Preparation of Demonstrations in Support of Requests to Exclude Ambient Air Quality Data Affected by High Winds under the Exceptional Events Rule* (High Winds Guidance Document); and Attachment 3, *Request for Comments on the Draft Guidance Documents on the Implementation of the Exceptional Events Rule.* Together, these documents clarify key provisions and respond to questions and issues that have arisen since the EPA promulgated the *Treatment of Data Influenced by Exceptional Events; Final Rule* (72 FR at 13560), known as the Exceptional Events Rule (EER), pursuant to the 2005 amendment of Clean Air Act (CAA) Section 319.

The EPA provided previous versions of these draft guidance documents to state, local, and tribal agencies, and to other parties as requested, in May of 2011 to solicit preliminary comments. The EPA has prepared the document *Responses to Significant First-Round Comments on the Draft Guidance Documents on the Implementation of the Exceptional Events Rule* (the Response to Comments document), to track these preliminary comments and the EPA's responses.

During this preliminary review period, the EPA received numerous comments, some of which the EPA has incorporated into the revised draft guidance documents. For example, the EPA has added an optional prospective controls analysis process and revised the discussion of the optional High Wind Action Plan; both of these are voluntary analyses that can facilitate agreement between states/local agencies/tribes and the EPA as to what measures constitute "reasonable" controls in advance of an actual event. Once the plans have gone through a notice and comment process at the state/local/tribal level and the EPA has approved these plans, the EPA generally anticipates that they will be effective for three years. Both of these approaches are described in more detail in the revised, draft High Winds Guidance document. The EPA solicits feedback on the anticipated use and functionality of these plans. Initial commenter feedback also asked the EPA to identify timelines for steps in the exceptional event submittal and review process. In the draft guidance documents, the EPA identifies suggested review and response timeframes, and indicates willingness to work with agencies on these timeframes to the extent the mandatory timing of the EPA regulatory actions allows.

The EPA has also begun applying the principles in the draft guidance documents as we receive exceptional event submittal packages. For example, the EPA's Region 9 office worked with agencies in Arizona to incorporate approaches presented in the draft guidance documents into a consolidated exceptional events demonstration package that addresses numerous exceedances of the PM_{10} standard. The EPA hopes that, once finalized, much of the information included in this streamlined exceptional events demonstration submittal could be transferable and serve as a model for future events for both Arizona and other areas experiencing high wind dust events.

While the EPA incorporated some comments into the revised draft guidance documents, the EPA did not incorporate all aspects of commenter feedback. For example, multiple commenters suggested that Exceptional Events Rule revisions are the appropriate mechanism to implement some of the approaches described in the guidance documents. The EPA maintains that guidance documents do not change, increase, or decrease rule requirements; they assist by providing information and illustrations for better understanding of and compliance with the rule. The EPA is deferring a decision on whether to revise the Exceptional Events Rule.

Initial feedback on the draft guidance documents also raised the following questions on which the EPA is specifically seeking comment:

- The EPA has developed draft exceptional event implementation guidance with the goal of establishing clear expectations to enable affected agencies to better manage resources as they prepare the documentation required under the EER. These draft

guidance documents identify mechanisms (*e.g.*, demonstration prioritization, review time lines, High Wind Action Plans) to streamline the demonstration development, submittal, and review process. The EPA seeks comment regarding other specific, broadly applicable, streamlining mechanisms that the EPA could incorporate into the exceptional event implementation process.

• The EPA has modified the exceptional events Web site at *http://www.epa.gov/ttn/analysis/exevents.htm* to include additional links to tools, such as the DataFed Web site, that submitting agencies may use in the development of their demonstration submittals. The EPA has also posted exceptional event demonstrations that have already been reviewed and acted upon by the EPA. The EPA solicits feedback regarding other web-based information, links, tools, or methodologies that we can similarly post on our Web site.

• In the draft exceptional events guidance documents, the EPA defines the high wind threshold as the minimum threshold wind speed capable of overwhelming reasonable controls on anthropogenic sources (*i.e.*, capable of causing significant dust emissions from controlled sources) or causing emissions from natural undisturbed areas. The EPA further notes that this area-specific threshold, along with the submitter's analysis of implemented reasonable controls and other factors, helps inform the analysis of the "not reasonably controllable or preventable" criterion. The EPA intends to allow air agencies to use wind data from a multitude of sources in the development of high wind thresholds. The EPA has identified several sources of local wind speed data including the National Weather Service, the National Climate Center, and local air monitoring stations. In addition, air agencies may use models such as Fifth Generation Pennsylvania State University/National Center for Atmospheric Research Mesoscale Mode (MM5), Weather Research and Forecasting Model (WRF) and North American Mesoscale Model (NAM), to develop local wind speed data. The EPA solicits feedback on additional available sources of wind data and their applicability in informing local high wind analyses.

• As previously mentioned, demonstrations for high wind dust events necessarily include wind speed analyses. Generally, the EPA will accept that high winds could be the cause of a high 24-hour average PM_{10} or $PM_{2.5}$ concentration if there was at least one full hour in which the hourly average wind speed was above area-specific high wind threshold. Potential issues arise when determining the hourly average wind speed if wind speeds are not recorded at specified intervals throughout each hour. While some sources of wind speed data use hourly averages, other data sources employ 1–5 minute ("short-period") averages. When the available wind speed data consist of only the wind speed during a fixed short period of each hour (e.g., the first or last 5 minutes of each hour) or the wind speed during the variable short period when wind speed was at its maximum during the hour, the EPA will generally accept that the hourly average wind speed was above the threshold if the reported short-period wind speed was above the threshold. Where wind speed is recorded at specified intervals throughout each hour, agencies should use all recorded data to calculate the hourly average wind speed. AERMINUTE, a preprocessor to AERMOD that takes short-period wind speed observations and calculates an hourly average wind, can assist in this calculation. AERMINUTE data, or other sub-hourly data with a resolution equal or greater than 5 minutes, can be fed into AERMET, the AERMOD meteorological processor, to get a user-friendly output. The EPA solicits additional feedback and tools to convert 1–5 minute wind speed data to hourly averages.

• Within the EPA's Air Quality System (AQS), monitoring agencies can use two types of data validation, or data qualifier, codes: the *Request Exclusion* flags (*R*) and the *Informational Only* flags (*I*). Agencies should use the *I* series flags when identifying informational data and the *R* series flags to identify data points for which the agency intends to request an exceptional event exclusion and the EPA's concurrence. Given that the EPA can act/concur only on *R* flags, some agencies have questioned the utility of *I* flags. Do AQS users find *I* flags in AQS useful? If so, how do users employ these flags?

• In response to comments received and in an effort to streamline the development of high wind demonstrations, the EPA has added an optional "Prospective Controls Analysis" process by which states, local agencies, and tribes can voluntarily provide information on attainment status, identify natural and anthropogenic windblown dust sources and emissions, provide the status of SIP submittals (if applicable), and identify the wind speed up to which the collective windblown dust controls are expected to be effective. This optional analysis can facilitate agreement between states/local agencies/tribes and the EPA as to what constitutes "reasonable" controls in advance of an actual event. The EPA has also added an optional "High Wind Action Plan" that states/local agencies/tribes can use to document current in-place controls, document controls on new sources that need reasonable controls for future events, and/or document current and/or planned mitigation measures. Both of these approaches are described in more detail in the revised draft High Winds Guidance document. The EPA anticipates that air agencies would submit the prospective controls analysis in advance of or with a demonstration package and similarly expects that air agencies would submit the High Wind Action Plan following the EPA's initial review of a demonstration package. The EPA recognizes that the information contained in the prospective controls analysis and the High Wind Action Plan is likely to overlap. The EPA solicits feedback on the anticipated use and functionality of these plans. Specifically, the EPA requests that commenters identify: (1) Specific elements in the prospective controls analysis and High Wind Action Plan that are useful, (2) whether these concepts should be combined or kept separate and (3) whether the flexibility to implement needed dust controls provided by the High Wind Action Plan as a voluntary alternative to the traditional regulatory nonattainment designation process is helpful.

• In Table 3 of the revised draft High Winds Guidance document, the EPA identifies example technical analyses that air agencies should consider when preparing their high wind dust event controls analysis to demonstrate the not reasonably controllable or preventable criterion. The EPA solicits comment on the identified analyses and any additional technical analyses that air agencies could use to demonstrate that the wind exceeded an identified high wind threshold and that the exceedance was caused by emissions that were not reasonably controllable.

• The EPA acknowledges that certain extreme exceptional event cases may require more limited demonstration packages. Whether a particular event should be considered "extreme" for this purpose depends on the type and severity of the event, pollutant concentration, spatial extent, temporal extent, and proximity of the event to the violating monitor. Several meteorological phenomena that could be considered extreme events include hurricanes, tornadoes, haboobs, and catastrophic volcanic eruptions. The EPA addresses "extreme" high wind dust events in the draft Q&A document,

but solicits comment on whether and how specific events of various types should be considered to be "extreme."

With this document, the EPA is announcing the availability of revised draft guidance, along with examples of approved demonstrations on the EPA's Web site at *http://www.epa.gov/ttn/analysis/exevents.htm.* The EPA is providing the draft guidance to facilitate review of these materials by outside parties and to help ensure that the EPA's final guidance provides an efficient and effective process to make determinations regarding air quality data affected by events. The EPA notes that these draft guidance documents and the exceptional events Web site present examples to illustrate specific points. The example analyses and level of rigor are not necessarily required for all demonstrations.

After receiving timely submitted public comments on the draft guidance, the EPA plans to issue updated non-binding guidance. In addition, the EPA will continue to work closely with state, local, and tribal agencies to address issues arising during the development and submittal of exceptional event demonstration packages. The EPA is deferring a decision on whether to revise the Exceptional Events Rule.

The EPA invites public comment on all aspects of this draft guidance during the 60-day comment period. The draft guidance is not a regulation or any other kind of final action and does not establish binding requirements on the EPA or any state, local, or tribal agency or any emissions source. While the EPA has established a docket and is requesting public comment on the draft guidance, this procedure does not alter the nature or effect of the draft guidance and does not constitute a formal rulemaking process or require the EPA to respond to public comments in the updated guidance before the EPA or other agencies may use the guidance in reaching decisions making related exceptional event demonstration submittals. The EPA retains the discretion to revise its guidance, issue additional guidance, propose regulations as appropriate, and to use information submitted in public comments to inform future decisions. Because this draft guidance does not constitute a formal rulemaking action, the EPA is not required to respond to comments, but intends to consider significant comments in amending or updating the non-binding guidance. Following the 60-day comment period and review and incorporation of comments, the EPA expects to post the revised, final guidance documents at *http://www.epa.gov/ttn/analysis/exevents.htm.*

Please refer to the **ADDRESSES** section above in this document for specific instructions on submitting comments.

III. Internet Web Site for Guidance Information

Interested parties can find the draft guidance titled, Draft Guidance Documents on the Implementation of the Exceptional Events Rule, on the Exceptional Events Web site for this rulemaking at *http://www.epa.gov/ttn/analysis/exevents.htm.* The Web site includes examples of reviewed exceptional event submissions, best practices components, and links to publicly available support information and tools that the public may find useful.

Dated: June 26, 2012.

Mary E. Henigin,

Acting Director, Office of Air Quality Planning and Standards.

[FR Doc. 2012–16308 Filed 7–5–12; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 180

[EPA–HQ–OPP–2012–0441; FRL–9352–9]

Difenzoquat; Proposed Data Call-in Order for Pesticide Tolerance

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed order.

SUMMARY: This document proposes to require the submission of various data to support the continuation of the tolerances for the pesticide difenzoquat. Pesticide tolerances are established under the Federal Food, Drug, and Cosmetic Act (FFDCA).

DATES: Comments must be received on or before September 4, 2012.

ADDRESSES: Submit your comments, identified by docket identification (ID) number EPA–HQ–OPP–2012–0441; FRL–9352–9, by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute.
- *Mail:* OPP Docket, Environmental Protection Agency Docket Center (EPA/DC), Mail Code: 28221T, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001.
- *Hand Delivery:* To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at *http://www.epa.gov/dockets/contacts.htm.*

Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at *http://www.epa.gov/dockets.*

FOR FURTHER INFORMATION CONTACT: Eric Miederhoff, Pesticide Re-evaluation Division (7508P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001; telephone number: (703) 347–8028; email address: *miederhoff.eric@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

You may be potentially affected by this action if you are an agricultural producer, food manufacturer, or pesticide manufacturer. Potentially affected entities may include, but are not limited to, those involved with:

- Crop production (NAICS code 111).
- Animal production (NAICS code 112).
- Food manufacturing (NAICS code 311).
- Pesticide manufacturing (NAICS code 32532).

This listing is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this action. Other types of entities not listed in this unit could also be affected. The North American Industrial Classification System (NAICS) codes have been provided to assist you and others in determining whether this action might apply to certain entities. If you have any questions regarding the applicability of this action to a particular entity, consult the person listed under **FOR FURTHER INFORMATION CONTACT.**

B. What should I consider as I prepare my comments for EPA?

1. *Submitting CBI.* Do not submit this information to EPA through regulations.gov or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD–ROM that you mail to EPA, mark the outside of the disk or CD–ROM as CBI and then identify electronically within the disk or CD–ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI

Draft Guidance to Implement Requirements for the Treatment of Air Quality Monitoring Data Influenced by Exceptional Events

This summary document and its attachments[1] clarify key provisions of the 2007 Exceptional Events Rule (EER) to respond to questions and issues that have arisen since the rule was promulgated. The draft guidance in this document and the attachments, along with examples of approved demonstrations on the EPA's website[2], are provided to help ensure that the EPA's final guidance provides an efficient and effective process to make determinations regarding air quality data affected by events. The EPA notes that we released a previous version of these draft guidance documents to state, local, and tribal agencies, and to other parties as requested in May of 2011. The EPA incorporated some of the commenters' feedback into these revised draft guidance documents. An accounting of the preliminary comment and response process is documented in the docketed response to comments document.[3] The EPA notes that these draft guidance documents and the exceptional events website present examples to illustrate specific points. The example analyses and level of rigor are not necessarily required for all demonstrations. Please direct comments on these draft guidance documents to Docket ID No. EPA-HQ-OAR-2011-0887 by the comment deadline indicated in the Federal Register Notice of Availability. For guidance-related questions, please contact Beth W. Palma at 919-541-5432.

These draft guidance materials identify the four independent criteria on which exclusion of event-affected data depends, describe the administrative process and associated timing for submittal and review of demonstrations, provide answers to frequently asked questions, and provide previously reviewed demonstrations and best practice components. The EPA recognizes the challenges that air agencies[4] face in preparing exceptional event demonstration packages. The EPA also recognizes the limited resources of the air agencies that prepare and submit exceptional event demonstration packages and of the EPA regional offices that review these demonstration packages. One of the EPA's goals in developing exceptional event implementation guidance is to establish clear expectations to enable affected agencies to better manage resources as they prepare the documentation required under the EER. The EPA expects submitters to prepare and submit the appropriate level of supporting documentation, which will vary on a case-by-case basis using the weight-of-evidence approach. The EPA expects the resources required to prepare (and review) packages to decrease as we continue to identify ways to streamline the process and continue to build our database of example demonstrations and analyses. In addition, the EPA acknowledges that certain extreme exceptional event cases may require more limited demonstration packages. This necessary case-by-case approach, however, makes the development of general guidance with bright lines difficult.

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[1] Attachment 1, "Draft Exceptional Events Rule Frequently Asked Questions" (the draft Q&A document), Attachment 2, "Draft Guidance on the Preparation of Demonstrations in Support of Requests to Exclude Ambient Air Quality Data Affected by High Winds under the Exceptional Events Rule" (the draft High Winds Guidance document), and Attachment 3, "Request for Comments on the Draft Guidance Documents on the Implementation of the Exceptional Events Rule" (the Request for Comments document).

[2] Additional information and examples of exceptional event submissions and best practice components can be found at the EPA's Exceptional Events website located at http://www.epa.gov/ttn/analysis/exevents.htm.

[3] Response to Comment document entitled, "Responses to Significant First-Round Comments on the Draft Guidance Documents on the Implementation of the Exceptional Events Rule."

[4] References to "air agencies" are meant to include state, local, and tribal air agencies responsible for implementing the EER.

This draft guidance overview document and its attachments are based on the following principles:

1. Air agencies should not be held accountable for exceedances due to events that were beyond their control at the time of the event.
2. It is desirable to implement reasonable controls to protect public health.[5]
3. Clear expectations will enable the EPA and other air agencies to better manage resources related to the exceptional events process.

Exceptional Event Rule Provisions

On March 22, 2007, the EPA promulgated the "Treatment of Data Influenced by Exceptional Events; Final Rule" (72 FR at 13560) pursuant to the 2005 amendment of Clean Air Act (CAA) Section 319. This rule, known as the Exceptional Events Rule, superseded the EPA's previous natural events guidance and those sections of the interim fire policy document that address exceptional events.[6] The EER created a regulatory process codified at 40 CFR parts 50 and 51 (50.1, 50.14 and 51.930). These regulatory sections contain definitions, procedural requirements, requirements for air agency demonstrations, and criteria for EPA approval for the exclusion of air quality data from regulatory decisions under the EER.

The definition of an exceptional event at 40 CFR §50.1(j) repeats the CAA definition which provides that an exceptional event is one that affects air quality, is not reasonably controllable or preventable, and is caused by human activity that is unlikely to recur at a particular location or a natural event. Additional requirements in 40 CFR §50.14(a)(2) and (b)(1) identify that an air agency must demonstrate "a clear causal relationship between the measured exceedance or violation of such standard and the event" and that "an exceptional event caused a specific air pollution concentration in excess of one or more national ambient air quality standards." The rule further requires at 40 CFR §50.14(c)(3)(iv) that the demonstration to justify data exclusion shall provide evidence that the event is associated with a measured concentration in excess of normal historical fluctuations, including background, and evidence that there would have been no exceedance or violation but for the event.

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[5] With respect to exceptional events, Section 319 of the Clean Air Act states the following guiding principles (among others);

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

***

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

[6] Previous guidance and policy documents that either implied or documented the need for identifying data affected by an exceptional event include:

i) "Guideline for Interpretation of Air Quality Standards," U.S. EPA, OAQPS No. 1.2-008, Revised February 1977.

ii) "Guideline On the Identification and Use of Air Quality Data Affected by Exceptional Events" (the Exceptional Events Policy), U.S. EPA, OAQPS, July 1986.

iii) "Areas Affected by PM10 Natural Events" (the PM10 Natural Events Policy), memorandum from Mary D. Nichols, Assistant Administrator for Air and Radiation, to the EPA regional offices, May 30, 1996.

iv) "The Interim Air Quality Policy on Wildland and Prescribed Fires" (the Interim Fire Policy), memorandum from Richard D. Wilson, Acting Assistant Administrator for Air and Radiation, to the EPA regional administrators, May 15, 1998.

v) "Guideline on Data Handling Conventions for the PM NAAQS," U.S. EPA, OAQPS, EPA-454/R-98-017, December 1998.

Treatment of Technical Criteria for Exclusion of Data Affected by Events

When considered together, the EER provisions summarized above identify the following six elements that air agencies must address when requesting that the EPA exclude event-related concentrations from regulatory determinations:

- the event affected air quality
- the event was not reasonably controllable or preventable
- the event was caused by human activity that is unlikely to recur at a particular location, or was a natural event
- there exists a clear causal relationship between the specific event and the monitored concentration
- the event is associated with a measured concentration in excess of normal historical fluctuations including background
- there would have been no exceedance or violation but for the event

In reviewing exceptional events demonstration packages, the EPA has found that the following EER elements, along with historical fluctuations, play a significant role in the air agencies' supporting documentation:

1. not reasonably controllable or preventable
2. if the event was caused by human activity, that human activity is unlikely to recur at a particular location[7]
3. clear causal relationship between specific event and monitored concentration
4. no exceedance or violation but for the event[8]

As described in the draft guidance documents, the EPA's technical review of a demonstration package would therefore focus on these elements. While the EER requires and the EPA expects complete demonstration packages to contain narrative and evidence supporting all six elements, the EPA's position is that these four elements represent distinct facts that air agencies must demonstrate for the EPA to concur on an event claim.[9] Note that if an event is natural, then the second element is not considered in a demonstration review. In the case of an event that is initiated by a natural process, such as a volcano or high wind dust event, the event would be considered a natural event if sources are entirely natural or contributing anthropogenic sources are reasonably controlled.[10] This concept is explained in more detail in Attachment 2, the draft High Winds Guidance document.

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[7] The remaining part of this criterion, "or a natural event" is intentionally omitted here.

[8] Criteria 1, 3, and 4 on this list, along with historical fluctuations, are considered "independent elements" in the draft High Winds Guidance document.

[9] While the "historical fluctuations element" is considered an independent element, it also plays an important role in the "clear causal relationship" and "no exceedance but for" demonstrations. The EPA will review agency submissions using a weight-of-evidence approach. The state's role in satisfying this element is to provide appropriate analyses and statistics comparing the event-affected concentration to normal historical fluctuations and conclude that the provided data show that the event was in excess of normal historical fluctuations. The EPA will review the information provided by the air agency. "Normal historical fluctuations" will generally be defined by those days without events for the previous years. The EPA acknowledges that natural events can recur and still be eligible for exclusion under the EER; therefore, events do not necessarily have to be rare to satisfy this element. However, in most cases, the EPA expects that failure of the "historical fluctuations" element indicates likely failure for "clear causal relationship" and/or "no exceedance but for" as well.

[10] Human activity would be considered to have played little or no *direct* causal role in causing the entrainment of the dust by high wind if contributing anthropogenic sources of dust are reasonably controlled, and thus the event would

The EPA recognizes the inherent links between all six elements and expects that some sections of a demonstration package (e.g., affects air quality, natural event) may repeat or refer to other sections of the demonstration package (e.g., clear causal relationship, but for). Further, each potential event can have varied and differing characteristics, and thus would usually require a case-specific demonstration and evaluation. Therefore, the EPA would use a "weight-of-evidence" approach in evaluating each element within an exceptional event demonstration package.

In the draft guidance documents, the requirement that the event was not reasonably controllable or preventable, which is part of the definition of an exceptional event in both the Clean Air Act and the EER, would mean that if a set of control measures *could reasonably have been in place* for contributing sources at the time of the event, then they *must* have been in place for the event to qualify as an exceptional event under the EER. This EER requirement applies to all events but is more complicated for high wind dust events because the event typically includes both natural and anthropogenic sources of dust. In contrast, an event such as a lightning-induced wildfire does not include an anthropogenic contribution to the event. Among other factors to consider, reasonableness would need to be judged in light of the technical information available to the air agency at the time the event occurred. The EPA would expect for nonattainment areas to already have the technical information needed to reasonably control anthropogenic sources in their jurisdiction. It would be important that each demonstration package address the question of reasonable controls. As with the other elements, whether an event was not reasonably controllable or preventable would be evaluated on a case-by-case basis. In general, reasonable controls would not include any control on emissions-generating activity outside of the state or tribal boundaries of the state (or tribal lands) within which the concentration at issue was monitored.

Timing of EER Demonstration Package Submittal and Review

The EPA understands that the initial identification of data affected by exceptional events and the subsequent preparation, submittal, and review of demonstration packages is a resource intensive process. Delays in processing and making decisions on submitted packages create regulatory uncertainty and potentially increase the workload for both the submitting agency and the EPA. In addition, the backlog of pending actions makes retrieval of data to support new submittals potentially more difficult. Further, air agencies and the EPA often face timelines by which they must make regulatory decisions that can be affected by the inclusion or exclusion of event-affected data.

The EPA will work with air agencies as they prepare complete demonstration packages that meet the requirements of the EER. In an effort to streamline this identification, preparation, submittal, and review process, the EPA has developed the following draft guidelines.

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be considered a natural event. If anthropogenic sources contributed significantly to a measured concentration (or if emissions from anthropogenic sources alone would have resulted in an exceedance or violation of the NAAQS) and these same emissions from anthropogenic sources are affected by an event and are reasonably controllable but did not have those reasonable controls applied at the time of the event, then the event would not be considered a natural event.

1. **Identification of data affected by exceptional events in AQS** – The EPA is aware that air agencies routinely review their air quality monitoring data, which may result in the identification of certain data being affected by an exceptional event. Although air agencies may flag any data in AQS that they wish to flag, the EPA encourages air agencies to flag only data that might have a regulatory consequence and for which an approvable demonstration is likely.[11] Should air agencies wish to flag values for informational purposes, the EPA prefers that they use the AQS flags intended for this purpose.

2a. **Air agency submittal of letter of intent to submit a package *(optional)*** – To promote early communication, the EPA suggests that air agencies provide a letter of intent to submit a demonstration package for flagged data in AQS as soon as possible, if possible within 12 months from the event occurrence, after the agency identifies the event(s) as being significant.[12] This initial notification can assist both the air agency and the EPA in the planning and prioritization process.

2b. **Air agency notification of intent to submit a package *(optional)* -** Air agencies choosing not to submit a letter of intent are still encouraged to contact their EPA regional office more informally to alert it of the forthcoming demonstration submittal.

3. **EPA response to air agency letter of intent** – The EPA anticipates responding to the air agency's letter of intent within 60 days of receipt. The EPA response will provide the regional office's best assessment of the priority that can be given to the submission once received and any case-specific advice the EPA may have to offer for the preparation of the demonstration.

4. **Air agency submittal of exceptional event demonstration packages[13]** – Air agencies should prepare a technical demonstration package, taking into account the information in the EPA's guidance documents, which shows that a particular air quality monitored value(s) is influenced by an exceptional event. The EPA acknowledges that certain extreme exceptional event cases may lessen the technical burden associated with demonstration packages. Air agencies that believe their demonstration packages are tied to near-term regulatory actions should submit their demonstration packages well in advance of the regulatory deadline. Air agencies should also identify the relationship between the exceptional event-related flagged data and the anticipated regulatory action

[11] States should place flags and an initial event description in AQS in accordance with the AQS data submission schedules (i.e., within 90 days of the end of the previous quarter) but not later than July 1st of the calendar year following the event in which the flagged measurement occurred. Note that for data certification purposes, it is recommended to flag data prior to submittal of data certification (May 1st).

[12] The Letter of Intent is an optional step and the EPA recognizes that states may need additional time to prepare and submit demonstration packages particularly where the basis of the exclusion is violating an annual standard or a 3-year design value. Similarly, a state could consider submitting an annual letter of intent if annual submittal makes sense for resource planning or for historically seasonal events. If a state decides to submit a letter of intent, the EPA recommends that it be submitted as expeditiously as possible after the state identifies the event or events as having significance.

[13] The EER allows states to submit packages up to 3 years following the end of the calendar quarter in which the event occurred, or 12 months prior to the date that a regulatory decision must be made by the EPA.

in the cover letter that accompanies their initial submittal package to the reviewing EPA regional office.

5. **EPA prioritization of submitted demonstration packages** – The EPA will generally give priority to exceptional event determinations that may affect near-term regulatory decisions, such as SIP submittal actions, National Ambient Air Quality Standards (NAAQS) designations, and clean data findings.

6. **EPA review of prioritized demonstration packages** – The EPA generally intends to conduct its initial review of a submitted exceptional event demonstration package within 120 days of receipt. Following this initial review, the EPA will generally send a letter to the submitting agency that includes a completeness determination and/or a request for additional information, a date by which the supplemental information should be submitted (if applicable), and an indicator of the timing of the EPA's final review. The EPA encourages air agencies to provide supplemental information if needed and requested by the EPA. The EPA anticipates a 60-day response time for states to provide additional requested information.[14] The EPA intends to make a decision regarding event concurrence within 18 months of submittal of a complete package, or sooner if required by a near-term regulatory action. Determinations on Exceptional Event demonstrations do not constitute final agency action until they are relied upon in a regulatory decision such as a finding of attainment or nonattainment which will be conducted through notice-and-comment rulemaking procedures.

Exceptional Events Rule Frequently Asked Questions Document (Attachment 1)

The "Draft Exceptional Events Rule Frequently Asked Questions" document (the draft Q&A document) provides draft responses to questions that have arisen since the EER was promulgated. The questions are grouped into six broad areas. The EPA encourages those involved in flagging data and preparing demonstration packages to review the draft questions and answers, and to provide input regarding their usefulness and appropriateness and regarding additional questions which need answers. The following bullets identify key points of interest in the draft Q&A document:

- Natural events, such as volcanic eruptions, do not have to be infrequent to qualify as exceptional events 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.

- The EER does not prohibit air agencies from flagging individual concentration values below the level of the NAAQS. However, in general, only such data that contribute to a violation of the NAAQS are excludable. Questions 29-31 of the draft Q&A document describe the few, limited situations in which concentration values below the level of the NAAQS contribute to violations of the NAAQS.

[14]The EPA recognizes that states may need more than 60 days to prepare and submit some types of supplemental information. The EPA is willing to work with agencies on supplemental timeframes; however, the mandatory timing of EPA actions may limit the response time the EPA allows.

- An event that an air agency has concluded is associated with a measured concentration "in excess of normal historical fluctuations" will be reviewed using a weight-of-evidence approach. The comparison of the measured concentration to normal historical concentrations will also influence how much information is needed to successfully meet other technical elements. For example, when the observed concentration is high compared to historical concentrations, the EPA may require less additional evidence to demonstrate the "but for" finding. The draft Q&A document provides recommendations for showing how the observed concentration compares to the distribution of historical concentrations.

- Question 6 in the draft Q&A document describes types of evidence that could be submitted as part of a demonstration showing that an ozone exceedance would not have occurred but for the effect of a fire event. In particular, statistical or photochemical dispersion model predictions of the ozone concentration that would have occurred in the absence of the fire would be a relevant type of evidence, provided the demonstration package is transparent about the technical basis for the model and its uncertainties. Also, as noted below, the EPA intends to develop a separate draft guidance document for fire-related events.

- Not every natural or infrequent anthropogenic event that affects air quality is a true "exceptional event" under the definition of that term in the Exceptional Event Rule. Ambient data affected by an event that does not meet the "but for" criterion cannot be excluded under the authority of the Exceptional Events Rule even if in all other respects the event meets the definition of an exceptional event. The Exceptional Events Rule does not address data handling associated with events that are not considered "exceptional" under the EER, and does not provide the EPA with authority to exclude such data. Yet, the event-related concentration could still impact design values. An air agency incorporating the event-related concentration in a design value used for a prospective attainment demonstration might seem to need more emission reductions to attain the NAAQS by its attainment deadline than is actually the case. The EPA plans to more formally address this topic on a pollutant/NAAQS basis, the first of which will be ozone guidance in the preamble of a soon-to-be-proposed rulemaking on SIP requirements for areas designated nonattainment for the 2008 ozone NAAQS. Until the planned guidance for a pollutant and NAAQS of interest is issued, air agencies should consult with their EPA regional office if they face this situation. EPA further discusses this issue in Question 13 in the draft Q&A document.

- To remove any possible confusion, the passages of the preamble that were declared to be a legal nullity by the court that reviewed the EER are specifically identified in Question 20 in the draft Q&A document.[15] While air agencies cannot rely solely on these passages as the EPA guidance on interpretation of the EER, this draft guidance overview document and its attachments are consistent with those sections.

[15] See *NRDC v. EPA*, No. 07-1151 (D.C. Cir. 3/20/09).

- The EPA identifies in Question 28a of the Q&A document currently existing mechanisms that air agencies can use at various points in the exceptional events process to resolve disagreements regarding non-concurrence on submittal packages.

High Winds Guidance Document (Attachment 2)

The attached "Draft Guidance on the Preparation of Demonstrations in Support of Requests to Exclude Ambient Air Quality Data Affected by High Winds under the Exceptional Events Rule" (the High Winds Guidance document) when finalized will be a resource for air agencies when flagging data and preparing demonstrations packages for high wind dust events that have affected PM_{10} and $PM_{2.5}$ concentrations. The draft document applies the provisions of the EER and the general guidance conveyed in this draft guidance overview document and in the draft Q&A document to the particular situation of a high wind dust event. While the document is specific to high wind dust events, it outlines how the EPA intends to implement the preparation and review process for exceptional events and, therefore, may have relevance for other types of exceptional events. The following are some of the highlights of the draft High Winds Guidance document:

- In nonattainment areas, a reference point for considering what constitutes reasonable control of wind-blown dust during high wind events would be the set of measures that are identified as RACM or BACM in the approved SIPs of other areas with similar wind-blown dust conditions, depending on area classification. USDA best management practices designed to effectively reduce fugitive dust air emissions and prevent loss of soil during high winds could also be considered if applicable to the dust source. Also, RACM or BACM measures in an area's own approved SIP should be considered part of the reasonable set of controls. The assessment of whether an event was not reasonably controllable will be made on a case-by-case basis considering all the facts.

- Reasonable controls generally would not need to be implemented for wind-blown dust from undisturbed natural landscapes or previously disturbed landscapes that are being allowed to return to natural conditions.

- For purposes of qualifying for the exclusion of data affected by wind events with sustained wind speeds above 25 miles per hour (or above another threshold determined to be appropriate for a particular area), the demonstration of reasonable controls applied to disturbed landscapes and other anthropogenic sources of dust could be less rigorous because: (1) the contribution from natural undisturbed lands is likely to be high and, (2) at such high wind speeds many available controls would have been ineffective in significantly reducing wind-generated dust emissions.

- In response to commenter feedback, the EPA has developed and added the *optional* prospective controls analysis as a means of documenting <u>existing</u> controls and reaching up-front agreement as to what constitutes "reasonable" controls. In the prospective controls analysis, the air agency would provide information on attainment status, identify natural and anthropogenic windblown dust sources and emissions, provide the status of SIP submittals (if applicable), and identify the wind speed up to which the collective windblown dust controls are expected to be effective. Air agencies would submit their

prospective controls analysis in advance of an agency submittal and the EPA review of any specific demonstration submittal, with a letter of intent, or with their demonstration package submittal. The EPA review and approval of controls and an appropriate high wind threshold would also typically be effective for a minimum of three years.

- If the EPA has approved a SIP containing wind-blown dust controls within the past three years, then the submitting air agency has the option of using their current, implemented SIP-approved controls and specifying a high wind threshold to which the controls are expected to be effective to constitute the set of controls that would have been reasonable to implement.

- The EPA would further encourage air agencies to work with the EPA regional offices to develop High Wind Action Plans, which need not be incorporated into the SIP, as a way to develop a mutual understanding of what additional controls are reasonable to implement in light of foreseeable high wind conditions. Similar to a Natural Events Action Plan[16], the optional High Wind Action Plan is a mechanism to implement necessary controls on newly-identified sources needing reasonable controls such that the EPA could consider future high wind events not reasonably controllable or preventable.

Requests for Comments (Attachment 3)

As part of the public comment process, the EPA is soliciting feedback on a series of questions that address the following topics:

- specific, broadly applicable, streamlining mechanisms
- available web-based information, links, tools, or methodologies
- available sources of wind data and their applicability in informing local high wind thresholds
- additional feedback and tools to convert 1-5 minute wind speed data to hourly averages
- the anticipated use and functionality of the prospective controls analysis and the high wind action plan
- technical analyses that can be used to demonstrate that the wind exceeded an identified high wind threshold and that the exceedance was caused by emissions that were not reasonably controllable
- the utility and functionality of "Informational Only" ("I") flags in AQS
- characterizing "extreme" events

On-line Availability of Exceptional Event Packages and Best Practice Components

To assist air agencies in deciding what type and how much evidence/technical analysis to include in their demonstration packages, the EPA has developed a public website at http://www.epa.gov/ttn/analysis/exevents.htm that contains EPA-approved demonstration

[16]On May 30, 1996, Mary D. Nichols, Assistant Administrator for Air and Radiation issued a memorandum to EPA regional offices entitled, "Areas Affected by PM_{10} Natural Events." The policy, known as the PM_{10} Natural Events Policy, or simply the Natural Events Policy, set forth procedures for protecting public health through the development of a Natural Events Action Plan (NEAP), which implements Best Available Control Measures (BACM) for human-generated particulate emissions in areas that could violate the PM_{10} NAAQS due to natural events. Promulgation of the Exceptional Events Rule superseded the Natural Events Policy.

packages and links to best-practice components. The EPA developed this website to provide examples to illustrate specific points; the example analyses and level of rigor are not necessarily required for all demonstrations. The website will continue to evolve as agencies submit and the EPA reviews additional demonstration packages.

Draft Guidance Documents Still under Development

The EPA intends to develop a separate draft guidance document addressing the preparation of demonstrations to support wildfire-related event claims, including events that may have affected ozone concentrations. We also intend to develop a draft document that when finalized would replace the Interim Fire Policy and would contain additional guidance on basic smoke management practices for prescribed fires. The EPA has not established a schedule for developing these documents. We expect to provide opportunities for stakeholder input on these draft documents.

Conclusion

The EPA intends to follow the draft guidance provided in this overview document and its attachments during the public comment period and document finalization process, because we believe it is consistent with the Exceptional Events Rule and the guidance already provided in the preamble to the rule. Although the EPA hopes to formalize the concepts in these guidance documents by issuing final guidance, the EPA has not excluded the possibility of issuing rule revisions. The EPA is deferring a decision on whether to revise the Exceptional Events Rule.

The EPA's Office of Air Quality Planning and Standards and the EPA regional offices are available for assistance and consultation. Interested parties may direct comments on this guidance to Docket ID No. EPA-HQ-OAR-2011-0887. For guidance-related questions, please contact Beth W. Palma at 919-541-5432.

Attachments:

1. Draft Exceptional Events Rule Frequently Asked Questions

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

3. Request for Comments on the Draft Guidance Documents on the Implementation of the Exceptional Events Rule

ATTACHMENT 1

Draft Exceptional Events Rule Frequently Asked Questions

The Exceptional Events Rule of 2007[1] supersedes the EPA's previous Exceptional Events guidance and policy documents and creates a regulatory process codified at 40 CFR parts 50 and 51 (50.1, 50.14 and 51.930). The Exceptional Events Rule (EER) recognizes that each potential event can have different or unique characteristics, and thus, requires a case-by-case demonstration and evaluation. Therefore, the EER adopts a "weight-of-evidence" approach in evaluating each demonstration to justify excluding data affected by an exceptional event. The EPA acknowledges that certain extreme[2] exceptional event cases may require more limited demonstration packages.

Technical questions and issues related to implementation have arisen since the EPA promulgated the EER. This Question and Answer (Q&A) document is intended to respond to some of these frequently asked questions and to provide instruction and clarification to air agencies[3] implementing the EER. The EPA recognizes the limited resources of the air agencies that prepare and submit exceptional event demonstration packages and of the EPA regional offices that review these demonstration packages. One of the EPA's goals in developing exceptional event implementation guidance is to establish clear expectations to enable affected agencies to better manage resources as they prepare the documentation required under the EER. The EPA expects submitters to prepare and submit the appropriate level of supporting documentation, which will vary on a case-by-case basis using the weight-of-evidence approach. The EPA expects the resources required to prepare (and review) packages to decrease as we continue to identify ways to streamline the process and continue to build our database of example demonstrations and analyses. In addition, as noted above, the EPA acknowledges that certain extreme exceptional event cases may require more limited demonstration packages.

For organizational ease, this document has been divided into the following topical sections:

A. Historical Fluctuations
B. "But For" Test
C. Exceptional Event Data Flagging Schedules
D. General AQS Procedures
E. General Exceptional Events Rule Applicability and Implementation Issues

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[1] "Treatment of Data Influenced by Exceptional Events; Final Rule," 72 FR at 13563, March 22, 2007.
[2] The EPA acknowledges that certain extreme exceptional event cases may require more limited demonstration packages. Whether a particular event should be considered "extreme" for this purpose depends on the type and severity of the event, pollutant concentration, spatial extent, temporal extent, and proximity of the event to the violating monitor. Several meteorological phenomena that could be considered extreme events include hurricanes, tornadoes, haboobs, and catastrophic volcanic eruptions. The EPA addresses "extreme" high wind dust events in Question 17a in this document, but solicits comment on whether and how specific events of various types should be considered to be "extreme."
[3] References to "air agencies" are meant to include state, local, and tribal air agencies responsible for implementing the EER.

F. Exceptional Event Data Flagging for Air Quality Concentrations that Could Contribute to an Exceedance or Violation of the National Ambient Air Quality Standards

Each section contains related questions. Readers of this document can find additional information at the EPA's Exceptional Events website located at http://www.epa.gov/ttn/analysis/exevents.htm. The EPA's draft guidance documents and the exceptional events website present examples to illustrate specific points. The example analyses and level of rigor are not necessarily required for all demonstrations.

Disclaimer
The Exceptional Events Rule is the source of the regulatory requirements for exceptional events and exceptional event demonstrations. This Q&A document provides guidance and interpretation of the Exceptional Events Rule rather than imposing any new requirements and shall not be considered binding on any party.

A. Historical Fluctuations

> *40 CFR 50.14(c)(3)(iv): "The demonstration to justify data exclusion shall provide evidence that:*
> * * *
> *(C) The event is associated with a measured concentration in excess of normal historical fluctuations, including background;*

1. **Question:** Is the Exceptional Events Rule demonstration requirement to provide evidence to support "a measured concentration in excess of normal historical fluctuations, including background" a test that can be "passed" or "failed" based on the outcome of the statistical comparison? For example, must the concentration affected by an event exceed a specific percentile point in the historical data?

   Answer: It is a test, but there is no specific percentile point that the EPA will use to determine whether the test has been passed. The EPA will use a weight-of-evidence approach to review each demonstration on a case-by-case basis. The air agency's role in satisfying this element is to provide appropriate analyses and statistics and conclude that the provided data show that the event was in excess of normal historical fluctuations. The EPA will review the information provided by the air agency. "Normal historical fluctuations" will generally be defined by those days without events for the previous years. The EPA acknowledges that natural events can recur and still be eligible for exclusion under the EER; therefore, events do not necessarily have to be rare to satisfy this element.

   The submittal of data showing how the event concentration compared with historical concentrations will help the EPA determine whether the "clear causal relationship," "but for," and "affects air quality" criteria have been satisfied. These EER criteria, as well as "not reasonably controllable or preventable," need to be satisfied for EPA to concur on an exceptional event claim. The EPA expects that failure on this element indicates likely failure for "clear causal relationship" and/or "but for" as well. However, failure to submit a comparison would prevent the EPA from being able to approve exclusion of the data in question.

   The EPA recommends that each "historical fluctuation" demonstration submittal contain a minimum set of statistical analyses described in more detail in subsequent questions. Submission of the identified statistical analyses will be considered to have met the requirement to "provide evidence."

   It is important to note, however, that there is no outcome of the "historical fluctuation" statistical comparison that, by itself, can guarantee that the clear causal relationship and "but for" elements will also be successfully demonstrated. The EPA will consider in its weight-of-evidence approach the comparison of the concentrations during event(s) in question with historical concentration data. For example, a uniquely high concentration in an area (and season) with no previous exceedances, with a clear causal connection, and with no evidence of any other plausible explanation would be a case in which the weight-

of-evidence would indicate that the "but for" criterion has been demonstrated. In contrast, if the event-affected concentration does not stand out much from normally occurring exceedance concentrations for the same place and season, the statistical comparison will not by itself provide much support for "but for" in the weight-of-evidence consideration.

2. **Question:** What evidence does the EPA want included in the demonstration as part of a comparison of a measured concentration with normal historical fluctuations, including background?

   Answer: The EPA would prefer an analysis showing how the observed concentration compares to the distribution of historical concentrations. To speed the EPA review process, avoid the need for the EPA to request additional information, and ensure that the EPA understands the position of the submitting agency; this analysis should consist of the following types of statistics, graphics, and explanatory text:

   - Comparison of concentrations on the claimed event day with past historical data (see Question 3 for additional detail). The historical comparisons can be made on an annual and/or seasonal basis, depending on which is more appropriate. For example, if PM or ozone data at the location show clear seasonality (i.e., exceedances are nonexistent or extremely rare in some seasons but not others, or concentrations vary according to season due to meteorological conditions), discussing that information in the demonstration is likely appropriate. In contrast, if exceedances can be expected throughout the year, analysis of annual data would likely be more appropriate. For seasonal comparisons, the EPA recommends using all available seasonal data from 3-5 years (or more, if available). The analysis should discuss the seasonal nature of pollution for the location being evaluated. Depending on the quantity of data, it may be appropriate to present monthly maximums; however, it is not appropriate to present monthly-averaged daily data or any other average of the daily data as this masks high values. Regardless of whether seasonal or annual data are presented, all data should be provided in the form relevant to the standard that is being considered for data exclusion (see Question 30). Specific examples of analyses of annual and seasonal data, as well as analyses of historical speciated $PM_{2.5}$ fluctuations and spatial distribution fluctuations are included in the presentation located at http://www.epa.gov/ttn/analysis/docs/IdeasforShowingEEEvidence.ppt. Examples of graphics are also included in the response to Question 3.

   Additionally, it may be useful for the comparison of concentrations on the claimed event day with past historical data to label appropriate data points as being associated with concurred exceptional events, suspected exceptional events, or other unusual occurrences. As additional evidence to use in interpreting the data, it may also be useful to include comparisons omitting such points. The intent of these comparisons is to present a time series of concentration data for the event area, thereby giving a full and accurate portrayal of the historical context for the claimed event day.

   - Comparison of concentrations on the claimed event day with a narrower set of similar days: Similar days could include neighboring days (*e.g.*, a time series of two weeks) and other days with similar meteorological conditions (possibly from other years). The

objective of such a comparison would be to demonstrate that the event caused higher concentrations than would be expected for given meteorological and/or local emissions conditions.

- Percentile of concentration relative to annual data. The percentile of the event-day concentration should be provided for the event day relative to all measurement days over the previous 3-5 years. To ensure statistical robustness, the EPA expects a minimum of 300 data points to be included in this calculation. The daily statistic should be appropriate for the form of the standard being considered for data exclusion (see Question 30).

- Percentile of concentration relative to seasonal data. The percentile of the event-day concentration should be provided for the event day relative to all measurement days for the season (or appropriate alternative 3-month period) of the event over the previous 3-5 years. It is appropriate to use the same time horizon as used for the percentile calculated relative to annual data.

(Note: The use of percentiles is illustrative and should not be seen as a bright line to be passed or failed when comparing observed concentrations with historical values.)

3. **Question:** How will the submitted "historical fluctuations" evidence be considered when the EPA assesses whether the "but for" and "clear causal relationship" criteria are met?

   Answer: The EPA will review the submitted analyses showing how the observed concentration compares to the distribution of historical concentrations to determine whether the event is associated with a measured concentration in excess of normal historical fluctuations and will assess the other criteria, in part, based on this historical fluctuations comparison. When the observed concentration is higher than all or nearly all normal historical concentrations (i.e., concentrations when there was not an event), the EPA may need less additional evidence to demonstrate the "but for" finding. When the concentration is similar to or lower than a large number of normal historical values, the EPA may want additional evidence (*e.g.*, PM or VOC speciation data) to support the "but for" and "clear causal relationship" demonstration requirements. The additional evidence will help differentiate the concentration increment caused by the event in question from other, non-event causes.

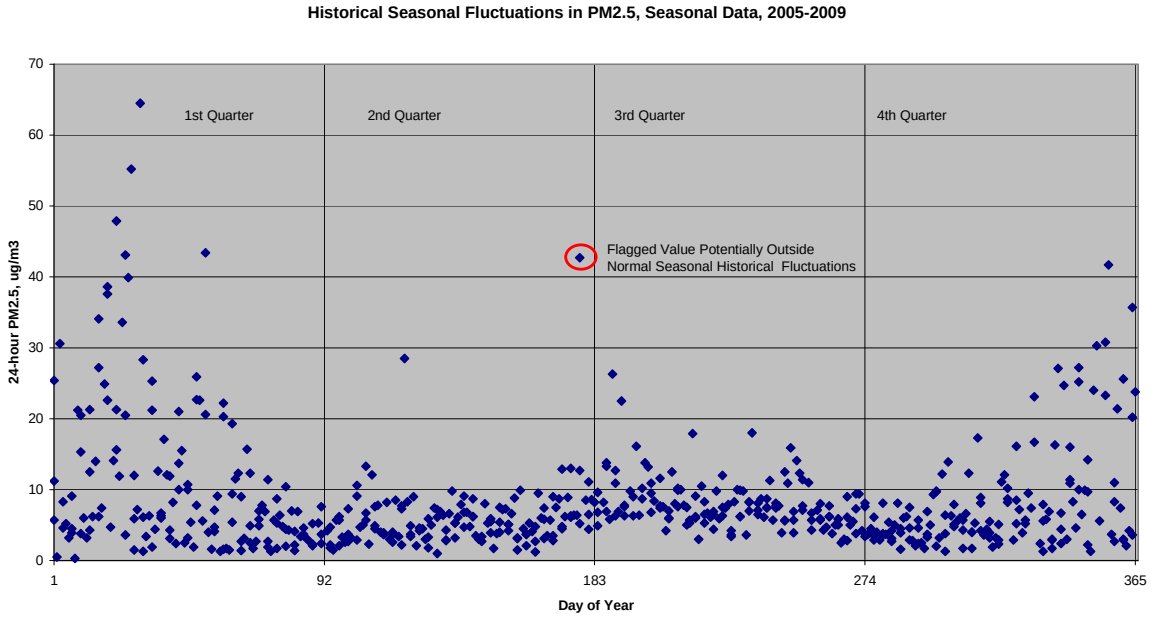
   Stated another way, the EPA's intended use of the data is to review the historical fluctuations prong, which may influence how much information of other types is needed to successfully meet the other demonstration criteria (i.e., "but for" and "clear causal relationship") of 40 CFR § 50.14 based, in part, on the degree to which the measured concentration is in excess of normal historical fluctuations.

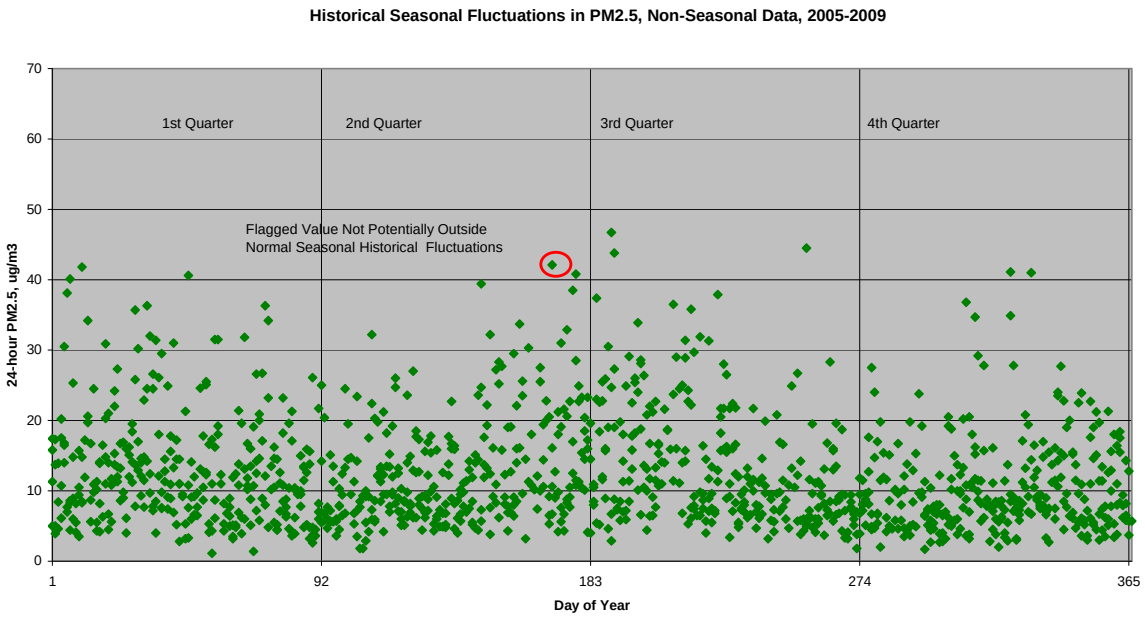
   Submitting agencies are encouraged to discuss available historical fluctuation evidence with the appropriate EPA regional office prior to submitting the event demonstration package to determine if specific information might assist in the review process.

Additional Examples and Explanation Concerning "Historical Fluctuations" Evidence
(Note: The discussion and graphics that follow illustrate the type of analyses and discussion that are described in this question and in Question 2 and that might be included in a submittal showing that an event is associated with a measurement "in excess of normal historical fluctuations.")

The evidence comparing the event-affected concentration with historical concentrations is most helpful to an air agency's demonstration if it shows that the event-affected concentration is high compared to all, or nearly all, historical concentrations generated by normal emissions and ambient conditions. This scenario makes it more plausible that the event caused the observed excess concentration rather than that some other causal event occurred on the same day as the known event. If similar events have been very rare in the past, it may be possible to make this point by labeling appropriate data points as being associated with concurred exceptional events, suspected exceptional events, or other unusual occurrences. To facilitate the EPA's understanding of the impact of these events, air agencies may also include comparisons omitting such points.

The following figures demonstrate the concept of seasonal emissions fluctuations. The first figure shows an exceedance level $PM_{2.5}$ value in late spring that is outside the range of the 3 to 5-year historical data set for non-wintertime $PM_{2.5}$, while the second figure shows a similar data value for a different part of the country where similar exceedance concentrations occur throughout the year, suggesting that some non-event process(es) can cause high concentrations all during the year. In the first case, a seasonal assessment of historical fluctuations would be appropriate, while annualized data analysis might be more appropriate for the second case to provide the most robust yet also representative historical data set.





4. **Question:** The Preamble to the EER states that less documentation or evidence may be needed to demonstrate that an event affected air quality for flagged data > 95th percentile than for values > 75th percentile. For ozone, PM_{10} and 24-hour $PM_{2.5}$, in areas near the standard, exceedances are often near or above the 95th percentile of historical data. In these cases, will the EPA accept less documentation to demonstrate that an event affected air quality simply because an event-affected concentration is above the 95th percentile of the historical concentrations?

   Answer: The preamble statement paraphrased in the question above was intended to address National Ambient Air Quality Standards (NAAQS) that are based on averaging periods of many days, such as annual, quarterly and/or 3-month rolling average NAAQS. NAAQS with 1-hour, 8-hour or 24-hour averaging periods only allow a small percentage of days to have concentrations above the level of the NAAQS. Flagging and excluding data falling at around the 75th percentile point of the historical concentrations are extremely unlikely to influence an area's attainment status with respect to such a short-term NAAQS. Data around the 75th percentile point can, however, affect compliance with NAAQS having a quarterly average, 3-month average, or annual average standard. For the annual $PM_{2.5}$ NAAQS, it is true that showing that the Exceptional Events Rule criteria are met will be more difficult for values near the 75th percentile point than for values near the 95th percentile point because it is more likely that values near the 75th percentile point are related to non-event causes.

   Other questions and answers in this Q&A document address situations involving NAAQS with short averaging periods.

5. **Question:** Some pollutant demonstrations do not (or poorly) characterize the historical fluctuations of the observed concentrations at the monitor affected by the event. How can one judge whether the demonstration is adequate in this regard?

Answer: As previously stated in the response to the historical fluctuations question, the EPA will review the submitted analyses showing how the observed concentration compares to the distribution of historical concentrations to assess whether the event is associated with a measured concentration in excess of normal historical fluctuations, and when assessing the exceptional event demonstration criteria of "affects air quality," "clear causal relationship," and "but for" causation. Because the "historical fluctuations" showing is not a statistical demonstration with any defined bright line, air agencies need only submit (with appropriate descriptions and discussion) the type of statistical analyses described in the responses to Questions 2 and 3, and the EPA will review these analyses and look at both the relationship between the claimed concentration and historical concentrations and the strength of the data set to help inform the evidence needed to demonstrate the clear causal relationship and "but for" criteria.

In the response to Question 2, we identified that 3-5 years of data should be evaluated to ensure some degree of statistical validity. We recognize, however, that these data may not be available for all monitors and/or all pollutants. If data are not available, please consult with the reviewing EPA regional office.

B. "But For" Test

Section 319 of the Clean Air Act requires that "a clear causal relationship must exist between the <u>measured exceedances</u> of a national ambient air quality standard and the exceptional event to demonstrate that the <u>exceptional event caused a specific air pollution concentration</u> at a particular air quality monitoring location…" and that [States] can petition [EPA] to "[E]xclude data that is directly due to exceptional events from use in determinations…with respect to exceedances or violations."

The implementing language in the EER at 40 CFR 50.14(c)(3)(iv) states: "The demonstration to justify data exclusion shall provide evidence that:
** * **
(D) There would have been no exceedance or violation but for the event.

6. **Question:** What types of evidence can be included in a demonstration that ozone exceedances would not have occurred but for the effect of a forest fire event?

Answer: Air Agencies may include any evidence that they consider relevant to the "but for" requirement, but they should recognize that the effects of a fire on ozone are complex. Fire can generate ozone precursors, but it can also reduce solar radiation needed to drive ozone formation. Also, fire plumes containing ozone and ozone precursors can pass over a monitoring site without mixing down to ground level and affecting the monitored concentration. Additionally, wildfires often occur during the same seasons that exhibit high ozone caused by anthropogenic precursor emissions making it difficult to separate the wildfire contribution from a high ozone event that would have occurred without the fire.

Examples of relevant evidence follow. Generally, the more types of evidence the demonstration includes, the stronger the case for the exceptional event.

- Statistical evidence that shows that for the place, time of year, and prevailing weather conditions at the time of the event, past ozone data show no history of exceedances on days that were not affected by a fire event, or shows that exceedances were so infrequent as to make the fire at issue the more likely cause of the observed exceedance.
- Unusual diurnal patterns of hourly or minute-by-minute ozone concentrations, such as a spike or peak other than at the normal time of day. This could be demonstrated by comparing the event pattern to the range of diurnal patterns exhibited on typical high ozone days.
- Evidence that the normally good correlation between the affected monitor and a monitor clearly outside the area of influence of the fire was disrupted on the day of the fire event in a manner not seen on non-fire days.
- Evidence that there were no known unusual emission releases from non-fire sources at the time of the fire event, such as from traffic due to a sports or entertainment event or source non-compliance.
- Evidence that the plume from the fire passed over the location of the monitoring site, and mixed down to ground level. This can include satellite images, wind data including HYSPLIT trajectories, visual smoke observations, and chemical analysis of PM filters showing elements and compounds that are markers for biomass burning.
- Altered pollutant amounts, ratios, or patterns that indicate the affect of the event rather than non-event sources. This information could include the level, timing and patterns of CO and PM; PM size distribution or composition; indicators of precursor composition and "age," such as oxygenated VOCs, radicals, sulfates, and timing and pattern of NO_2 and NO; and pollutant ratios, such as CO/NO_x, CO/PM_{10}, Elemental Carbon (EC)/Organic Carbon (OC), O_3/NO_y and O_3/CO.
- A prediction that the "normal" ozone concentration would have been below the level of the NAAQS. "Normal" ozone concentrations can be predicted using statistical methods based on previous-day ozone and same-day weather variables (like methods used for air quality advisories in some areas) or using air quality models. If either type of prediction is included in a demonstration, the EPA will likely give it consideration only if the demonstration package also includes information on the uncertainty of the prediction methods, i.e., information on its past success in predicting normal ozone levels. The demonstration should also explain the predictive method in terms that are understandable enough to allow informed public comment.
- A prediction based on air quality/photochemical modeling of the incremental ozone concentration due to the emissions from the fire, from comparing modeling results with and without the emissions from the fire. A demonstration that includes such evidence should address the uncertainties in the emission estimates for the fire including the speciation of the VOC and NO_x emissions, and the

uncertainties due to other aspects of the modeling platform such as grid cell size, etc.

The EPA intends to prepare a future separate document that provides more guidance for preparing a demonstration for wildfire events that are believed to have affected ozone concentrations. In addition, the EPA will post on its exceptional events website example demonstration packages that illustrate the type and scope of analyses that constitute complete submittals for ozone-related exceptional events.[4]

C. Exceptional Event Data Flagging Schedules

Note: "Flag" is the common terminology for a data qualifier code in the EPA's AQS (Air Quality System). Unless explicitly noted, the process of "flagging" data refers to adding Request Exclusion ("R") data qualifier codes to selected data in AQS. "R" flags are the only AQS flags that satisfy the EER requirement for initial data flagging. The EPA can act/concur only on an "R" flag.

7. **Question:** When the EPA revises the National Ambient Air Quality Standards, how will it notify air agencies of the schedules and deadlines for flagging and documenting exceptional event data for designations purposes?

   Answer: When 40 CFR § 50.14, "Treatment of Air Quality Monitoring Data Influenced by Exceptional Events," was revised in March 2007, the EPA was mindful that designations would be occurring under the then-recently revised $PM_{2.5}$ NAAQS. Exceptions to the generic deadline of July 1 of the calendar year following the datum year (see 40 CFR § 50.14(c)(2)(iii)) were included for $PM_{2.5}$ in the rule. The EPA was also mindful that similar issues would arise for subsequent new or revised NAAQS. The Exceptional Events Rule at section 50.14(c)(2)(vi) indicates "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 initial designation of areas for those NAAQS." See as examples, the data flagging schedule identified in the SO_2 NAAQS final rule at 75 FR at 35592 or the data flagging schedule identified in the NO_2 NAAQS final rule at 75 FR at 6531.

D. General AQS Procedures

8. **Question:** What is the difference between the "R" series flags and the "I" series flags, and how should they be used?

   Answer: Within AQS, monitoring agencies can use two types of data validation, or data qualifier, codes: the *Request Exclusion* flags ("R") and the *Informational Only* flags ("I"). Agencies should use the "I" series flags when identifying informational data and the "R" series flags to identify data points for which the agency intends to request an exceptional event exclusion and the EPA's concurrence. As an example, air agencies may use an "I" series flag to initially identify values they believe were affected by an event. Once the air

[4] http://www.epa.gov/ttn/analysis/exevents.htm

agency collects additional supporting data, it may change the flag to an "R" series flag and submit an initial event description. Or, the air agency may find that additional information does not support flagging the data as an exceptional event, and the air agency may, therefore, delete the flag or retain the "I" series flag. Air agencies may also use the "I" series flags simply to note activities or conditions occurring on the data collection day that are unrelated to exceptional events. Air agencies intending to change "I" flagged data to "R" flagged data could approach the EER flagging and initial event description deadline of July 1st of the year following the sample measurement. Air agencies must change the flag status from "I" to "R" BEFORE the July 1st deadline. Normally, air agencies should not modify the flag status after this date and, therefore, will not have met the EER initial flagging and event description deadlines.

The EPA does not intend to review or concur on the "I" series flags. Air agencies must submit "R" flags by July 1 of the calendar year following the year in which the flagged measurement occurred or by the other deadlines identified with individual NAAQS revisions (see Question 7).

9. **Question:** May an air agency flag any data in AQS?

   Answer: Yes, but the EPA requires air agencies to use the "R" flags to identify data that might have a regulatory consequence and for which an air agency intends to request exclusion and submit an approvable demonstration. Air agencies should use the "I" series flags to identify values for informational purposes (see Question 8). AQS only allows EPA to place concurrence flags on data identified with an "R" flag. "I" flags never affect regulatory summary statistics (e.g., design values, number of exceedances, 98th percentile values) generated by AQS for NAAQS determinations purposes. "R" flags will not affect the regulatory summary statistics unless or until they are concurred by the EPA.

   Further, while the EER does not prohibit air agencies from flagging individual concentration values below the level of the NAAQS, in general, air agencies can only request exclusion for data that contribute to a violation or an exceedance of the NAAQS. See Questions 29-31 for more information.

10. **Question:** The EPA requires air agencies to provide an initial description for data flagged with an "R" data qualifier code. Is it possible for an initial description to be inadequate (for example, "fires in surrounding states")?

    Answer: Although the EPA is not specifying pass/fail criteria for the initial description associated with "R" flagged data, it is possible for an air agency to enter inadequate initial descriptions in AQS. The preamble to the Exceptional Events Rule explains: "At the time the [request exclusion] 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.*" 72 FR at 13568 (emphasis added). AQS maintains event definitions, including their initial descriptions, in fields separate from the raw data flagging fields. As a result,

air agencies can enter more detailed event descriptions either before or after the raw data measurements are flagged. Regardless of precise timing, the intent of this initial description is to initially explain why the flagged data warrant consideration as exceptional events. Although the initial description is not likely to provide enough information to assist the EPA with exceptional event planning and prioritization, the act of providing the initial description encourages air agencies to review and identify data having regulatory consequence and for which they are likely to submit an approvable demonstration. To facilitate the EPA's review of the initial event description, the EPA suggests that air agencies notify the appropriate regional office after the air agency creates the event description. This allows the air agency and the EPA to discuss and, if necessary, develop a mutually agreed-upon description. This initial discussion and the *optional* letter of intent (see Question 27) can assist the EPA and air agencies with exceptional event review and prioritization.

11. **Question:** The "j" flag was "Construction/Demolition." The new "IE/RE" flag is demolition; can it also be used for construction?

    Answer: The "j" flag is obsolete and can no longer be used. The "IE/RE" flag should <u>not</u> be used for construction.

    Generally, construction activity is not considered to be exceptional. Reasonable and appropriate controls capable of preventing localized NAAQS exceedances are expected to be available during most construction events. In some cases, however, construction activities may involve very high-energy, emissions-generating physical processes, such as explosive excavation. Dust control measures may not be adequate to prevent exceedances / violations in the vicinity of this type of activity.

    If an agency wishes to "flag" data related to exceedances caused by some construction activity, the agency should use the *Other* ("IL/RL") exceptional events flag. Air agencies should use the "IE/RE" flag only when an exceptional demolition event occurred and the air agency wishes to flag the data for exclusion as an exceptional event. Air agencies using either the "IE/RE" flag or the "IL/RL" flag to identify an exceptional event would be expected to show in a demonstration submittal that all reasonable and appropriate controls were in place during the construction / demolition activity, and that those controls proved inadequate to prevent NAAQS exceedances. The demonstration would also need to meet all other requirements of the Exceptional Events Rule.

11a. **Question:** What flags does AQS use to describe fires?

    Answer: Land Management Agencies modified their fire-related definitions after the EPA promulgated the Exceptional Events Rule. The EPA has incorporated the fire-related terminology in the exceptional events guidance documents to ensure consistency (see also Question 20a). These definitional changes result in corresponding changes to fire-related flags in AQS. The EPA eliminated from AQS the Wildland Fire Use Fire – United States ("IU") and ("RU") flags and the Forest Fire ("E") flag. The EPA continues to use the following flags to describe fires:

- IF – Fire – Canadian (Informational Only)
- IG – Fire – Mexico/Central America (Informational Only)
- IM – Prescribed Fire (Informational Only)
- IP – Structural Fire (Informational Only)
- IT – Wildfire – US (Informational Only)
- RF – Fire – Canadian (Request Exclusion)
- RG – Fire – Mexico/Central America (Request Exclusion)
- RM – Prescribed Fire (Request Exclusion)
- RP – Structural Fire (Request Exclusion)
- RT – Wildfire – US (Request Exclusion)

The EPA believes it is appropriate to retain the Fire – Canadian ("IF/RF") and Fire – Mexico/Central America ("IG/RG") flags because these flags indicate the jurisdictional origin of the fire (i.e., outside of the submitting state/outside of the US). Emissions from fires originating outside of the United States that affect air quality concentrations in the United States may qualify for regulatory treatment under the international transport provisions of 40 CFR part 179(b) of the Clean Air Act.

12. **Question:** The National Park Service operates ozone monitors in some locations that meet all requirements of 40 CFR part 58. Can an air agency request exclusion of data from such monitors under the EER, and exclusion of other data not collected by the air agency itself that may lead to a nonattainment finding?

    Answer: Yes. However, air agencies should take special steps with regard to data handling within AQS. To maintain data integrity, AQS is generally designed so that only the agency updating a monitoring site may enter or alter data for that site. Under normal circumstances, an air agency will not have access rights to apply event flags to data from monitors operated by other entities, such as the National Park Service or other state, local, or tribal agencies. When an air agency believes that an exceptional event affected the concentration recorded by monitors operated by other agencies, the air agency should contact the agency operating the monitor and request that the operating agency flag the identified data range for exclusion. The affected air agency should also develop and forward to the operating agency an initial event description that the operating agency can enter in AQS as it enters the appropriate "R" series flags (see Question 10). If an air agency is unsuccessful in requesting that another agency apply the appropriate "R" series flags and initial event description, the air agency should contact the EPA regional office. If the EPA regional office is aware of the request, and if the request was prior to July 1st of the year following the datum year, the EPA will generally still consider the affected air agency's request. Air agencies should notify the EPA regional office of such an instance as soon as possible.

    Regardless of whether the monitor operator flags the data in question or the air agency notifies the regional office that a flag is needed, it is the air agency's responsibility to develop an initial event description, prepare the demonstration, and submit it to the EPA

under the applicable schedule. The agency operating the monitor may choose to assist in this process.

13. **Question:** Events can make an air concentration significantly higher than it would have been in the absence of the event contribution, and elevate the 3-year design value for a NAAQS pollutant. Depending on the magnitude of the effect and how the "normal" concentration compares to the NAAQS, the "but for" test may not be satisfied in that there may have been a violation with or without the event. Thus, it appears that data associated with the event cannot be handled as an exceptional event. However, retaining such data in the calculation of a design value for a nonattainment area can make it seem that the area needs more emissions reduction to attain the NAAQS than is actually the case. How will the EPA deal with such a situation when reviewing an attainment demonstration? How, if at all, should AQS be used to flag such data?

    Answer: *(See also Question 19 for a related question regarding PM_{10}.)* The question reflects a proper understanding that not every natural or infrequent anthropogenic event that affects air quality is a true "exceptional event" under the definition of that term in the Exceptional Event Rule. Ambient data affected by an event that does not meet the "but for" criterion cannot be excluded under the authority of the Exceptional Events Rule even if in all other respects the event meets the definition of an exceptional event. When the available evidence indicates that there would have been an exceedance of a NAAQS even in the absence of the event, for example when a wildfire makes a summer-time ozone exceedance worse than it otherwise would have been, the event is not a true "exceptional event" under the EER. The Exceptional Events Rule does not address data handling associated with events that are not considered "exceptional" under the EER, and does not provide EPA with authority to exclude such data. Yet as the question points out, this event-related concentration could still impact design values. An air agency incorporating the event-related concentration in a design value used for a prospective attainment demonstration might seem to need more emission reductions to attain the NAAQS by its attainment deadline than is actually the case.

    However, the EPA intends to achieve much the same effect as if such data were excludable under the Exceptional Events Rule, by addressing this topic in future guidance on the preparation of attainment demonstrations in required SIPs for areas designated as nonattainment. The first pollutant and NAAQS that the EPA will address this way will be the 2008 ozone NAAQS. The EPA plans to more formally describe its intention to develop such ozone guidance in the preamble of a soon-to-be-proposed rulemaking on SIP requirements for areas designated nonattainment for the 2008 ozone NAAQS. Until the planned guidance for a pollutant and NAAQS of interest is issued, air agencies should consult with their EPA regional office if they face this situation. To avoid confusion, air agencies should use AQS informational-only "I" flags on such data, rather than "R" flags.

    In the remainder of this response to the question, the EPA describes in more detail the differences between the event scenario described in the question and a true "exceptional event" under the Exceptional Events Rule, for the purpose of making it clear to all parties why the planned guidance on attainment demonstrations and the SIP approval process,

rather than the Exceptional Event Rule and the associated AQS data flagging, demonstration submittal, and review process, will apply to such an event scenario.

To illustrate an attainment demonstration scenario using the 2006 24-hour $PM_{2.5}$ NAAQS of 35 μg/m^3, assume that the three annual 98th percentile 24-hour $PM_{2.5}$ concentrations for a monitoring site for 2006-2008 are 44, 31, and 37 μg/m^3 for each respective year, with a resulting 3-year design value of 37 μg/m^3, which is a violation. Also, assume that the next highest concentration in 2006 below the 44 μg/m^3 was 40 μg/m^3. The 44 μg/m^3 concentration in 2006 was affected by a one-day wildfire, and the air agency was able to show that the concentration would have been 41 μg/m^3 without the fire. Because both 44 μg/m^3 and 41 μg/m^3 are exceedances, the event on that day does not meet the "but for" test when viewed from an "exceedance" perspective. Moreover, from a "violations" perspective, the 2006 value also would not meet the "but for" test, because the "no event" concentration value of 41 μg/m^3 for the event day in 2006 would still be the 98th percentile concentration and would still result in a 3-year design value of 36 μg/m^3 which is a violation. Thus, the 2006 wildfire does not meet the definition of an exceptional event.

E. General Exceptional Events Rule Applicability and Implementation Issues

14. **Question:** The Preamble to the Exceptional Events Rule states that the EPA headquarters or the EPA regional office will make its decision on demonstrations public. See 72 FR at 13574 ("The EPA regional offices will work with the States, Tribes, and local agencies to ensure that proper documentation is submitted to justify data exclusion. EPA will make the response and associated explanation publicly available."). What method does the EPA plan to use to make the explanation "publicly available?"

Answer: The EPA posts example demonstration packages and decisions (consisting of air agency demonstration submittals, the EPA responses, and the EPA technical support documents) on the EPA regional office websites and/or the Technology Transfer Network website.[5] In certain instances, the EPA's concurrence or non-concurrence determination may be a factor in a rulemaking that includes a public comment period. In these cases, the same information that is posted on the EPA websites, and any additional supporting correspondence, will also be posted in the relevant rulemaking docket. Further, the EPA plans to make the demonstrations and the EPA's concurrence decisions available to interested parties upon request.

14a. **Question:** At what point in the exceptional event development and review process is public notice and opportunity for comment required? How does the EPA determine the need for public comment?

Answer: The EER requires that air agencies offer notice and opportunity for public comment as part of the demonstration development process (see 40 CFR 50.14(c)(3)(i) and 40 CFR 50.14(c)(3)(v)). The EPA must provide notice and opportunity for public

[5] http://www.epa.gov/ttn/analysis/exevents.htm

comment prior to taking final Agency action. In addition, an air agency may need to provide an additional opportunity for public comment if the EPA requests and/or if the air agency provides supplemental information not included in the original documentation made available for public comment. The EPA will make a case-by-case decision regarding supplemental opportunities for public comment during the demonstration preparation, submittal, and review process. As part of this decision, the EPA may consider potential impact and/or expressed public interest in the claimed event, data uncertainty, historical application of demonstration approach, etc.

When the EPA concurs based on the weight-of-evidence that the air agency has successfully made the demonstrations referred to in 40 CFR 50.14(a)(2) and (b)(1) to the EPA's satisfaction, the EPA will exclude the affected data from the following types of calculations and activities:

- The EPA's AQS will not count these days as exceedances when generating user reports, and will not include them in design values estimates, unless the AQS user specifically indicates that they should be included.[6]
- The EPA will accept the exclusion of these data for the purposes of selecting appropriate background concentrations for New Source Review air quality analyses.[7]
- The EPA will accept the exclusion of these data for the purposes of selecting appropriate background concentrations for transportation conformity hot spot analyses.[8]
- The EPA will exclude these data when assessing whether the ambient monitoring requirements of 40 CFR part 58, which are tied to air quality conditions, are being met.
- The data will continue to be publically available, but the EPA's publications and public information statements on the status of air quality in the affected area will not reflect these data in any summary statistic of potential regulatory application, unless such inclusion is specifically noted.[9]

In addition, some proposed regulatory actions (e.g., proposed designation, classification, attainment demonstration, or finding as to whether the area has met the applicable NAAQS) rely on design values that exclude data that the EPA has determined meet the exceptional event weight-of-evidence requirements. These regulatory actions require the EPA to provide an opportunity for public comment prior to taking a final Agency action.

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[6]Due to the complexity of the AQS software, inadvertent errors may occur. The EPA asks that agencies provide the EPA with information if/when AQS outputs seem inconsistent with the EPA's intention to exclude concurred upon data.

[7] If the EPA is the permitting authority, the EPA will propose permits on this basis. If the EPA is commenting on another permitting authority's proposed action, the EPA's comments will be consistent with the determinations in this guidance document.

[8]Applicable only to PM_{10} and $PM_{2.5}$. See "Transportation Conformity Guidance for Quantitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas," EPA-420-B-10-040, US EPA Office of Transportation and Air Quality, December 2010, page 98.

[9]These data may be included in statistics intended to describe current status and trends in actual air quality in the area for public information purposes including reporting of the Air Quality Index.

If the EPA pursues one of these actions for a given area, the EPA will open a new comment period during which the public may comment on the exceptional event submission and/or the EPA's determinations. The EPA must consider and respond to received comments before taking final regulatory action.

15. **Question:** It is possible for events to affect more than one state. Each state/air agency must then submit its own exceptional events demonstration package, which may result in redundant work. Could the EPA take on multi-state/agency demonstrations?

    Answer: The primary responsibility for developing demonstrations lies with state, local, and tribal air agencies. The EPA encourages states and air agencies to coordinate with each other in compiling demonstration packages, and these agencies may submit some of the same data and analyses when a single event affects multiple jurisdictions. Each NAAQS exceedance, however, will likely have some unique properties (e.g., unique monitoring locations, different surrounding and potentially contributing sources with varying levels of control, different historical concentration patterns, etc.). States/agencies need to address these unique characteristics in individual submittal packages. Similarly, where a single event results in exceedances of multiple NAAQS (e.g., annual and 24-hour PM), the submitting agency needs to address the unique features of each NAAQS exceedance or violation (e.g., potentially different monitoring locations, different historical concentration patterns). An air agency could submit a single demonstration package for a single event affecting multiple NAAQS provided the air agency clearly identifies the unique characteristics of each NAAQS.

    For example, if multiple states or jurisdictions are affected by a Saharan dust plume, they could collaborate and submit a common demonstration component (e.g., the same or very similar information in multiple submittals) for the "not reasonably controllable or preventable" and "human activity unlikely to occur or natural event" elements. Because the actual event-related exceedance would have been measured by different monitors located in different regions with possibly different contributing factors (e.g., rural monitor affected by both dust from feedlots and Saharan dust and urban monitor affected by both nearby industrial sources and Saharan dust), the "clear causal relationship," "but for," and "historical fluctuations" elements are likely to differ from one submittal to another.

16. **Question:** Does the EER address scenarios in which temporary activities (e.g., multi-month or multi-year road construction / demolition projects) significantly impact a previously-sited monitor such that the monitor is no longer representative of the area, but rather functions more like a "hot-spot" monitor?

    Answer: Except for $PM_{2.5}$, there is no difference in how monitoring data are treated from "area-wide" monitors and hot-spot monitors. All such data, if meeting applicable CFR regulations, are comparable to the NAAQS. For $PM_{2.5}$ a unique microscale or hot-spot monitor is only comparable to the 24-hour NAAQS and not to the annual $PM_{2.5}$ NAAQS. Air agencies must indicate in their annual monitoring network plan (or an update to that plan) whether $PM_{2.5}$ monitors are suitable or not suitable for comparison

against the annual $PM_{2.5}$ NAAQS. If the EPA regional office approves a monitor as being unsuitable, this will prevent the data being used to compare with the annual $PM_{2.5}$ NAAQS (see 40 CFR § 58.30). Note that data collected at "special purpose" monitors meeting the applicable 40 CFR part 50 and 58 requirements can be compared to the NAAQS when the EPA makes an attainment determination.

The EER does not specifically address temporary anthropogenic emission sources such as construction projects. However, neither does the EER explicitly place a limit on the duration of a single event. A submitting agency could make a showing that a claimed event (e.g., a multi-year road construction project) is not likely to recur at the location in question. If the remaining exceptional event criteria and demonstration criteria are met, including the requirement that the event (including the emissions from the project) is not reasonably controllable, the activity might qualify as being an exceptional event.

Air agencies not wishing to develop exceptional event demonstration packages for the described scenario can request agreement from the EPA regional office to relocate a monitor that no longer meets monitoring objectives. This process is, however, time consuming and resource intensive, so air agencies usually "monitor through" the disruption or ask their regional offices to support a temporary shut-down. When the EPA regional offices approve temporary shut-downs, the operating air agency should assign a Null Data Code in AQS for "construction/repairs in area" (AC) to identify and invalidate data associated with periods of local construction.

16a. **Question:** Are policy relevant background ozone concentrations and exceptional events related?

Answer: Policy relevant background ozone concentrations and exceptional events can include partially overlapping concepts. The 2007 Staff Paper[10] defines policy relevant background ozone "as the distribution of [ozone] concentrations that would be observed in the U.S. in the absence of anthropogenic (man-made) emissions of precursor emissions (e.g., VOC, NOx, and CO) in the U.S., Canada, and Mexico." An exceptional event is a natural event (excluding stagnations, inversions, high temperatures, or precipitation) or an anthropogenic event that is unlikely to recur in the same location. Both exceptional events and policy relevant background include emissions from natural events like forest wildfires or stratospheric ozone intrusions. However, exceedances due to natural emissions that occur every day and contribute to policy relevant background, such as biogenic emissions, do not meet the definition of an exceptional event and are thus not eligible for exclusion under the EER. Routine anthropogenic emissions outside of the U.S. contribute to policy relevant background, but are not exceptional events. Air agency preparation of a demonstration package and the EPA's subsequent review of the demonstration package is case-by-case based on a weight-of-evidence approach and does

[10] Environmental Protection Agency (2007a) Review of the national ambient air quality standards for ozone: assessment of scientific and technical information. OAQPS staff paper. (Updated Final) July 2007. Research Triangle Park, NC: Office of Air Quality Planning and Standards; EPA report no. EPA-452/R-07-007, available online at: http://epa.gov/ttn/naaqs/standards/ozone/s_o3_cr_sp.html.

not explicitly consider whether the event type might contribute to policy relevant background. However, if a natural event that contributes to policy relevant background causes an observed concentration that meets the statutory definition of an exceptional event and fulfills all of the exceptional event criteria, the EPA would consider the event to be an exceptional event.

17. **Question:** Volcanoes on Hawaii are causing 1-hour and 24-hour SO_2 exceedances, which are clearly volcanic exceptional events. Section 319 of the Clean Air Act and CFR require the EPA to provide air agencies with a method to flag and petition the EPA for exclusion of exceptional events data. When will the EPA provide the method for SO_2?

    Answer: AQS has been modified to allow flags on all criteria pollutant data. The specific schedule for exceptional event flagging and documentation submission for data to be used in designations decisions is identified in the final primary SO_2 NAAQS rule (see preamble at 75 FR at 35585-35586 and regulatory text at 75 FR at 35592). The correct flag to use for a volcanic eruption event is "RS."

17a. **Question:** The EPA acknowledges that certain extreme exceptional event cases may require more limited demonstration packages. How might the EPA decide whether to consider a particular high wind dust event "extreme" for the purpose of expecting only a very limited demonstration package?

    Answer: While many dust storms could qualify as exceptional events, the EPA believes that most events that are conventionally referred to as "dust storms" should not be considered "extreme" events for this purpose. The National Weather Service (NWS) defines a "dust storm" as a severe weather condition characterized by strong winds and dust-filled air over an extensive area, but does not include any quantified criteria for the spatial extent or the concentration of the dust. In contrast, a haboob is of the magnitude that could be considered an extreme event. Haboobs are caused by severe thunderstorm activity and are typically characterized as "solid walls" of dust that can rise up to 2,000 meters and travel hundreds of miles.

    Generally, the EPA would consider sustained wind speed, spatial extent, visibility, and PM levels in determining whether an event is an extreme event. An example of an event that could be considered an exceptional event but not an extreme event would be the Santa Ana winds blowing at 25-30 mph, creating an exceedance at one monitor, with maximum hourly PM_{10} levels of less than 800 $\mu g/m^3$. In contrast, a haboob that occurred in Phoenix in 2011 had downburst winds of 70 mph, with a wall of dust moving at 30-40 mph for 150 miles; hourly PM_{10} levels of 50,000 $\mu g/m^3$ were monitored during this event. Both of these events could be considered for exclusion under the EER. The South Coast Air Quality Management District prepared a satisfactory The South Coast Air Quality Management District prepared a satisfactory 49-page demonstration package (plus an appendix with additional supporting information) for the Santa Ana winds event, parts of which have been used as examples in the High Winds guidance document. However, the EPA would expect that much more limited documentation for an event like the haboob would be sufficient to convince the EPA (and all other parties) that the event

meets the several criteria for data exclusion (clear causal connection, not reasonably controllable or preventable, etc.).

18. **Question:** Carbon monoxide (CO) flags are in AQS for exceedances caused by fires, but the CO NAAQS (40 CFR 50.8) does not reference the Exceptional Event Rule. What is the EPA's approach for the treatment of CO data affected by exceptional events?

    Answer: CO flagging, including the option for the EPA's concurrence, has been enabled in AQS. CO flags from structural fires and wildfires that qualify as exceptional events have been allowed in historic EPA guidance. The EER Preamble (72 FR at 13563) explains the EPA's position with respect to exceptional event flagging for pollutants for which the statement of the NAAQS in 40 CFR part 50 does not explicitly reference the Exceptional Events Rule: "In the interim, where exceptional events result in 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." Therefore, air agencies may flag CO data in AQS and the EPA may apply the same process and approval criteria as in the Exceptional Events Rule.

    On August 12, 2011, the EPA issued a decision to retain the current suite of CO standards without revision (see 76 FR at 54294). Because the EPA made no revisions to the CO standards, it promulgated no related changes to the Exceptional Events Rule.

19. **Question:** The limited maintenance plan requirements for PM_{10} require a demonstration that the area design value is less than or equal to 98 $\mu g/m^3$. Flagging of values between 98 $\mu g/m^3$ and the NAAQS are therefore relevant for this regulatory decision. Can these values, which are not exceedances and do not contribute to violations, be flagged and receive the EPA's concurrence?

    Answer: Yes. The May 7, 2009, memorandum from William T. Harnett to Regional Air Division Directors states the following regarding the PM_{10} limited maintenance plan option: "In determining eligibility for the limited maintenance plan option, the EPA will treat 24-hour average air quality data between 98 $\mu g/m^3$ and 155 $\mu g/m^3$ in a manner analogous to the treatment of exceedance data under the Exceptional Events Rule, provided the impacted data meet the general definition and criteria for exceptional events (natural event, or exceptional event that is not reasonable controllable or expected to recur)." This memorandum is posted on the EPA website at http://www.epa.gov/ttn/oarpg/t1/memoranda/lmp_final_harnett.pdf

19a. **Question:** What does it mean to use a "weight-of-evidence" approach when the EPA reviews exceptional event demonstration submittals?

    Answer: In using the term "weight-of-evidence," the EPA believes we should consider all relevant evidence and qualitatively "weigh" this evidence based on its relevance to the EER criterion being addressed, the degree of certainty, its persuasiveness, and other considerations appropriate to the individual pollutant and the nature and type of event.

20. **Question:** Exactly which section(s) of the preamble to the final Exceptional Event Rule has been declared a "legal nullity" by the court, and what does that mean?

Answer: In *NRDC v. EPA*, No. 07-1151 (D.C. Cir. 3/20/09), the DC Circuit Court states that

> "In one section of the preamble, EPA refers to its 'final rule concerning high wind events', which 'states that ambient particulate concentrations due to dust being raised by unusually high winds will be treated as due to uncontrollable natural events' when certain conditions apply (72 Fed. Reg. 13576). There is no such final rule. The final rule [language in 40 CFR 50 and 40 CFR 51.930] does not mention high wind events or anything about 'ambient particulate matter concentrations.' EPA calls this a drafting error. In light of the error, the high wind events section of the preamble is a legal nullity."

The EPA considers the "high wind events section of the preamble" to which the court referred to be the section titled "*B. High Wind Events*" beginning on 72 FR at 13576. This does not necessarily mean that these passages do not reflect the EPA's interpretation of what might be appropriate under the EER. Rather, it means that other parts of the preamble and other EPA guidance should be relied upon instead of statements in these passages of the final rule preamble, which should be treated as not having been published.

20a. **Question:** What fire-related definitions should air agencies use in their exceptional event documentation?

Answer: Land Management Agencies modified their fire-related definitions after the EPA promulgated the Exceptional Events Rule. The EPA will use the following fire-related terminology in the revised draft exceptional events guidance documents to ensure consistency:

Prescribed fire - Any fire intentionally ignited by management under an approved plan to meet specific objectives.

Wildfire – Any fire started by an unplanned ignition caused by lightning; volcanoes; unauthorized activity; accidental, human-caused actions; and escaped prescribed fires.

20b. **Question:** How should air agencies support a claim that emissions from wildfires are "not reasonably controllable or preventable"?

Answer: The EPA recognizes that emissions from wildfires are generally not reasonable to prevent or control. The EPA uses "generally" in this statement because the current United States Forest Service (USFS) definitions of "wildfire" and "prescribed fire" define these events in terms of purpose and deliberateness of ignition (See definitions in response to Question 20a). Based on the USFS definitions, a wildfire may have started

from an unintentional ignition, but the land manager may have allowed the fire to continue to burn although it could have been extinguished. In such a case, some of the explanation of the reasonableness of this decision is needed. Land managers may similarly allow a prescribed fire to burn beyond its originally determined bounds. Submitting agencies should also explain the reasons for extending the bounds of the burn.

The EPA's expectation is that air agencies identify the origin and evolution of the wildfire in simple terms when documenting the "not reasonably controllable or preventable" criterion in their demonstration submittal. Fires started by lightning, volcanoes, unauthorized activity, or accidental human-caused actions are unplanned and unwanted fires and therefore, despite efforts to prevent or control such fires[11] the emissions may not be reasonably controllable or preventable. In these cases, it is often sufficient for agencies to provide a statement such as the following to document the "not reasonably controllable or preventable" criterion: "Based on the documentation provided in [section X] of this submittal, [lightning] caused the unplanned, unwanted wildfire event. The responsible agencies did their reasonable best to control the extent of and extinguish the fire by taking the following actions [insert list or description of actions taken]. Therefore, emissions from this fire were 'not reasonably controllable or preventable.'" Emissions from intentionally ignited fires and escaped prescribed fires that burners allow to burn require additional supporting documentation to demonstrate the "not reasonably controllable or preventable" criterion. In these cases, the submitting agency must explain how the fire escaped or why the land manager allowed the fire to burn. The EPA expects to discuss the issue of control/prevention of wildfires in future guidance.

21. **Question:** The Exceptional Event Rule allows for exclusion of data affected by a prescribed fire if the usual requirements of the rule are satisfied and if the air agency has adopted and is implementing a Smoke Management Program or if the air agency has ensured that the burner employed basic smoke management practices. Are there minimum requirements for a Smoke Management Program? What are "basic smoke management practices?"

    Answer: The EPA intends to develop separate guidance to address this issue which will be issued at a later date following an opportunity for stakeholder input.

22. **Question:** Is there a tie between the requirements of 40 CFR 51.930 Mitigation of Exceptional Events and the EPA's approval for exclusion of data affected by an exceptional event?

    Answer: While the granting of data exclusion under the EER does not depend on air agency actions to meet the requirements of 40 CFR § 51.930, the EPA encourages the submittal of a mitigation measures with the demonstration package, particularly for those events expected to recur. The Exceptional Events Rule was promulgated pursuant to

[11] Prevention/control efforts could include posting High Fire Danger signs to make people more careful and prevent accidental fires, and/or taking reasonable action to contain a fire once it has started.

Section 319 of the Clean Air Act which contains a provision that each air agency "must take necessary measures to safeguard public health regardless of the source of the air pollution..." This provision was the basis for the mitigation requirements in 40 CFR §51.930 and the requirement in the EER at 40 CFR §50.14(c)(1)(i) that all air agencies 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." The language at 40 CFR §51.930 requires that:

> "(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."

Although the language at 40 CFR §51.930 does not require the preparation or submittal of a mitigation plan, it does require that the air agency develop and implement processes and measures that could easily become the elements of a formal, written plan. The mitigation criteria focus on specific measures and actions to protect public health, rather than on measures that control or prevent emissions associated with a specific event. So, a mitigation plan may include measures that apply to emissions sources in general (e.g., dust suppression or covering techniques for mineral processing) rather than those measures or controls that might be discussed in the "not reasonably controllable or preventable" portion of an event demonstration (e.g., controls/measures X, Y, and Z were in place on sources A, B, and C during the time of the event). A mitigation plan may also include procedures and responsibilities for public alerts and sheltering advisories. Because having a mitigation plan in place will help air agencies meet the EER requirements at 40 CFR §50.14(c)(1)(i) related to public notification more systematically, the EPA encourages the development and submittal of a mitigation plan with the demonstration package if one has not already been adopted.

23. **Question:** Need a state (or tribe) make an argument or submit evidence about control measures for events that took place in other states or countries, on federally-owned and managed land, or on tribal (or state) lands not subject to state (or tribal) regulation?

    Answer: Under the Clean Air Act, the EPA generally considers a state (not including areas of Indian country) to be a single responsible actor. Accordingly, neither the EPA

nor the Exceptional Events Rule provides special considerations for intrastate scenarios when an event in one county affects air quality in another county in the same state, assuming that the event occurs on land subject to state authority (versus tribal government authority). For cases involving intrastate transport, the state or local air agency must evaluate whether emissions from neighboring (or contributing) counties are not reasonably controllable or preventable. As discussed in greater detail in the overview guidance document and the draft High Winds Guidance document, the assessment of "not reasonably controllable or preventable" is based on existing level of required control, attainment status, and, for high wind dust events, wind speed and other factors. States and tribes should consult with their EPA regional office early in the development of an exceptional event demonstration package if they believe that emissions from sources on federally-owned and managed land (e.g., national parks within the state) have been affected by an event in a way that raises issues of reasonable control.

Interstate and international transport events are different than intrastate events. The EPA believes it is not reasonable to expect the downwind state (i.e., the state submitting the demonstration) to have convinced the upwind country or state to have implemented controls on sources sufficient to limit event-related air concentrations in the downwind state. As with any demonstration submittal, the submitting (downwind) state should sufficiently identify all natural and anthropogenic contributing sources of emissions (both in-state and out-of-state) to show the causal connection between an event and the affected air concentration values. A submitting state may provide a less detailed characterization of sources in the upwind state or country than of sources within its jurisdiction. After completing the source characterization, the submitting state should assess whether emissions from sources within its jurisdiction (i.e., in-state sources) were not reasonably controllable or preventable. Although the submitting state should also provide available information on the status of control measures for emissions from out-of-state sources, the submitting state may determine based on available information that the implemented controls on out-of state sources constitute reasonable controls and that the "not reasonably controllable or preventable" criterion is satisfied. When assessing emissions transported from other states or countries, the submitting state can say that it characterized the out of state sources, determined that these sources contributed to the noted exceedance or violation, and determined, based on jurisdictional boundaries and other available information, that contributing emissions from the upwind state or country were not reasonably controllable or preventable. Submitting states are further required to submit evidence/statements supporting the other exceptional event criteria (i.e., clear causal relationship, but for, human activity unlikely to recur or a natural event, affects air quality, and historical fluctuations).

The EPA recommends a similar approach to significant out-of-state anthropogenic sources in the case of a mixed natural/anthropogenic event that the submitting state wishes to consider a natural event of the grounds that all significant anthropogenic sources were reasonably controlled.

As with all exceptional event demonstrations, the EPA will evaluate the information on a case-by-case basis based on the facts of a particular exceptional event including any

information and arguments presented in public comments received by the state in its public comment process or by the EPA in a notice-and-comment regulatory action that depends on the data exclusion. This response is not intended to discourage states from working cooperatively to plan and apply controls on both sides of a state boundary for their mutual benefit.

In addition to the provisions in the EER, the Clean Air Act provides mechanisms in sections 110(a)(2)(D) and 126 to address interstate transport issues and mechanisms in section 179(b) to address international transport issues.

24. **Question:** Need an air agency make an argument or submit evidence about control measures for air quality impacts from wind-blown dust from desert land in its natural state?

    Answer: While the EPA's position is generally that impacts from wind-blown dust from undisturbed natural deserts are inherently not reasonable to control, the air agency would need to assert this and provide appropriate supporting documentation in its demonstration package. The supporting documentation should include descriptions of the geographic area (with maps or available visuals) and a discussion of the historical land use, including prior disturbances, water diversions and other historical practices which may have occurred on the land, even if the land seems or is considered to be "undisturbed" at present. Submitting agencies should also identify all sources contributing to an event and identify appropriate control strategies for each anthropogenic source.

25. **Question:** Is there a template or example for preparing a demonstration document?

    Answer: The guidance document, "Draft Guidance on the Preparation of Demonstrations in Support of Requests to Exclude Ambient Air Quality Data Affected by High Winds under the Exceptional Event Rule" (the High Winds guidance document) provides this type of advice for demonstrations for high wind dust events. While the High Winds guidance document speaks specifically to high wind dust events, the EPA expects many of the principles discussed therein to extend to all types of exceptional events. The EPA has also developed a presentation entitled, "Presenting Evidence to Justify Data Exclusion as an Exceptional Event: Ideas based on how the EPA has recently documented events to support regulatory decisions." Interested parties can download this presentation from the following site: http://www.epa.gov/ttn/analysis/docs/IdeasforShowingEEEvidence.ppt. Additionally, the EPA intends to develop a future separate guidance document addressing the preparation of demonstrations to support wildfire-related ozone event claims.

26. **Question:** Where can an air agency find examples of demonstrations from other air agencies that have been approved by the EPA?

    Answer: Examples of approved demonstrations are posted at http://www.epa.gov/ttn/analysis/exevents.htm.

27. **Question:** How quickly will the EPA review the demonstration document and provide feedback to the air agency on the approval, or on any suggested improvements?

    Answer: The EPA generally intends to conduct its initial review of a submitted exceptional event demonstration package within 120 days of receipt. Following this initial review, the EPA will generally send a letter to the submitting agency that includes a completeness determination and/or a request for additional information, a date by which the supplemental information should be submitted (if applicable)[12], and an indicator of the timing of the EPA's final review. The EPA will generally prioritize exceptional event determinations that affect near-term regulatory decisions.[13]

    To promote early communication, the EPA suggests that air agencies provide a letter of intent to submit a demonstration package for flagged data in AQS as soon as possible, if possible within 12 months from the event occurrence, after the agency identifies the event(s) as being significant. A letter of intent is an *option* for the air agency to use in situations where it may help communication and prioritization.[14] This initial notification can assist both the air agency and the EPA in the planning and prioritization process. The EPA intends to respond to such a letter within 60 days of receipt. The EPA response will provide the regional office's best assessment of the priority that can be given to the submission once received and any case-specific advice the EPA may have to offer for the preparation of the demonstration.

    The EPA intends to make a decision regarding concurrence with an air agency's flag within 18 months of receipt of a complete package for those demonstrations that impact a near-term regulatory action, or sooner if necessary to support a regulatory action. The EPA intends to communicate with the submitting agency, as needed, during the demonstration review period.

    Submitting air agencies that believe their demonstration packages are tied to near-term regulatory actions should submit their demonstration packages well in advance of the regulatory deadline. Air agencies should also identify the relationship between the exceptional event-related flagged data and the anticipated regulatory action in the cover letter that accompanies their initial submittal package to the reviewing EPA regional office.

28. **Question:** Will the EPA ever perform and consider additional data analysis itself before deciding whether to approve an air agency-submitted demonstration in support of data exclusion?

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[12] The EPA will generally ask that air agencies provide supplemental information within 60 days from receipt of the letter from the EPA. The EPA recognizes that air agencies may need more than 60 days to prepare and submit some types of supplemental information. The EPA is willing to work with agencies on supplemental timeframes; however, the mandatory timing of EPA actions may limit the response time the EPA allows.
[13] "Regulatory decisions" include findings as to whether the area has met the applicable NAAQS, classification determinations, attainment demonstrations, the development of Limited Maintenance Plans, clean data findings.

Answer: In general, the EPA will not prepare analyses or additional arguments to be included as components in a submitted demonstration package. Rather, the EPA will recommend demonstration package improvements to the submitting agency. However, if a demonstration package is associated with an imminent regulatory action and the public interest will be best served by the EPA preparing and/or considering additional analyses, the EPA may either assist with or independently prepare supporting analyses that could become part of the submission package or an EPA-prepared technical support document. Analyses prepared by the EPA could support either approval or disapproval of an air agency's request for concurrence on flagged data.

28a. **Question:** Does the Exceptional Events Rule contain a dispute resolution process that air agencies can use to resolve disagreements regarding non-concurrence on submittal packages?

Answer: Several mechanisms currently exist that air agencies can use at various points in the exceptional events process:

- Engage in early dialogue with the appropriate EPA regional office.
- Submit requests for reconsideration to the official who made the determination if a request identifies a clear error or if information submitted by the agency was overlooked
- Elevate the concern within the EPA's chain of command.
- Participate in the public notice and comment process (see Question 14a).
- Challenge in an appropriate court the regulatory decision subsequently made that is based on the EPA's exceptional event determination.

In addition, for complex exceptional events claims or those with significant regulatory or other impacts (e.g., those claims that directly influence proposed designation or redesignation, classifications, and attainment determinations), the EPA regional office staff will generally seek input from other EPA regional offices and/or the EPA headquarters staff.

F. Exceptional Event Data Flagging for Air Quality Concentrations that Could Contribute to an Exceedance or Violation of the National Ambient Air Quality Standards

29. **Question:** Each criteria pollutant except PM_{10} now has multiple NAAQS in effect that differ by averaging period, and/or there is an "original" and a lower "revised" NAAQS level each of which has regulatory significance. If a measurement value is approved by the EPA for exclusion for one particular NAAQS averaging period and level, is it automatically excluded for all the other NAAQS for that pollutant?

Answer: No. The exclusion of a measured air concentration is to be justified and approved separately for each NAAQS that applies to the pollutant.

When initially flagging data, an air agency does not need to commit to the specific NAAQS for which it seeks to exclude a measured concentration. The EPA's ambient air quality database, AQS, is designed to allow an air agency to apply a single flag to a measured concentration value, which merely indicates the agency's interest in excluding that value with respect to one or more of the applicable NAAQS. Later, in the justification (i.e., the demonstration) for exclusion, the air agency can indicate the specific NAAQS for which it seeks exclusion and for which the demonstration addresses the Exceptional Events Rule criteria. When the EPA makes a decision regarding concurrence with an air agency's flag, it will generally identify in its approval/disapproval letter (or other official notice) all of the NAAQS for which the EPA has concurred on the flag. The EPA will also generally set a flag in AQS indicating concurrence with respect to a specific single NAAQS or a specific combination of NAAQS for that pollutant (e.g., in the case of $PM_{2.5}$, the 24-hour NAAQS only, the annual NAAQS only, or both the 24-hour and the annual average NAAQS). The EPA does this by associating one or more "pollutant standard ID" value with the concurrence.

The EPA concurrence flags entered into AQS prior to the March 2010 re-engineering of AQS to accommodate the Exceptional Events Rule did not indicate the specific single NAAQS or the specific combination of NAAQS for which the exclusion was approved. These "legacy" concurrence flags have been converted to the new approach using the following defaulting scheme:

- For ozone, all legacy flags were treated as applying to both the 0.08 ppm 8-hour NAAQS and the 0.12 ppm 1-hour NAAQS. This default was chosen because as of March 2010, designations under the 2008 NAAQS of 0.075 ppm had been suspended pending reconsideration of that NAAQS, and AQS staff were not aware of any concurrences already granted with respect to the 0.075 ppm NAAQS.
- For $PM_{2.5}$, all concurrences on events with dates prior to January 1, 2005 (meaning the date of the concentration, not the date of the EPA's concurrence) were presumed to be applicable only to the annual $PM_{2.5}$ NAAQS. This default was chosen because prior to the revision of the 24-hour $PM_{2.5}$ NAAQS in 2006, violations of the 1997 24-hour NAAQS were extremely rare.
- For $PM_{2.5}$, all concurrences on events with dates of January 1, 2005 through March 2010 were presumed to be applicable only to the 24-hour NAAQS because there were no revisions to the annual $PM_{2.5}$ NAAQS during this timeframe, so designations to nonattainment for the annual $PM_{2.5}$ standard were extremely rare. This 24-hour $PM_{2.5}$ NAAQS default was chosen because it was possible for designations under the 2008 24-hour NAAQS to be based on data as early as 2005.
- For PM_{10}, all concurrences were presumed to apply to the 24-hour NAAQS, as the annual PM_{10} NAAQS was revoked in 2006.[15]

[15] The EPA realizes that many of the defaulted EPA concurrences for pre-2006 PM_{10} concentrations that were below the level of the 24-hour PM_{10} NAAQS actually were applicable to the annual PM_{10} NAAQS, but this approach was the most practical way to ensure that all other concurrences originally intended to be applicable to

- For CO, all concurrences were presumed to apply to both the 1-hour and the 8-hour NAAQS. This default was chosen to ensure that the concurrence applied to whichever NAAQS had been exceeded and was the basis for the exclusion request.
- For SO_2, all concurrences were presumed to apply to both the 24-hour and the annual NAAQS. This default was chosen to ensure that the concurrence applied to whichever NAAQS had been exceeded and was the basis for the exclusion request. No flags were assumed to apply to the 1-hour NAAQS because the 1-hour SO_2 standard was not promulgated until June of 2010, after the AQS re-engineering.
- For Pb, all concurrences (if any existed) were presumed to apply to the quarterly average NAAQS of 1.5 $\mu g/m^3$. This default was chosen because March 2010 was prior to the EPA issuing final designations under the 2008 Pb NAAQS of 0.15 $\mu g/m^3$.
- For NO_2, all concurrences were presumed to apply to the annual NAAQS because the 1-hour NO2 standard was not promulgated until February of 2010.

For concurrences on events with dates after the March 2010 re-engineering of AQS, the EPA will specify the NAAQS to which the concurrence applies. If this defaulting scheme does not properly represent the actual concurrence action that was taken by the EPA regional office, the regional office should revise and correct the concurrence flags, if they have not already done so.

Detailed information on the use of events flags in AQS can be found in a tutorial posted at http://www.epa.gov/ttn/airs/airsaqs/manuals/ExceptionalEventTutorial.pdf. Concurrence flags are discussed on page 20 of this tutorial.

30. **Question:** For a NAAQS that is defined for a multi-hour or multi-day averaging time, but for which concentrations are measured, reported, and flagged on the basis of a shorter time period, what comparisons between measurements and the NAAQS level should be done to satisfy the "but for" test?

    Answer: One requirement for data exclusion under the Exceptional Events Rule is that there would have been no exceedance or violation of the NAAQS "but for" the event. In AQS, flagging and concurrence are done for each individual reported measurement. When the averaging period for the NAAQS is the same as the measurement duration period, individual measurements can be compared directly to the level of the NAAQS. This is the case for the 1-hour ozone, 1-hour CO, 1-hour SO_2, and 1-hour NO_2 NAAQS.[16]

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the 24-hour NAAQS were preserved. Because concentrations below the level of the 24-hour NAAQS have no effect on attainment determinations for the 24-hour NAAQS, no error can come from treating such values as having been concurred. Nevertheless, the EPA regional office may choose to update these concurrence flags as time permits.

[16] Air agencies have for many years reported SO_2 concentrations as hourly averages. While some air agencies have also voluntarily reported 5-minute average concentrations also, either for each of the 12 5-minute blocks in an hour or for the maximum 5-minute average concentrations (block or running) during an hour, it is the hourly concentration averages that should be compared to the 1-hour SO_2 NAAQS. Under a change in SO_2 monitoring

However, a difference exists for the following NAAQS between the time period for reporting concentrations and the averaging period to which the level of a NAAQS applies.

- Ozone, CO, NO_2, and SO_2 are reported to AQS as 1-hour measurements, but all three have NAAQS defined for longer averaging periods (3-hours, 8-hours, 24-hours, and/or annual).
- Pb is reported as 24-hour measurements, but the old and new NAAQS are both for three-month averages (quarterly averages and three-month rolling averages, respectively).
- When using automated/continuous monitoring equipment, $PM_{2.5}$ and PM_{10} are sometimes reported as 1-hour measurements but there are $PM_{2.5}$ and PM_{10} NAAQS with 24-hour averaging periods and a $PM_{2.5}$ NAAQS with an annual averaging period.
- When using filter-based monitoring equipment, $PM_{2.5}$ and PM_{10} are sometimes reported as 24-hour measurements but there is a $PM_{2.5}$ NAAQS with an annual averaging period.

The mismatches of time periods make this a question with a complex answer. The following paragraphs, summarized in Table Q30-1, explain the general rationale behind the pollutant and NAAQS-specific entries in Table Q30-2.

To satisfy the "but for" criterion, there must have actually been an exceedance or violation of the NAAQS in a time period overlapping with the event and its effects on air quality, and which would not have occurred "but for" the effects of the event.[17] By definition, an exceedance necessarily involves a comparison between an air concentration, averaged over a time period equal in length to the averaging time of the NAAQS, and the level of the NAAQS. For example, it does not make sense to compare an individual 1-hour ozone concentration to the level of the 8-hour NAAQS as part of a test of whether the "but for" criterion is met, because the outcome of the

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requirements that accompanied the promulgation of the 1-hour SO_2 NAAQS, the EPA now requires that air agencies report the maximum 5-minute block average concentration, as well as the hourly concentration (see 40 CFR § 58.12(g)). Air agencies may satisfy the 5-minute reporting requirement by submitting all twelve 5-minute block averages or by reporting only the maximum 5-minute block average concentration. The EPA's AQS retains the hourly concentration as submitted; AQS does not use 5-minute data to replace the submitted hourly concentration. While 5-minute concentrations may play a role in evaluating whether Exceptional Event criteria are satisfied for a given hour and event, for example to establish a clear causal connection, they are not to be compared to the level of the 1-hour (or any other) NAAQS for SO_2 as part of a "but for" demonstration and should not be flagged for exclusion under the EER. Air agencies may, however, use "I" series flags (Information only) with 5-minute SO_2 data.

[17] The EPA interprets the Exceptional Event Rule and its preamble to mean "exceedance or violation" each time that "exceedance" or "violation" occurs in the text, consistent with the obvious intent of the Clean Air Act amendment requiring the EPA to promulgate the Rule. An "exceedance" occurs each time the concentration in the air for the averaging period applicable to the NAAQS is higher than the level of the NAAQS. Most NAAQS allow some such occurrences in a 1-year or 3-year time period (depending on the NAAQS). A "violation" of the NAAQS occurs when there have been enough high-concentration episodes that the statistical form of the particular NAAQS indicates a failure to meet the NAAQS.

comparison for a single hour does not indicate whether an exceedance or violation of the 8-hour NAAQS occurred, or whether it would not have occurred "but for" the event. Instead, one should consider whether the event made a "but for" difference in the average concentration over the period that is the same as the averaging period for the NAAQS. That is, air agencies making a "but for" argument should compare the average concentration to the identified NAAQS rather than the individual concentrations that comprise the average. Air agencies should, however, identify in their exceptional event submission those cases in which a single measurement or several, but not all, measurements cause the elevated average.

The preamble to the Exceptional Events Rule provides one exception from this formal definitional approach. The preamble states that in the particular case of $PM_{2.5}$, the direct comparison of a single 24-hour average concentration (determined from a single filter-based measurement or by averaging 24 1-hour measurements from a continuous equivalent instrument) to the level of the annual NAAQS (currently 15 $\mu g/m^3$) can be the basis for meeting the "but for" criterion for exceedances or violations of the annual NAAQS. In context, it is clear that based on this comparison, a 24-hour concentration can be excluded from the calculation of the annual $PM_{2.5}$ NAAQS design value, if other rule criteria are also met. It is therefore not necessary to show that the annual average $PM_{2.5}$ concentration was above 15 $\mu g/m^3$ with the event and would have been below 15 $\mu g/m^3$ "but for" the single event at issue. Such a concentration can also be excluded from the calculation of the design value for the 24-hour $PM_{2.5}$ NAAQS, although this is likely to make a difference to meeting the NAAQS only if the actual measured concentration were close to or above 35 $\mu g/m^3$. This special case is reflected in Table Q30-2.

In light of this departure in the preamble from a formal definitional approach in the case of a 24-hour $PM_{2.5}$ measurement and the annual $PM_{2.5}$ NAAQS, Table Q30-2 also provides a parallel special approach for similar comparisons involving Pb, NO_2 and SO_2. The EPA believes applying this interpretation for Pb, NO_2, and SO_2 is consistent with the interpretation in the preamble for $PM_{2.5}$ and is consistent with the EPA's intent in drafting the Exceptional Events Rule that should be applicable to all pollutants. That is, a 24-hour average concentration of Pb, NO_2, or SO_2 can be compared to the NAAQS level defined for a longer period, for purposes of meeting "but for" with respect to the NAAQS with the longer averaging period. However, the EPA does not intend to concur on flags for a 1-hour NO_2 and SO_2 concentration that is below the level of the annual NAAQS, regardless of the outcome of "but for" comparisons based on 24-hour or annual averaging periods.[18] Also, the EPA does not

[18] This restriction is intended to parallel the similar restriction for $PM_{2.5}$ stated in the preamble to the Exceptional Event Rule. It likely has no practical effect. It is highly unlikely that even several hourly concentrations below the level of the annual NO_2 NAAQS (53 ppb) could include an event contribution that would, when divided by 8760 (24 hours times 365 days), result in the annual average NO_2 concentration crossing from below to above the level of the annual NAAQS. Similarly, it is highly unlikely that even several hourly concentrations below the level of annual SO_2 NAAQS (30 ppb) could include an event contribution that would, when divided by 24, result in the 24-hour average SO_2 concentration crossing from below to above the level of the 24-hour SO_2 NAAQS (140 ppb).

intend to concur on flags for a 24-hour Pb measurement below the level of the old (fixed quarterly average) Pb NAAQS or the new (rolling 3-month average) Pb NAAQS.

Table Q30-1. Principles for Correct Approaches for Helping to Show That the "But For" Test Is Met

Note: The principles identified in this table are presented from the more general and/or self-evident to the more specialized and/or derivative.

	Principle	Application to Specific NAAQS	Exceptions
1	A single measurement may be compared directly to the level of the NAAQS if the averaging times are the same.	• 1-hour NAAQS for CO, SO_2, NO_2, and ozone. • 24-hour filter-based $PM_{2.5}$ or PM_{10} measurements vs. 24-hour NAAQS.	
2	When the measurement time is shorter than the averaging time of the NAAQS (e.g., 1-hour O_3 measurements and the 8-hour O_3 NAAQS), air agencies can compare the average of multiple measurements within the averaging period of the NAAQS to the level of the NAAQS (e.g., compare the average of eight 1-hour measurements to the 8-hour NAAQS). If this comparison shows that the average is more than the NAAQS but would have been below the NAAQS in the absence of the event, then the "but for" test will have been met for those individual measurements in the longer averaging period that were affected by the event. Air agencies should, however, identify in their exceptional event submission those cases in which a single measurement or several, but not all, measurements cause the elevated average.	• 1-hour ozone measurements vs. 8-hour NAAQS. • 1-hour CO measurements vs. 8-hour NAAQS. • 1-hour SO_2 measurements vs. 3-hour, 24-hour, and annual NAAQS. • 1-hour NO_2 measurements vs. annual average .NAAQS. • 1-hour $PM_{2.5}$ measurements vs. 24-hour and annual average NAAQS. • 1-hour PM_{10} measurements vs. 24-hour average NAAQS. • 24-hour $PM_{2.5}$ measurements vs. annual average NAAQS. • 24-hour Pb measurements vs. quarterly average NAAQS. • 24-hour Pb measurements vs. rolling 3-month average NAAQS.	If a measurement value is below the level of the quarterly, rolling 3-month, or annual average NAAQS, it cannot be excluded, regardless of the outcome of comparing the longer period average to the NAAQS level.
3	When the $PM_{2.5}$ or Pb measurement time is 24 hours, it is also permitted to compare the 24-hour measurement to the annual average $PM_{2.5}$ NAAQS or the quarterly or rolling 3-month Pb NAAQS.	• 24-hour $PM_{2.5}$ filter measurements vs. the annual average NAAQS (expressly permitted in the preamble to the Exceptional Events Rule). • 24-hour Pb filter measurements vs. the quarterly average and rolling 3-month average NAAQS (suggested by this guidance as	If a measurement value is below the level of the quarterly, rolling 3-month, or annual average NAAQS, it cannot be excluded.

	Principle	Application to Specific NAAQS	Exceptions
		a consistent with the intent of the $PM_{2.5}$ provision in the preamble).	
4	1-hour $PM_{2.5}$ and SO_2 measurements may be averaged to 24-hour periods and then compared to the annual average NAAQS. If the "but for" test is supported by this comparison, the showing supports a "but for" finding for those individual 1-hour measurements in the 24-hour averaging period that were affected by the event.	• 1-hour $PM_{2.5}$ measurements vs. annual average NAAQS (suggested by this guidance to create a level playing field between filter-based and continuous $PM_{2.5}$ measurements). • 1-hour SO_2 measurements vs. annual average NAAQS (where the 30 ppb annual SO_2 NAAQS still applies)	If the average of the 24 1-hour measurements is below the level of the annual average NAAQS, it cannot be excluded.
5	When there is no NAAQS for the 24-hour averaging period, 1-hour measurements may be compared directly to the annual NAAQS.	• 1-hour NO_2 measurements vs. annual average NAAQS (suggested by this guidance to create a benchmark for judging the excludability of 1-hour NO_2 measurements, other than whether the event affected the annual average enough to make a "but for" difference relative to the annual average NAAQS).	If a measurement value is below the level of the annual average NAAQS, it cannot be excluded.
6	Otherwise, single 1-hour measurements may not be compared to the level of the annual average NAAQS.	• Single 1-hour SO_2 measurements may not be compared the annual average NAAQS (because there is a 24-hour NAAQS for SO_2 with a defined averaging methodology). • Single 1-hour $PM_{2.5}$ measurements may not be compared to the annual average NAAQS (because there is a 24-hour NAAQS for $PM_{2.5}$ with a defined averaging methodology).	

Table Q30-2 identifies the comparisons and conclusions that would help satisfy the "but for" test for each pollutant, for each current NAAQS. Note that for completeness Table Q30-2 addresses some situations that may be very unlikely to actually occur – for example, that a single event might cause an exceedance of the annual average NO_2 NAAQS.

Table Q30-2. Correct Approaches for Helping to Show That the "But For" Test Is Met

	Pollutant	Specific Case: NAAQS level NAAQS averaging period Measurement period	Correct Approach
1	Ozone	0.12 ppm 1-hour averaging period 1-hour measurement	If a 1-hour measured concentration was above 0.124 ppm but would have been 0.124 ppm or less in the absence of the event, the 1-hour ozone concentration value meets the "but for" test for purposes of comparison to the 1-hour NAAQS. If other criteria are also met for that hour (e.g., there was a clear causal relationship between the event and that hour's ozone level, among other criteria), then the hour can be flagged and concurred for exclusion.
2	Ozone	0.08 ppm 8-hour averaging period 1-hour measurement	• If the daily maximum 8-hour average of measured concentrations was above 0.084 ppm but would have been 0.084 ppm or less in the absence of the event, those 1-hour concentration values that were affected by the single event meet the "but for" test for purposes of comparison to the 0.08 ppm 8-hour ozone NAAQS. The exclusion of some or all hours of the 8-hour period that was originally the daily maximum 8-hour period may cause another 8-hour period to become the daily maximum. The "but for" comparison can be repeated for this new 8-hour period, which may result in flagging and concurrence for more 1-hour values. It is also possible for additional hourly concentrations that were not included in the original 8-hour block to be excluded as part of a second 8-hour block.
3	Ozone	0.075 ppm 8-hour averaging period 1-hour measurement	• If the daily maximum 8-hour average of measured concentrations was above 0.075 ppm but would have been 0.075 ppm or less in the absence of the event, those 1-hour concentration values that were affected by the single event meet the "but for" test for purposes of comparison to the 0.075 ppm 8-hour ozone NAAQS. The exclusion of some or all hours of the 8-hour period that was originally the daily maximum 8-hour period may cause another 8-hour period to become the daily maximum. The "but for" comparison can be repeated for this new 8-hour period, which may result in flagging and concurrence for more 1-hour values. It is also possible for additional hourly concentrations that were not included in the original 8-hour block to be excluded as part of a second 8-hour block.

Table Q30-2. Correct Approaches for Helping to Show That the "But For" Test Is Met

	Pollutant	Specific Case: NAAQS level NAAQS averaging period Measurement period	Correct Approach
4	$PM_{2.5}$	35 μg/m^3 24-hour averaging period 1-hour measurement	• If the 24-hour average concentration based on 1-hour measurements was above 35.4 μg/m^3 (after truncating after the first decimal digit, per 40 CFR 50 Appendix N section 3.0(c)) but would have been 35.4 μg/m^3 or less in the absence of the event, those 1-hour concentration values that were affected by the single event meet the "but for" test for purposes of comparison to 35 μg/m^3 24-hour $PM_{2.5}$ NAAQS. • Also, if the 24-hour average concentration based on 1-hour measurements was above 15.0 μg/m^3 (after truncation after the first decimal digit) but would have been 15.0 μg/m^3 or less in the absence of the event, those 1-hour concentration values that were affected by the single event meet the "but for" test for purposes of comparison to 35 μg/m^3 24-hour $PM_{2.5}$ NAAQS.
5	$PM_{2.5}$	15.0 μg/m^3 Annual averaging period 1-hour measurement	• If the annual average $PM_{2.5}$ concentration was above 15.0 μg/m^3 but would have been equal to or less than 15.0 μg/m^3 (after rounding to one decimal digit) in the absence of the single event's effect on one or more hours, those 1-hour concentration values that were affected by the single event meet the "but for" test for purposes of comparison to 15 μg/m^3 annual $PM_{2.5}$ NAAQS. • Also, if the 24-hour average concentration based on 1-hour measurements was above 15.0 μg/m^3 (after rounding to one decimal digit, per 40 CFR 50 Appendix N section 4.3(a)) but would have been equal to or less than 15.0 μg/m^{3}in the absence of the event, those 1-hour concentration values that were affected by the single event meet the "but for" test for purposes of comparison to 15 μg/m^3 annual $PM_{2.5}$ NAAQS. However, an hourly value must be part of a 24-hour average concentration that is above 15 μg/m^3 (after rounding to one decimal digit) to be excluded from an annual NAAQS calculation.

Table Q30-2. Correct Approaches for Helping to Show That the "But For" Test Is Met

	Pollutant	Specific Case: NAAQS level NAAQS averaging period Measurement period	Correct Approach
6	$PM_{2.5}$	35 μg/m^3 24-hour averaging period 24-hour measurement	• If the 24-hour average concentration was above 35.4 μg/m^3 (after truncating after the first decimal digit, per 40 CFR 50 Appendix N section 3.0(b)) but would have been 35.4 μg/m^{3}or less in the absence of the event, the 24-hr concentration value meets the "but for" test for purposes of comparison to 35 μg/m^3 24-hour $PM_{2.5}$ NAAQS. • Also, if the 24-hour average concentration was above 15.0 μg/m^3 (after truncating after the first decimal digit, per 40 CFR 50 Appendix N section 3.0(b)) but would have been 15.0 μg/m^{3}or less in the absence of the event, the 24 average concentration meets the "but for" test for purposes of comparison to 35 μg/m^3 24-hour $PM_{2.5}$ NAAQS.
7	$PM_{2.5}$	15 μg/m^3 Annual averaging period 24-hour measurement	• If the annual average $PM_{2.5}$ concentration was above 15.0 μg/m^3 (after rounding to one decimal digit per 40 CVFR 50 Appendix N section 4.2(a)) but would have been equal to or less than 15.0 μg/m^3 in the absence of the single event's effect on one or more days, those 24-hour concentration values that were affected by the single event meet the "but for" test for purposes of comparison to 15 μg/m^3 annual $PM_{2.5}$ NAAQS. • Also, if the 24-hour average concentration from the filter-based sampler was above 15.0 μg/m^3 (after truncating after the first decimal digit, per 40 CFR 50 Appendix N section 3.0(b)) but would have been equal to or less than 15.0 μg/m^{3}in the absence of the event, the 24-hour value meets the "but for" test for purposes of comparison to 15 μg/m^3 annual $PM_{2.5}$ NAAQS. Note that a 24-hour concentration that is equal to or less than 15.0 μg/m^3 (after truncation to one decimal digit) cannot be approved for exclusion, regardless of the outcome of the comparison just described.

Table Q30-2. Correct Approaches for Helping to Show That the "But For" Test Is Met

	Pollutant	Specific Case: NAAQS level NAAQS averaging period Measurement period	Correct Approach
8	PM_{10}	150 μg/m^3 24-hour averaging period 1-hour measurement	• If the 24-hour average concentration based on 1-hour measurements was above 150 μg/m^3 (after rounding to the nearest 10 μg/m^3, per 40 CFR 50 Appendix K section 1.0(b)) but would have been equal to or less than 150 μg/m^3 in the absence of the event, those 1-hour concentration values that were affected by the single event meet the "but for" test for purposes of comparison to the 150 μg/m^3 24-hour PM_{10} NAAQS.
9	PM_{10}	150 μg/m^3 24-hour averaging period 24-hour measurement	• If the 24-hour average concentration from the filter-based sampler was above 150 μg/m^3 (after rounding to the nearest 10 μg/m^3, per 40 CFR 50 Appendix K section 1.0(b)) but would have been equal to or less than 150 μg/m^3 in the absence of the event, the 24-hour value meets the "but for" test for purposes of comparison to the 150 μg/m^3 24-hour PM_{10} NAAQS.
10	CO	35 ppm 1-hour averaging period 1-hour measurement	• If a 1-hour measured concentration was above 35.0 ppm (after rounding to one decimal digit per 40 CFR 50.8(d)) but would have been 35.0 ppm or less in the absence of the event, the 1-hour CO concentration value meets the "but for" test for purposes of comparison to the 1-hour NAAQS.
11	CO	9 ppm 8-hour averaging period 1-hour measurement	• If an 8-hour average of measured concentrations is one of the two highest non-overlapping 8-hour periods of the year and was above 9.0 ppm (after rounding to one decimal digit per 40 CFR 50.8(d)) but would have been equal to or less than 9.0 ppm in the absence of the event, those 1-hour concentration values that were affected by the single event meet the "but for" test for purposes of comparison to the 9 ppm 8-hour CO NAAQS. The exclusion of some or all hours of the 8-hour period that was originally one of the two highest non-overlapping 8-hour periods of the year may cause another 8-hour period to become one of two highest non-overlapping 8-hour periods of the year. The "but for" comparison can be repeated for this new 8-hour period, which may result in flagging and concurrence for more 1-hour values. It is also possible for additional hourly concentrations that were not included in the original 8-hour block to be excluded as part of a second 8-hour block.

Table Q30-2. Correct Approaches for Helping to Show That the "But For" Test Is Met

	Pollutant	Specific Case: NAAQS level NAAQS averaging period Measurement period	Correct Approach
12	Pb	1.5 μg/m^3 Quarterly averaging period 24-hour measurement	• If the quarterly mean was above 1.5 μg/m^3 (after rounding to one decimal digit) but would have been equal to or less than 1.5 μg/m^3 in the absence of the single event's effect on some day(s), the 24-hour value(s) affected by the single event meets the "but for" test for purposes of comparison to the 1.5 μg/m^3 quarterly average Pb NAAQS. (Note that given the 1-in-6 sampling schedule for Pb, it will be unusual for a single event to affect multiple sampling days.) • Also, if the 24-hour average concentration from the filter-based sampler was above 1.5 μg/m^3 (after rounding to one decimal digit) but would have been equal to or less than 1.5 μg/m^{3}in the absence of the event, the 24-hour value meets the "but for" test for purposes of comparison to 1.5 μg/m^3 quarterly average Pb NAAQS. A 24-hour Pb concentration that is equal to or less than 1.5 μg/m^3 can never be excluded, regardless of the outcome of the comparison just described.
13	Pb	0.15 μg/m^3 Rolling 3-month averaging period 24-hour measurement	• If a 3-month mean was above 0.15 μg/m^3 (after rounding to two decimal digits) but would have been equal to or less than 0.15 μg/m^3 in the absence of the single event's effect on some day(s), the 24-hour value affected by the single event meets the "but for" test for purposes of comparison to the 0.15 μg/m^3 quarterly average Pb NAAQS. (Note that given the 1-in-6 sampling schedule for Pb, it will be unusual for a single event to affect multiple sampling days.) • Also, if the 24-hour average concentration from the filter-based sampler was above 0.15 μg/m^3 (after rounding to two decimal digits per 40 CFR 50 Appendix R section 5(b)) but would have been equal to or less than 0.15 μg/m^3 in the absence of the event, the 24-hour value meets the "but for" test for purposes of comparison to the 0.15 μg/m^3 quarterly average Pb NAAQS. A 24-hour Pb concentration that is equal to or less than 0.15 μg/m^3 can never be excluded, regardless of the outcome of the comparison just described.

Table Q30-2. Correct Approaches for Helping to Show That the "But For" Test Is Met

	Pollutant	Specific Case: NAAQS level NAAQS averaging period Measurement period	Correct Approach
14	NO_2	100 ppb 1-hour averaging period 1-hour measurement	• If a 1-hour measured concentration was above 100 ppb (after truncating to a whole number per 40 CFR 50 Appendix S section 4.2(c)) but would have been equal to or less than 100 ppb in the absence of the event, the 1-hour NO_2 concentration value meets the "but for" test for purposes of comparison to the 1-hour NAAQS.
15	NO_2	53 ppb Annual averaging period 1-hour measurement	• If the annual average of all the measured 1-hour concentrations in a year was above 53 ppb (after rounding to a whole number per 40 CFR 50 Appendix S section 4.1(b)) but would have been 53 ppb or less in the absence of the event, those 1-hour values that were affected by the single event meet the "but for" test for purposes of comparison to the 53 ppb annual average NO_2 NAAQS. • Provided there is an exceedance of the annual standard, if the 1-hour concentration was above 53 ppb (after truncating to a whole number per 40 CFR 50 Appendix S section 4.2(c)) but would have been equal to or less than 53 ppb in the absence of the event meets the "but for" test for purposes of comparison to annual NAAQS. However, a 1-hour NO_2 concentration that is below 53 ppb (after rounding to a whole number) can never be excluded, regardless of the outcome of the comparison just described.
16	SO_2	75 ppb 1-hour averaging period 1-hour measurement	If a 1-hour measured concentration was above 75 ppb (after rounding to a whole number per 40 CFR 50 Appendix T section 4(c)) but would have been equal to or less than 75 ppb in the absence of the event, the 1-hour SO_2 concentration value meets the "but for" test for purposes of comparison to the 1-hour SO_2 NAAQS.
17	SO_2	140 ppb 24-hour averaging period 1-hour measurement	If the 24-hour average concentration based on 1-hour measurements was above 140 ppb (after rounding to the nearest 10 ppb per 40 CFR 50.4(b)) but would have been equal to or less than 140 ppb in the absence of the event, those 1-hour concentration values that were affected by the single event meet the "but for" test for purposes of comparison to 140 ppb 24-hour SO_2 NAAQS.

Table Q30-2. Correct Approaches for Helping to Show That the "But For" Test Is Met

	Pollutant	Specific Case: NAAQS level NAAQS averaging period Measurement period	Correct Approach
18	SO_2	30 ppb Annual averaging period 1-hour measurement	• If the annual average of measured 1-hour concentrations was above 30 ppb (after rounding to a whole number per 40 CFR 50.4(a))) but would have been 30 ppb or less in the absence of the event, those 1-hour values that were affected by the single event meet the "but for" test for purposes of comparison to the 30 ppb annual average SO_2 NAAQS. • Also, if the 24-hour average concentration based on 1-hour measurements was above 140 ppb (after rounding to the nearest 10 ppb per 40 CFR 50.4(b)) but would have been equal to or less than 140 ppb in the absence of the event, those 1-hour concentration values that were affected by the event meet the "but for" test for purposes of comparison to the 30 ppb annual SO_2 NAAQS. If the 30 ppb annual SO_2 NAAQS still applies in the affected area, a 1-hour concentration equal to or below 30 ppb (after rounding to a whole number per 40 CFR 50.4(a)) may never be excluded, regardless of the outcome of the comparison just described.
19	SO_2 (secondary)	500 ppb 3-hour averaging period 1-hour measurement	• If the 3-hour average of measured 1-hour concentrations was above 500 ppb (rounded to the nearest 100 ppb per 40 CFR 50.5(a)) but would have been equal to or less than 500 ppb in the absence of the event, those 1-hour values that were affected by the single event meet the "but for" test for purposes of comparison to the 3-hour average secondary SO_2 NAAQS.

31. **Question:** When is it appropriate for air agencies to flag concentration values that are less than the level of the relevant NAAQS? Under what circumstances will the EPA concur on such flags?

    Answer: (Please read Q30 before reading this response.)

    AQS currently allows an air agency to flag any measured concentration values it chooses, including values below the level of the relevant NAAQS. The EPA does not plan to implement any new technical restrictions through the AQS software. Also, the EPA does not consider the Exceptional Events Rule to prohibit air agencies from flagging values below the level of the NAAQS. However, the EPA does not intend to review data flags in AQS for concurrence until the air agency submits its evidence/analysis package

demonstrating that exclusion of the flagged values is consistent with the criteria in the Exceptional Events Rule, including the "but for" analysis at 40 CFR 50.14(c)(3)(iv)(D). Air agencies wishing to flag values for informational purposes should use the "I" series flags in AQS.

Air agencies may see an advantage in flagging all values they believe were affected by an event (and contribute to a violation of the NAAQS), for purposes of being able to later identify historical data that have not been affected so that "normal" concentration patterns can be presented as part of meeting the "in excess of historical fluctuations" prong of the exclusion criteria. AQS does not prevent such flagging, but air agencies should be aware that agency flagging by itself does not establish that the concentrations were in fact affected by an event and should be excluded from the "normal" baseline.

Of the flagged cases that appear in both AQS and in demonstration packages, the EPA can concur with flags for concentrations that are below the NAAQS only in five very narrow conditions described below. If the EPA determines that a flag on a value less than the level of the NAAQS cannot meet the "but for" test, it is likely the EPA would nonconcur or leave the default/null value of the AQS concurrence flag (indicating no EPA action) in place.

Except in cases involving PM_{10} limited maintenance plans[19], the EPA intends to prioritize events that result in a violation or exceedance of a NAAQS or those that otherwise impact a regulatory decision. As described below and in the response to Question 30, there may be specific instances where individual measurements fall below a NAAQS but still contribute to a violating design value. There may also be instances where a shorter averaging time measurement (e.g., 1-hour O_3 measurement of 100 ppb) is not above the level of that averaging time NAAQS (e.g., 1-hour O_3 NAAQS of 120 ppb), but is above a longer averaging time NAAQS (e.g., 8-hour O_3 NAAQS of 80 ppb) and contributes to a violation of the longer averaging time NAAQS. In such cases, although the individual measurement may not exceed the level of the (short-term) NAAQS, it may be possible for air agencies to present sufficient evidence to satisfy the "but-for" criterion.

(See Questions 8, 9, 13, and 19 for additional information.)

First, PM_{10} values between 98 and 154 $\mu g/m^3$ (inclusive) may be flagged, concurred, and excluded for purposes of qualifying an area for reliance on only a limited maintenance plan.[20] Because of the expected exceedance form of the PM_{10} NAAQS, concentrations in this range cannot possibly affect whether a site actually meets the NAAQS, so there is no reason for flagging them except when the acceptability of a limited maintenance plan is

[19] See May 7, 2009 policy memorandum from William T. Harnett to Regional Air Division Directors at http://www.epa.gov/ttn/oarpg/t1/memoranda/lmp_final_harnett.pdf that allows PM_{10} values between 98 and 154 $\mu g/m^3$ (inclusive) to be flagged, concurred, and excluded for purposes of qualifying an area for reliance on only a limited maintenance plan.
[20] See May 7, 2009 policy memorandum from William T. Harnett to Regional Air Division Directors at http://www.epa.gov/ttn/oarpg/t1/memoranda/lmp_final_harnett.pdf.

an issue. The normal AQS flagging and concurrence procedures may be used in this situation.[21]

A second scenario in which the EPA can concur with flags for concentrations that are below the NAAQS is indicated at 72 FR at 13570. If (i) an event has affected air quality on multiple consecutive days, (ii) at least one measured concentration during the episode can be found to meet the "but for" test using the relevant comparison specified in Table Q30-2, and (iii) the air quality impact on each day is "exceptional," measurements for the entire period are eligible for data exclusion regardless of how they compare to the level of the NAAQS. In the context of this provision, "exceptional" encompasses all the requirements of the Exceptional Events Rule other than the "but for" test (e.g., clear causal connection, "in excess of normal historical fluctuations, including background," not reasonably controllable or preventable).

Scenarios in which the measured concentration is greater than a NAAQS with a longer averaging time but less than the level of a NAAQS with a shorter averaging time

Third, applying Table Q30-2 may result in qualifying a 24-hour $PM_{2.5}$ measurement that is greater than the 15 μg/m^3 annual $PM_{2.5}$ NAAQS but not greater than the 35 μg/m^3 24-hour $PM_{2.5}$ NAAQS for exclusion for the purposes of the 24-hour $PM_{2.5}$ NAAQS. This is the result if the actual 24-hour concentration was between 15 and 35 μg/m^3 but would have been below 15 μg/m^3 but for the effect of the event. It should be noted that an exclusion made under this very specific provision for the 24-hour $PM_{2.5}$ NAAQS will only affect the outcome of an attainment determination for the 24-hour NAAQS if the concentration value in question is one of the few highest daily concentrations during the year, because only then could it have affected the 3-year design value. When a 24-hour value below the level of the 24-hour NAAQS does affect the 3-year design value, the application of the guidance for the fourth situation (below), which is applicable to all four NAAQS pollutants with multi-year design values, would get to the same result as application of this paragraph.

Fourth, assuming that all other Exceptional Events Rule requirements and conditions are met, the EPA may concur with flags for ozone, $PM_{2.5}$, 1-hour NO_2, and 1-hour SO_2 that are "less than the level of the NAAQS" if adjusting the flagged concentrations for the estimated contribution from the event would change the 3-year design value from being above the NAAQS to being equal to or below the NAAQS. However, as indicated in Table Q30-2, concentrations below certain values may never be excluded.

Fifth, a 1-hour measurement of a pollutant that is below the level of the 8-hour, 3-hour, 24-hour, or quarterly NAAQS for that pollutant can be excluded if (1) the event affected the 1-hour measurement, and (2) taking into account the event's effect on all the hours in

[21] The procedure for determining a PM_{10} design value in units of μg/m^3 is given in section 6.3 of the EPA guidance document "PM_{10} SIP Development Guideline," June 1987, posted at http://www.epa.gov/ttn/oarpg/t1/memoranda/pm10sip_dev_guide.pdf .

the longer period the effect of the event on the longer averaging period's concentrations satisfies the "but for" criterion. These situations are described in Table Q30-2 (rows 3, 4, 8, 11, 12, 13, 17, and 19). However, as indicated in Table Q30-2, concentrations below certain values may never be excluded.

The following NAAQS-specific discussions provide further explanations regarding some of the situations in which a concentration less than the level of the NAAQS may qualify for exclusion. These discussions are not exhaustive and do not obviate the need to refer to Table Q30-2.

24-hour $PM_{2.5}$

Assume for illustration that the three annual 98th percentile 24-hour $PM_{2.5}$ concentrations for a monitoring site for 2006-2008 are 41, 31, and 37 μg/m^3 for each respective year with a resulting 3-year design value of 36 μg/m^3 which is a violation of the 24-hour $PM_{2.5}$ NAAQS of 35 μg/m^3. Also, assume that the next highest concentration in 2007 below the 31 μg/m^3 was only 20 μg/m^3. The 31 μg/m^3 concentration in 2007 was affected by a one-day wildfire. The air agency has been able to show that the concentration would have been 17 μg/m^3 without the fire. Because neither 20 μg/m^3 nor 31 μg/m^3 exceed the NAAQS, the event on that day does not meet the "but for" test when viewed from an "exceedance" perspective. However, the effect of the fire on the 2007 value determines whether the 3-year design value passes the 24-hour NAAQS. Had there been no fire, the 98th percentile concentration in 2007 would have been 20 μg/m^3 which would result in a 3-year design value of 33 μg/m^3 (i.e., less than the 24-hour $PM_{2.5}$ NAAQS of 35 μg/m^3). Therefore, the 2007 value of 31 μg/m^3 meets the "but for" test when the focus in on NAAQS violations rather than individual exceedances. Assuming other requirements are met, the 31 μg/m^3 concentration would be approved by the EPA for exclusion from the 2006-2008 design value. Note that in doing a "violations-based" "but for" analysis, one does not simply substitute the "no event" concentration for the original 98th percentile day into the design value calculation. Rather, one must re-select the 98th percentile day, which sometimes will result in a different day's actual measured value being used in the design value calculation.[22]

It is conceivable that the effect of an event on a given day is not enough to satisfy the "but for" test with regard to the "violation" perspective explained in the preceding paragraph for one three-year period, but that it does satisfy it for an earlier or later 3-year period when it is combined with one or two different concentrations to calculate a 3-year design values, since the outcome of the "violations" analysis may change. After the EPA has approved the exclusion of a concentration based on a "violations" analysis for one 3-year period, the EPA will also exclude that concentration when calculating design values and attainment for the other two 3-year periods that include that same year.

[22] Note that exclusion of this 24-hour value from design values for the annual average NAAQS is a separate question, the likely answer to which is that the value is not excludable. If the event did not make the 24-hour concentration change from below 15 to above 15 μg/m^3 the event does not meet the first condition specified in row 7 of Table Q30-2. It is also very improbable that an event affecting a single day would meet the second condition in row 7 of Table Q30-2.

For the 24-hour $PM_{2.5}$ NAAQS, it is possible that multiple days with concentrations below the NAAQS within one year are flagged. Excluding just one of these concentrations may not change the annual 98th percentile concentration enough to cause the 3-year design value to change from "violating" to "complying," but excluding several of them may. The outcome for the design value may also depend in part on whether exclusion is granted for some other concentrations that are above the level of the NAAQS. In such cases, the exclusion decisions should first be made for each of the flagged concentrations that are above the NAAQS. All remaining flagged concentrations (those meeting all other requirements and conditions of the Exceptional Events Rule) should then be considered in progressively larger groups ranked by concentration. That is, if excluding the highest one of the flagged concentrations below the level of the NAAQS would cause a switch in whether the 3-year design value violates the NAAQS then if the EPA determines that value is to be excluded then there is no impact to retaining all others and, thus, no need to make determinations for those others. If excluding the two highest such concentrations causes a switch, then there is no impact to determining whether others beyond those two should be retained.

However, the preamble to the Exceptional Events Rule explicitly states that $PM_{2.5}$ concentrations below the level of the annual NAAQS cannot be excluded for purposes of comparisons to the annual NAAQS. (72 FR at 13570, bottom of middle column) Even if the conditions described in the preceding paragraph are met, values below 15 $\mu g/m^3$ cannot be excluded.

Annual $PM_{2.5}$

The preamble to the Exceptional Events Rule explicitly states that $PM_{2.5}$ concentrations below the level of the annual NAAQS cannot be excluded for purposes of comparisons to the annual NAAQS. (72 FR at 13570, bottom of middle column)

Ozone (0.075 ppm 8-hour NAAQS)

Assume for illustration that the three annual 4th highest daily 8-hour ozone values in 2006-2008 are 0.077, 0.076, and 0.075 ppm respectively. The 0.075 ppm value in 2008 was affected by an exceptional event. The 3-year average would be 0.076 ppm, a NAAQS violation. If the 0.075 ppm value for 2008 were to be excluded and if, as a result, 2008's new 4th highest value was 0.074 ppm or less, the 3-year average (after Appendix P truncation) would be 0.075 ppm, which is not a NAAQS violation. The 0.075 ppm value may be excluded under these circumstances even though it is not itself an exceedance. Furthermore, the exclusion also applies to the use of this value when calculating the 2007-2009 and 2008-2010 design values, regardless of whether such exclusion causes those design values to switch from violating to complying with the NAAQS.

For ozone, as for 24-hour $PM_{2.5}$, it is possible that an air agency could flag multiple days within one year with concentrations below the NAAQS. Excluding just one of these

concentrations may not change the annual 4th highest concentration enough to cause the 3-year design value to change from "violating" to "complying," but excluding several of them may. Also, the outcome for the design value may depend, in part, on whether exclusion is granted for some other concentrations that are above the level of the NAAQS. In such cases, the exclusion decisions should first be made for each of the flagged concentrations that are above the NAAQS. All remaining flagged concentrations (those meeting all other requirements and conditions of the Exceptional Events Rule) should then be considered in progressively larger groups ranked by concentration. That is, if excluding the highest one of the flagged concentrations below the level of the NAAQS would cause a switch in whether the 3-year design value violates the NAAQS then if the EPA determines that value is to be excluded, all others can be retained without impact. If exclusion of the two highest such concentrations causes a switch, then the EPA may focus first on whether only those are to be excluded.

PM_{10}

The only current PM_{10} NAAQS is the 24-hour NAAQS based on the expected number of exceedances over a 3-year period. Since a concentration below the level of the NAAQS would not be an exceedance and cannot affect compliance with the NAAQS in any way, a concentration below the level of the NAAQS usually cannot be excluded. However, under an EPA policy memo, for the purpose of the EPA approval of a limited maintenance plan PM_{10} values as low as 98 $\mu g/m^3$ can be concurred for exclusion when determining whether an area is eligible for a limited maintenance plan. (See May 7, 2009 memorandum from William T. Harnett to Regional Air Division Directors, http://www.epa.gov/ttn/oarpg/t1/memoranda/lmp_final_harnett.pdf). Because concentrations less than 98 $\mu g/m^3$ would appear to have little regulatory significance, the EPA discourages the flagging of such data.

Pb

The legacy 1.5 $\mu g/m^3$ and current 0.15 $\mu g/m^3$ NAAQS for lead are both based on a maximum three-month average concentration. The 1.5 $\mu g/m^3$ standard is based on the maximum quarterly average, while the 0.15 $\mu g/m^3$ NAAQS is based on the highest rolling 3-month average during a 3-year period. The EPA will not concur on the exclusion of a 24-hour concentration value that is below the level of the NAAQS, and we discourage air agencies from flagging such values.

NO_2

The EPA will not concur on the exclusion of a 1-hour NO_2 concentration that is below the level of the annual NO_2 NAAQS, and we discourage air agencies from flagging such values.

SO_2

The EPA will not concur on the exclusion of a 1-hour SO2 concentration that is below the level of the annual SO_2 NAAQS, and we discourage air agencies from flagging such values.

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

United States Environmental Protection Agency

June 2012

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Acronyms

AAQ	Affects Air Quality
ADEQ	Arizona Department of Environmental Quality
AQS	Air Quality System
BACM	Best Available Control Measures
BMP	Best Management Practice
CAA	Clean Air Act
CCR	Clear Causal Relationship
CFR	Code of Federal Regulation
CLASS	Clean Air Support System
DAQEM	Department of Air Quality and Environmental Management (Clark County, NV)
DRI	Desert Research Institute
EER	Exceptional Events Rule
EPA	Environmental Protection Agency
FEM	Federal Equivalent Method
FRM	Federal Reference Method
GIS	Geographic Information System
HAURL	Human Activity Unlikely to Recur at a particular Location
HF	Historical Fluctuations
MAG	Maricopa Association of Governments (Arizona)
MODIS	Moderate Resolution Imaging Spectroradiometer
MSM	Most Stringent Measure
nRCP	not Reasonably Controllable or Preventable
NAAQS	National Ambient Air Quality Standards
NEBF	No Exceedance But For the event
NSR	New Source Review
NWS	National Weather Service
RACM	Reasonably Available Control Measures
PM	Particulate Matter
SCAQMD	South Coast Air Quality Management District (California)
SIL	Significant Impact Level
SJV	San Joaquin Valley
SIP	State Implementation Plan
TOEM	Tapered Element Oscillating Microbalance
UNLV	University of Nevada, Las Vegas
WEG	Wind Erodibility Group
WGA	Western Governors' Association
WRAP	Western Regional Air Partnership

1. Highlights

The EPA developed this document to assist air agencies[1] in meeting the requirements of the Exceptional Events Rule[2] (EER) for high wind dust (i.e., particulate matter) events[3] and to provide example recommended elements for exceptional event demonstrations. High winds can entrain and transport particulate matter (PM) to a monitoring site. These particles can consist of both PM_{10} (i.e., particles less than 10 micrometers (µm) in diameter) and $PM_{2.5}$ (i.e., particles less than 2.5 µm in diameter). High wind dust events can include both PM_{10} and $PM_{2.5.}$

Purpose of this Document

The purpose of this document is to provide assistance and illustration to air agencies implementing the EER for high wind dust events.[4]

The EPA recognizes the limited resources of the air agencies that prepare and submit exceptional event demonstration packages and of the EPA regional offices that review these demonstration packages. One of the EPA's goals in developing this document and the other exceptional event implementation guidance[5] is to establish clear expectations to enable affected agencies to better manage resources as they prepare the documentation required under the EER. The EPA expects submitters to prepare and submit the appropriate level of supporting documentation, which will vary on a case-by-case basis using the weight-of-evidence approach. The EPA expects the resources required to prepare (and review) high wind dust exceptional event packages, and demonstrations for other event types, to decrease as we continue to identify ways to streamline the process and continue to build our database of example demonstrations and analyses. In addition, the EPA acknowledges that certain extreme exceptional event cases may require more limited demonstration packages.

To Whom does this Document Apply?

High wind dust events are typically a phenomenon experienced in the western United States where rainfall is seasonal, creating dry and dusty landscapes. Therefore, this document may be of most use to the states from the Great Plains (North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas) and west. Generally, this includes the states that comprise the Western Regional Air Partnership, which is most of EPA Regions 6, 7, 8, 9, and 10.

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[1] References to "air agencies" are meant to include state, local, and tribal air agencies responsible for implementing the EER.

[2] "Treatment of Data Influenced by Exceptional Events; Final Rule", 72 FR 13560, March 22, 2007.

[3] The term "high wind dust event" is used in this document to refer to the same type of event that was discussed as a "high wind event" in the EER. The EPA believes the term "high wind dust event" more clearly describes the referred-to event.

[4] This draft guidance document presents examples to illustrate specific points. These examples are not necessarily required for all demonstrations.

[5] Other draft exceptional event guidance documents include the following: "Draft Guidance to Implement Requirements for the Treatment of Air Quality Monitoring Data Influenced by Exceptional Events," the "Draft Exceptional Events Rule Frequently Asked Questions," and "Request for Comments on the Draft Guidance Documents on the Implementation of the Exceptional Events Rule." Additional information and examples of exceptional event submissions and best practice components can be found at the EPA's Exceptional Events website located at http://www.epa.gov/ttn/analysis/exevents.htm.

Guiding Principles for the Development of this Document

1. Air agencies should not be held accountable for exceedances due to events that were beyond their control at the time of the event.
2. It is desirable to implement reasonable controls to protect public health.[6]
3. Clear expectations will enable the EPA and other air agencies to better manage resources related to the exceptional events process.

Definition of a High Wind Dust Event

A high wind dust event includes both the high wind and the dust that the wind entrains and transports to a monitoring site. The event is not merely the occurrence of the high wind.

Elements for the Technical Demonstration of High Wind Dust Events

- Air agencies' demonstrations must address the following six technical elements under the EER before the EPA can concur on a high wind dust event demonstration:

  1. whether the event was not reasonably controllable or preventable (nRCP),
  2. whether there was a clear causal relationship (CCR),
  3. whether there would have been no exceedance or violation but for the event (NEBF),
  4. whether the event affects air quality (AAQ),
  5. whether the event was caused by human activity unlikely to recur or was a natural event (HAURL / Natural Event), and
  6. whether the event was in excess of normal historical fluctuations (HF).

If a demonstration fails to sufficiently address any one of the above, the EPA will not be able to concur with the request to exclude data under the EER.

- During the EPA's review of several high wind dust events flagged by air agencies as exceptional events, the EPA has found that the following EER elements play a significant role in air agencies' supporting documentation: nRCP, CCR, and NEBF.

- The EPA has also found for a high wind dust event that satisfying the requirements for nRCP, CCR, and HF criteria also generally satisfies the requirements for two elements identified by statute, AAQ and Natural Event.

- The EPA has not set pass/fail statistical criteria for the HF element, but will use a weight-of-evidence approach to assess each demonstration on a case-by-case basis. The air agency's role in satisfying this element is to provide analyses and statistics as recommended by the EPA in this document and conclude that the provided data show that the event was in excess of normal historical fluctuations. The EPA will review the information provided by the air agency. Events do not necessarily have to be rare to satisfy this element.

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[6] With respect to exceptional events, Section 319 of the Clean Air Act states the following guiding principles (among others);

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

***

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

- While not listed as a technical element required by the EER, wind data (e.g., wind speed and direction) will generally play a vital role in informing the EPA's decision on elements such as whether the event was not reasonably controllable or preventable and establishing a clear causal relationship.

Not Reasonably Controllable or Preventable

- Exceedances caused in whole or in part by anthropogenic dust sources within the air agency's control are unlikely to be eligible for treatment as exceptional events under the EER, even under conditions of elevated winds, unless the air agency shows that the event, including the emissions from the anthropogenic dust sources, was not reasonably controllable or preventable. The EPA intends to evaluate whether an event was not reasonably controllable or preventable at the time of the event by taking into account the wind speed; the controls in place; the controls required in the State Implementation Plan (SIP), which depends on an area's attainment status; the frequency and severity of exceedances; contributing sources; benefits of the controls; costs of controls; and other factors.

- The EPA also judges the reasonableness of controls based on the technical information that was available to the air agency at the time the event occurred. The EPA generally expects air agencies to already have the technical information needed to reasonably control sources within nonattainment areas.

- The degree of event-specific information and data necessary for demonstrating "not reasonably controllable or preventable" will generally be less for sustained wind speeds at or above the high wind threshold and greater for speeds below that the threshold. The high wind threshold is the minimum threshold wind speed capable of overwhelming reasonable controls on anthropogenic sources (i.e., significant emissions from controlled sources) or causing emissions from natural undisturbed areas. The EPA recommends that air agencies establish area-specific high wind thresholds based on local or applicable conditions and information. If an agency is unable to develop an area-specific high wind threshold, the EPA will accept a threshold of a sustained wind of 25 mph for areas in the West provided the agencies submit evidence of this as the level at which they expect stable surfaces (i.e., controlled anthropogenic and undisturbed natural surfaces) to be overwhelmed. In identifying a high wind threshold, the EPA does NOT intend to set a bright line as to what speed constitutes a high wind dust event or to categorically concur with all events with sustained winds above a given threshold.

- An air agency has the option of submitting a prospective controls analysis in advance or with a demonstration package. Described in more detail in Section 3.7.1, a prospective controls analysis is a generic[7] review of an area's existing windblown dust controls and high wind threshold. In the prospective controls analysis, the air agency would provide information on attainment status, identify natural and anthropogenic windblown dust sources and emissions, provide the status of SIP submittals (if applicable), and identify the high wind threshold up to which the collective windblown dust controls are expected to be effective. Once the EPA approves the prospective controls analysis, an air agency's subsequent high wind exceptional event packages could reference the approved set of controls in the prospective controls

[7] "Generic" means a general review rather than a review specific to an identified event.

analysis and show that the wind speed for the event in question is at or above the high wind threshold established in the prospective controls analysis. Air agencies would also include in their demonstration some positive showing that control requirements were being met on the day in question. An EPA-approved prospective controls analysis would generally be effective for a minimum of three years.

- The EPA and the submitting air agency may also consider developing a voluntary High Wind Action Plan. Air agencies can develop High Wind Action Plans to document their plans to implement needed controls on newly-identified sources that could emit dust during subsequent high wind events. A High Wind Action Plan is an optional mechanism to implement necessary controls more expeditiously than with the normal regulatory planning process. Preparation of such a plan and its approval by the EPA could promote a common understanding between the air agency and the EPA about whether subsequent high wind dust events are not reasonably controllable or preventable.

<u>Clear Causal Relationship</u>
As described in Section 3.3, air agencies can use the following example analyses to establish a clear causal relationship:
- analyses showing that the event in fact occurred and that emissions were transported in the direction of the monitors where measurements were recorded
- the size of the area affected by the emissions
- comparison to non-event days
- the spatial and temporal relationship between the event, transport of emissions, and recorded concentrations

<u>No Exceedance But For the Event</u>
The NEBF demonstration may be relatively straightforward for areas with typical concentrations on non-event days well below the applicable National Ambient Air Quality Standards (NAAQS). However, demonstrating NEBF becomes increasingly difficult if concentrations on non-event days during the same season exceed the standard and/or if the contribution of non-event pollution sources produce concentrations near the applicable NAAQS.

Disclaimer
The Exceptional Events Rule is the source of the regulatory requirements for exceptional events and exceptional event demonstrations. This document provides guidance and illustrations of events for the Exceptional Events Rule rather than imposing any new requirements. Further, any determination that an event is exceptional made on the basis of this guidance will need the facts in the documentation to support the decision.

2. Overview of Exceptional Events Rule

The EER and the preamble describe specific criteria for an event to be considered an "exceptional event" for purposes of exclusion of air quality data from regulatory decisions and acknowledge that "natural events" can be recurring.

2.1 Definition of the "Event" for High Wind Dust Events

In high wind dust events, the meteorological phenomenon (i.e., wind) is purely natural but the pollution from the event may be a mixture of natural sources (e.g., undisturbed soil) and anthropogenic sources (e.g., soil disturbed by human activity, emissions from sand and gravel facilities, etc.). The EPA classifies high wind dust events as "natural events" in cases where windblown dust is entirely from natural sources or where all significant anthropogenic sources of windblown dust have been reasonably controlled.[8] This long-standing policy of considering both the wind and the dust as part of the event was established in the Natural Events Policy where high winds were defined as:

> "Ambient PM-10 concentrations due to dust raised by unusually high winds will be treated as due to uncontrollable natural events under the following conditions: (1) the dust originated from nonanthropogenic sources, or (2) the dust originated from anthropogenic sources controlled with best available control measures (BACM)."[9]

A high wind dust event is defined as the combination of high wind and uncontrollable dust emissions. Uncontrollable windblown dust emissions only occur in the presence of high wind. Therefore, for exceptional events purposes, it is necessary to consider both the emissions and the corresponding high wind as the "event."

2.2 Evidence Necessary to Support Exceptional Events Requests

The EPA promulgated the Exceptional Events Rule in 2007, pursuant to the 2005 amendment[10] of Clean Air Act (CAA) Section 319. The EER added 40 CFR §50.1(j), (k) and (l); §50.14; and §51.930 to the Code of Federal Regulations. These sections contain definitions, criteria for EPA approval, procedural requirements, and requirements for air agency demonstrations, all of which

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[8] Human activity would be considered to have played little or no *direct* causal role in causing emissions of the dust by high wind if contributing anthropogenic sources of the dust are reasonably controlled, regardless of the amount of dust coming from these reasonably controlled anthropogenic sources, and thus the event would be considered a natural event. If anthropogenic sources of windblown dust that are reasonably controllable but that did not have those reasonable controls applied at the time of the high wind event have contributed significantly to a measured concentration, the event would not be considered a natural event.

[9] "Areas Affected by PM10 Natural Events" (the PM10 Natural Events Policy), memorandum from Mary D. Nichols, Assistant Administrator for Air and Radiation, to EPA Regional Offices, May 30, 1996. The EPA intended to uphold the principle that windblown emissions from controlled sources would be considered natural, however, due to a technical drafting error, the language in the section of the EER preamble titled "*B. High Wind Events*" beginning on 72 FR at 13576 was ruled legally null in *NRDC v. EPA, No. 07-1151* (D.C. Cir. 3/20/09).

[10] Safe, Accountable, Flexible, Efficient Transportation Equity Act: a Legacy for Users (SAFETEA-LU), section 6013 amending CAA §319, became law August 10, 2005; available at http://thomas.loc.gov/cgi-bin/query/z?c109:H.R.3:

must be met before the EPA can concur under the EER on the exclusion of air quality data from regulatory decisions.

The definition of an exceptional event given in 40 CFR §50.1(j) parallels the statutory definition of Section 319 of the CAA and itself contains certain criteria for approval by the EPA:

- The event "affects air quality."
- The event "is not reasonably controllable or preventable."
- The event is "caused by human activity that is unlikely to recur at a particular location or [is] a natural event."[11]

Additional criteria for the EPA approval to exclude data affected by a high wind dust event are given (with some repetition of key phrases) in 40 CFR §50.14(a) and (b)(1).[12] Under these provisions the air agency must:

- "demonstrat[e] to EPA's satisfaction that such event caused a specific air pollution concentration at a particular air quality monitoring location."
- "demonstrate a clear causal relationship between the measured exceedance or violation of such standard and the event …"
- "demonstrat[e] 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 [regarding schedules, procedures and submission of demonstrations]."

Under 40 CFR §50.14(c)(3)(iv),[13] the air agency demonstration to justify exclusion of data must provide evidence that:

A. "The event satisfies the criteria set forth in 40 CFR §50.1(j)" for the definition of an exceptional event (see above);

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".

The definition of an exceptional event provided in 40 CFR § 50.1(j) explicitly excludes "stagnation of air masses or meteorological inversions, a meteorological event involving high temperatures or lack of precipitation, or pollution relating to source noncompliance."[14] Exceedances due to these events would not be eligible for exclusion under the EER. For

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[11] A natural event is further described in 40 CFR 50.1(k) as "an event in which human activity plays little or no direct causal role."
[12] §50.14 (b)(2) and (b)(3) contain criteria relevant only to firework events and prescribed fire events.
[13] Prior to the publishing of the 2010 CFR the citation was §50.14(c)(3)(iii)
[14] For further explanation see "Treatment of Data Influenced by Exceptional Events; Final Rule," 72 FR at 13577, (March 22, 2007).

example, if sources out of compliance with fugitive dust or other rules contributed significantly to an exceedance, then the exceedance would not be excluded as due to an exceptional event.

2.3 Mitigation Requirement

40 CFR §51 Subpart Y includes mitigation requirements at 51.930. While the EER does not require that mitigation measures be submitted to the EPA as part of the demonstration package (or otherwise), it is nonetheless a requirement of Subpart Y that "[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." The mitigation requirement is addressed in Section 4 of this document.

2.4 Process Requirements per EER

In addition to technical demonstration requirements, the EER specifies the process an air agency must follow to request data exclusion:

- "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 which has been submitted to the AQS database." 40 CFR § 50.14(c)(2)(i).

- "The placement of the flags and the submittal of an initial event description must be done not later than July 1st of the calendar year following the year in which the flagged measurement occurred." 40 CFR § 50.14(c)(2)(iii).

- "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." 40 CFR § (50.14(c)(3)(i)).

- With the submission of the demonstration, the air agency "must document that the public comment process was followed." 40 CFR § (50.14(c)(3)(iv)).

3. Evidence to be Included in a High Wind Dust Event Demonstration Package

As discussed in Section 2.2, the EER identifies technical elements (i.e., criteria or evidence) that an air agency must address and demonstrate before the EPA can concur that an exceedance is due to an exceptional event. Table 1 shows the complete list of technical elements air agencies must submit and satisfy as part of a demonstration for high wind dust events. The EPA cannot concur on an air agency's request to exclude data under the EER if the air agency has failed to satisfy any of the criteria.

Table 1. EER Technical Demonstration Elements Required by the EER for High Wind Dust Events

Element	Abbreviation	Section of this Document Containing Additional Explanation
affects air quality*	AAQ	3.4
not reasonably controllable or preventable	nRCP	3.1
caused by human activity unlikely to recur at a particular location OR a natural event[15]*	HAURL / Natural Event	3.5
clear causal relationship between the measurement and the event	CCR	3.3
no exceedance or violation but for the event	NEBF	3.6
the event is associated with a measured concentration in excess of normal historical fluctuations, including background	HF	3.2

*These elements are typically met when the other elements have been satisfied.

The EPA uses a "weight-of-evidence" approach in reviewing air agency requests for data exclusion under the EER. Evidence and narrative that constitute a strong demonstration for one element can also be part of the demonstration for another element, but cannot make up for the absence or failure to satisfy another element. Although a strong demonstration on one element should not compensate for a failure of another, the strength of the demonstration for one requirement could influence the persuasiveness of evidence used for another.

In reviewing the supporting documentation in several high wind dust event demonstrations, the EPA has found the following EER elements play a significant role: nRCP, CCR, and NEBF. The criterion that the event be in excess of normal historical fluctuations (HF) is a technical element that the EPA expects to be satisfied by the submittal of data as outlined in Section 3.2. In addition to satisfying the HF criterion, these data are expected to inform the CCR and NEBF demonstrations.

[15] High wind dust events are considered natural events if sources are entirely natural or if contributing anthropogenic sources are reasonably controlled and therefore it is not relevant to consider whether the event was caused by human activity unlikely to recur.

The EPA has generally found that two elements identified by statute, AAQ[16] and Natural Event, are necessarily also satisfied for a high wind dust event if the other elements are satisfied. Air agencies can typically meet these criteria by satisfying the requirements for nRCP, CCR, and HF. While not identified as a separate demonstration element in Table 1, wind data (e.g., wind speed and direction) is vital in informing the EPA's decision regarding "not reasonably controllable or preventable" and "clear causal relationship."

Finally, the EPA recommends that air agencies begin their technical demonstration for a high wind dust event with a conceptual model of how the event occurred. An air agency's conceptual model can use text and/or schematics to identify and describe the relationship between various phenomena (e.g., weather and dust emissions) that caused an exceedance. In its simplest form, the conceptual model could be a narrative description of how the event unfolded and resulted in the exceedance(s). The conceptual model will be similar to a report abstract and should help tie the various rule criteria together into a cohesive explanation of the event.

Sections 3.1-3.6 of this document describe and clarify each element identified in Table 1. Section 6 provides example analyses and a recommended structure for the preparation of demonstration packages for high wind dust events.

In summary, the technical demonstration for a high wind dust event package should include the following technical elements:

- Not Reasonably Controllable or Preventable - Analyses and descriptions should show that the event was not reasonably controllable or preventable. Required by EER.

- Clear Causal Relationship - Analyses and descriptions should show that there was a clear causal relationship between the ambient concentration measurement under consideration and the event that is claimed to have affected the air quality in the area. Required by EER.

- No Exceedance But For the Event - Analyses and descriptions should show that there would have been no exceedance or violation but for the event. Required by EER.

- Affects Air Quality - Statutory technical element that is generally satisfied once the submitter provides historical fluctuations analyses (HF), establishes a clear causal relationship (CCR), and provides explicit information indicating satisfaction of requirement through clear causal and historical fluctuations showings. Required by EER.

- Natural Event - Statutory technical element that is generally satisfied once the submitter shows the event to be not reasonably controllable or preventable (nRCP), establishes a clear causal relationship (CCR), and provides information demonstrating these requirements have been met. Required by EER.

[16] The preamble to the EER clarifies the AAQ criteria in section V.B. (p. 13569) by stating that the following criteria establish that the event affected air quality: "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" and "the event is associated with an unusual measured concentration beyond typical fluctuations including background." On this basis AAQ is satisfied once CCR has been demonstrated and evidence for HF has been provided.

- Historical Fluctuations – Air agencies should provide analyses and descriptions in the format suggested in this document. The EPA will review this information in a weight-of-evidence showing. Required by EER.

- Wind Data - Data on wind speed and direction support the technical elements required by the EER such as CCR and nRCP.

- Conceptual Model - Narrative summary at the beginning of a demonstration package describing how the event unfolded to produce elevated PM at the monitor(s) that recorded the exceedance(s) and providing context for the supporting elements.

3.1 Not Reasonably Controllable or Preventable (nRCP)

Exceedances caused in whole or in part by anthropogenic dust sources within the air agency's control are unlikely to be eligible for treatment as exceptional events under the EER, even under conditions of high winds, unless the air agency shows that the event (i.e., dust entrained by high winds) was not reasonably controllable or preventable. The EPA evaluates whether an event was not reasonably controllable or preventable at the time of the event by taking into account controls in place and wind speed, along with other factors.[17] The factors and approach identified in this section should assist air agencies in developing adequate high wind dust exceptional event demonstration packages and promote consistency. The EPA will consider each package on a case-by-case basis per the EER.

3.1.1 Controls on Natural versus Anthropogenic Sources

According to the definition of an exceptional event, the event must be "not reasonably controllable or preventable" (40 CFR § 50.1(j)). For *natural* sources of dust, a high wind dust event can generally be considered to be not reasonably controllable or preventable[18], if winds are high enough to cause emissions from natural undisturbed areas. For *anthropogenic* sources of dust, a high wind dust event is also eligible to be considered to be not reasonably controllable or preventable if:

1. The anthropogenic sources of dust have reasonable controls in place.
2. The reasonable controls have been effectively implemented and enforced.
3. The wind speed was high enough to overwhelm the reasonable controls.

Reasonable controls on anthropogenic sources (item 1 on the list above) are fundamental to the event being not reasonably controllable or preventable. An event with both anthropogenic and natural components can be considered a "natural" event if the anthropogenic component is reasonably controlled. Air agencies must also demonstrate that natural events are reasonably controlled by showing that no additional controls are reasonable for the event. Additionally, "reasonable controls" refers to a collection of reasonably controlled sources. The term "not

[17]See SJV Attainment Affirmation, 73 FR73 14691, for a prior high wind dust event in which the EPA considered controls and wind speed, along with other factors.
[18] The EPA expects that in most cases it would not be reasonable to have controls on natural sources but this will be evaluated for each event.

reasonably controllable or preventable" refers to the *event* (i.e., dust entrained by high winds), rather than to any particular source. Further, in determining whether the event is not reasonably controllable or preventable, the EPA will consider whether the **collection** of anthropogenic sources has been reasonably controlled. For anthropogenic sources, it is the high wind overwhelming the collection of reasonable controls, that have been effectively implemented and enforced, that make the event not reasonably controllable or preventable.

For purposes of evaluating high wind dust exceptional events in the West, the EPA will generally use the definitions of natural and anthropogenic windblown dust emissions that have been developed in the *Western Regional Air Partnership (WRAP) Fugitive Dust Handbook*.[19] According to the *WRAP Fugitive Dust Handbook*, all mechanically suspended dust from human activities should be considered anthropogenic emissions, while windblown dust from lands not disturbed or altered by human activity should be considered natural emissions. Furthermore, windblown dust from surfaces that have been significantly disturbed or altered by humans should be categorized as anthropogenic emissions. Such surfaces may include: undeveloped lands[20], construction and mining sites, material storage piles, landfills, vacant lots, agricultural lands, roadways, parking lots, artificially exposed beds of natural lakes and rivers, exposed beds of artificial water bodies, areas subject to off-road vehicle activity, and areas burned by prescribed or other human-ignited fires. Natural sources may include: naturally-dry river and lake beds; barren lands; sand dunes; exposed rock; sea spray from natural water bodies; non-agricultural grass, range, and forest lands; areas burned by wildfires; and glacial silt.

The EPA generally considers dust entrained by high wind from undisturbed land (e.g., undisturbed desert) to be not reasonably controllable or preventable, because of the likely disturbance to natural ecosystems and the cost of treating large land areas. The EPA also generally considers that windblown dust from previously disturbed land that is being allowed to fully return to natural conditions by effective prevention of any new disturbance is also not reasonably controllable or preventable, provided that there are no reasonable active measures that could be taken to control dust during the transition back to natural conditions.[21] While emissions from most other natural sources of windblown dust could be similarly not reasonably controllable, the EPA will consider those on a case-by-case basis. In areas where events recur, the EPA may request increased characterization of the natural sources (e.g., historical surface disturbance, water diversions, vegetation changes, etc.).

While the EPA generally does not expect controls on emissions from natural sources (e.g., undisturbed land) for an event to be not reasonably controllable or preventable, the EPA does expect reasonable controls to be in place on the windblown anthropogenic contribution to the concentration measured during the event. Experience in several areas in the western United States has shown that it is practical and reasonable to apply dust-suppression controls to disturbed lands and other anthropogenic dust sources, and that these controls help limit ambient concentrations of PM during high wind dust events, up to certain wind speeds. For example, many areas in the west have successfully controlled dust with measures such as water or chemical stabilization of disturbed areas such as construction zones, or limiting disturbance

[19] *WRAP Fugitive Dust Handbook*, Prepared for Western Governors' Association, Countess Environmental (WGA Contract No. 30204-111), September 7, 2006. Available at http://www.wrapair.org/forums/dejf/fdh/index.html
[20] Undeveloped lands refer to those that are disturbed for purposes of development but not yet developed.
[21] An example of such a measure might be the restoration of all or part of natural surface water flows.

activities on windy days. If reasonable controls on windblown anthropogenic sources were in place, then the event would be considered "not reasonably controllable or preventable" and would satisfy the nRCP element of the definition of an exceptional event. That is, an air agency can generally meet the nRCP element for high wind events by identifying the contributing anthropogenic sources of windblown dust for a particular event and showing that reasonable controls were in place, effectively implemented, and enforced (as appropriate). The prior preparation of and EPA approval of a prospective controls analysis or high wind action plan (see Sections 3.7.1 and 3.7.2) addressing all the anthropogenic sources that might contribute during wind events can alleviate the need for this showing in each event case. For each event with windblown anthropogenic contributions, it will be important for an air agency to explicitly show that the exceedance occurred despite the implementation of those reasonable controls (i.e., to show that wind speeds were high enough to overwhelm the reasonable controls). The prior establishment of a high wind threshold (see Section 3.1.4 below) can make this showing less resource intensive per event. The EPA will evaluate the reasonableness of controls based on the controls that should have been in place given the information the air agency had when the event occurred (see Section 3.1.2 for factors that the EPA will consider in determining the reasonableness of the controls). The level of rigor required to demonstrate that reasonable controls were in place, implemented/enforced, and overwhelmed by high winds, will depend upon the wind speed of the event relative to the high wind threshold if one has been established (see Section 3.1.4 and 3.1.5).

Typically, measured ambient air concentrations during an event will include some contribution from natural or anthropogenic sources whose emissions are not affected by high wind, for example transportation and industrial point sources: these are considered non-event sources. Non-event sources are not subject to the nRCP requirement of the EER, but an air agency may apply full-time or event-dependent controls on such sources as part of its attainment/maintenance SIP or as part of meeting the mitigation requirement under 40 CFR §51.930.

3.1.2 Factors Considered in Determining the Reasonableness of Controls

This section describes an approach for determining the reasonableness of the controls in place. Among other factors to consider, reasonableness needs to be judged in light of the technical information available to the air agency at the time the event occurred. The EPA would consider air agencies experiencing the following scenarios and/or with the following technical information to have had technical information indicating the need for high wind dust controls:

- More than one expected exceedance per year from high wind dust
- Exceedances due to windblown dust when the sustained wind speed is less than the high wind threshold (or default) for the area
- Requirement for high wind dust BACM resulting from either nonattainment status or previous Natural Events Action Plan (NEAP)[22]

[22] On May 30, 1996, Mary D. Nichols, Assistant Administrator for Air and Radiation issued a memorandum to EPA regional offices entitled, "Areas Affected by PM_{10} Natural Events." The policy, known as the PM_{10} Natural Events Policy, or simply the Natural Events Policy, set forth procedures for protecting public health through the development of a Natural Events Action Plan, which implements Best Available Control Measures (BACM) for human-generated particulate emissions in areas that could violate the PM_{10} NAAQS due to natural events. Promulgation of the Exceptional Events Rule superseded the Natural Events Policy.

- Formal communication from the EPA indicating the need for high wind dust controls
- Promulgation of new/revised Federal rules that would require controls on particular sources

The EPA does not expect high wind dust controls in areas with no history of high wind dust exceedances.

The set of control requirements mandated by the area's designation status is the primary factor used in evaluating reasonableness (see Section 3.1.2.2 for additional detail). Table 2 shows example factors that the submitter and the EPA may consider when assessing the reasonableness of controls as part of the nRCP criterion. Table 2 is not intended to be all-inclusive or quantitative.

Table 2. Example Factors Considered In Determining the Reasonableness of Controls.

"Reasonableness" Factor	**Description of "Reasonableness" Factor**
1. Control requirements based on area attainment status	The reasonableness of the controls depends upon historical concentrations and designation status.
2. Frequency and severity of past exceedances	More stringent controls may be reasonable if an area experiences frequent[23] and/or severe[24] exceptional event exceedances due to high winds than if the area has experienced only non-recurring[25] and/or mild isolated exceedances.[26]
3. Ease and effectiveness of control implementation	The EPA may consider cost-effective and readily deployable controls more reasonable.
4. Use of measures that are in widespread use	Controls that are considered "standard practices" and/or measures in widespread use for dust control in other areas would be considered more reasonable.
5. Jurisdiction	The EPA expects air agency demonstration submittals to address the status of control measures for interstate and international transport. However, the EPA also expects that air agency demonstrations can generally satisfy the "not reasonably controllable or preventable" criterion with less detailed characterization of sources in the upwind state or country than of sources in the same state as the affected monitor.[27]

[23] Frequent is enough exceedances from high wind dust events to cause of violation of the NAAQS.
[24] A severe exceedance could be a 24-hour average PM10 concentration > 250 $\mu g/m^3$.
[25] Non-recurring is fewer than one high wind dust event per year
[26] A mild isolated exceedance could be, for example, an exceedance at one site close to the standard.
[27] Considering the sovereignty issues associated with interstate and international transport, the EPA believes that "reasonable control" showings can rely on the concept that it is not reasonable to expect the downwind state (i.e., the state submitting the demonstration) to have convinced the upwind country or state to have implemented controls on sources sufficient to limit event-related air concentrations in the downwind state. As with any demonstration submittal, the submitting (downwind) state should sufficiently identify all natural and anthropogenic contributing sources of emissions (both in-state and out-of-state) to show the causal connection between an event and the affected air concentration values. A submitting state may provide a less detailed characterization of sources in the upwind state or country than of sources within its jurisdiction. After completing the source characterization, the submitting state should assess whether emissions from sources within its jurisdiction (i.e., in-state sources) were not reasonably controllable or preventable. Although the submitting state should also provide available information on the status of

Table 2. Example Factors Considered In Determining the Reasonableness of Controls.

"Reasonableness" Factor	**Description of "Reasonableness" Factor**
6. Controls on primary sources expected to have contributed to the event	Were primary sources of anthropogenic windblown dust controlled during the event?
7. Significant contribution of sources to the exceedance	There is no defined *de minimis* emission rate or ambient contribution that limits which sources should be considered for control, and the EPA will review this on a case-by-case basis. However, as a starting point, we believe it is generally reasonable to consider source categories that may contribute 5 µg/m^3 or more to an exceedance of the 150 µg 24-hour PM_{10} standard.[28] In some cases (i.e., wind speeds above the high wind threshold) it may not be necessary to consider sources down to 5 µg, while in other situations it may be appropriate to consider sources below 5 µg. This starting point may be revisited should the PM_{10} NAAQS be revised. *De minimis* levels for $PM_{2.5}$ have not been clearly established.
8. Overall benefit of controls	There may be benefits to controlling even small anthropogenic sources. Reducing ambient concentrations may have a public health benefit.

3.1.2.2 Consideration of attainment status in judging reasonableness

In order for the anthropogenic sources to be considered to be reasonably controlled, the EPA expects, at a minimum, that it is reasonable for an air agency to have the controls required for an area's attainment status. Generally, the EPA does not expect areas classified as attainment, unclassifiable, or maintenance for a NAAQS to have the same level of controls as areas that are nonattainment for the same NAAQS. Also, if an area has been recently designated to nonattainment but has not yet been required to implement controls, the EPA will expect the level of controls that is appropriate for the planning stage.

3.1.2.3 Consideration of BACM/RACM

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control measures for emissions from out-of-state sources, the submitting state may determine based on available information that the implemented controls on out-of state sources constitute reasonable controls and that the "not reasonably controllable or preventable" criterion is satisfied. When assessing emissions transported from other states or countries, the submitting state can say that it characterized the out of state sources, determined that these sources contributed to the noted exceedance or violation, and determined, based on jurisdictional boundaries and other available information, that contributing emissions from the upwind state or country were not reasonably controllable or preventable. Submitting states are further required to submit evidence/statements supporting the other exceptional event criteria (i.e., clear causal relationship, but for, human activity unlikely to recur or a natural event, affects air quality, and historical fluctuations). The EPA refers the reader to Question 23 in the "Draft Exceptional Events Rule Frequently Asked Questions" for additional information on this topic.

[28] 5µg is the "significant impact level" (SIL) used in NSR permitting to decide whether an individual source has a significant contribution to a 24-hr PM_{10} NAAQS violation, based on 40 CFR 51.165(b)(2), and so is used here for a similar use.

Although Reasonably Available Control Measures (RACM) and Best Available Control Measures (BACM) for windblown dust are not necessarily required to have been in place at the time of the event for all areas, they are measures that the EPA and affected agencies have identified as being reasonable. The CAA requires BACM for serious PM_{10} nonattainment areas and RACM in moderate PM_{10} nonattainment areas; therefore, for such areas, the EPA, at a minimum, will use the local list of BACM or RACM measures (as applicable) as a reference point to review the reasonableness of controls. The control measures evaluated must be related to windblown dust. Having BACM/RACM in place during the time of the event is an important consideration, but may not be sufficient on its own (e.g., the BACM/RACM measures may not be related to windblown dust, they may not be sufficient by themselves particularly if the SIP has not been recently reviewed or revised), or if it focuses on air quality issues during specific periods without high winds (such as winter stagnation events). Generally, the EPA will consider windblown dust BACM to constitute reasonably controls if they have been reviewed and approved in the context of a SIP revision for the emission source area within the past three years. In some cases, a lower level of control could be reasonable, while in other cases it could be reasonable to require controls more stringent than current BACM or RACM, for example, if a new significant source is identified. Other areas (i.e., attainment, maintenance, or unclassified areas) are not required to have put BACM in place and also may not have implemented RACM. In these cases, the EPA may use local RACM measures, where available, along with other RACM measures that may be appropriate for the location and source categories, as the reference point. RACM/BACM lists may be **a reference point, but not the sole means,** by which the EPA assesses the reasonableness of controls. If an air agency believes that RACM/BACM should not be used by the EPA as the reference point to judge the reasonableness of controls, the air agency should include this justification in the demonstration package.

In addition to BACM/RACM, the U.S. Department of Agriculture's Natural Resources Conservation Service develops best management practices (under various program titles), some of which are designed to effectively reduce fugitive dust air emissions and prevent loss of soil during high winds, which may also be informative and useful controls in particular situations. These best management practices are not intended to be a surrogate for BACM/RACM but could be included in the collection of control measures.

3.1.3 Implementation and Enforcement of High Wind Dust Control Measures

As stated in Section 3.1.1, the second condition the EPA will consider in its determination of whether the event meets the nRCP criterion is implementation and enforcement (where appropriate) of control measures on contributing sources of dust. In their demonstration submittals, air agencies should submit available inspection reports and/or notices of violations (NOVs) in upwind areas as evidence that all reasonable controls were implemented and functioning properly at the time of the event.[29] The EPA recognizes that records may not be

[29] The EPA recognizes that agencies have varied methods of permitting and enforcement and does not expect all agencies to have these records for all events. The EPA does, however, expect agencies to make a general showing that controls are being enforced to a reasonable degree (not necessarily on the particular day of the event); if several categories of anthropogenic sources are identified as significant or likely contributors to an event, the means used to determine compliance with reasonable control requirements for each category should be described in the demonstration.

available for all events. Cases where relevant control measures were not being fully implemented or properly enforced, but reasonably could and should have been, are unlikely be eligible for data exclusion under the Exceptional Events Rule.

3.1.4 Consideration of Wind Speed

The third condition stated in Section 3.1.1 for the EPA to consider for the nRCP criteria for an event with anthropogenic sources is whether the wind speed was high enough to overcome reasonable controls. In all cases (i.e., those including natural and/or anthropogenic sources) wind speed informs the rigor of the nRCP analysis. It is important to note that the EPA is not setting a bright line as to what speed constitutes a high wind dust event or to categorically concur with all events with sustained winds above a given level. This section describes how the EPA will use wind speed in its evaluation of the nRCP criterion.

Typically, undisturbed desert landscapes in the west have a natural crust that protects the surface and tends to prevent windblown dust emissions. Similarly, many reasonably-controlled anthropogenic sources (e.g., disturbed surfaces) employ techniques that stabilize surfaces to reduce or prevent emissions since disturbed surfaces are a primary source of anthropogenic dust. Numerous studies have been conducted to determine the minimum wind speed capable of overwhelming reasonable controls on anthropogenic sources or causing emissions from natural undisturbed areas. The speed at which this occurs varies by location, depending on characteristics of the local landscape (e.g., soil type) and controls (See Appendix A). The EPA recommends that agencies develop a high wind threshold for each area experiencing high wind dust events (see Appendix A3 for additional information on the development of a high wind threshold). Appropriate area-specific thresholds would consider local conditions and the variation in control strategies and specify a minimum wind speed above which these controls would be overwhelmed. If nonanthropogenic sources are a significant source of emissions for a particular area, a high wind threshold may also be based on the level of wind speed capable of causing emissions from those specific natural undisturbed areas. This approach is consistent with the Natural Events Policy where the EPA required the air agencies to define the conditions in which BACM level controls were overwhelmed. The area-specific high wind threshold should be representative of conditions (i.e., sustained wind speeds[30]) that are capable of overwhelming reasonable controls (whether BACM, RACM, or other) on anthropogenic sources and/or causing emissions from natural undisturbed areas. The threshold is not intended to represent the minimum wind speed at which *any* level of emissions could occur (e.g., aerodynamic entrainment), but rather when significant emissions begin due to reasonable controls or natural undisturbed areas becoming overwhelmed. The high wind threshold can be submitted in advance of submittal of the demonstration package, with a letter of intent, with a demonstration package, as part of a prospective controls analysis, or as part of a High Wind Action Plan. If an agency is unable to develop an area-specific high wind threshold, the EPA will accept a threshold of a sustained wind of 25 mph for areas in the west provided the agencies support this as the level at which they expect stable surfaces (i.e., controlled anthropogenic and undisturbed natural surfaces) to be overwhelmed.[31] If the EPA has specific information based on relevant studies to choose an alternative high wind threshold, the EPA will notify the air agency once this

[30] See Section 6.2.2.2 for details on the calculation of sustained wind speed.
[31] The 25 mph threshold is based on studies conducted on natural surfaces.

information has been submitted. Throughout this document, the term "high wind threshold" will be used to define the minimum threshold wind speed capable of overwhelming reasonable controls on anthropogenic sources (i.e., significant emissions from controlled sources) or causing emissions from natural undisturbed areas.

If a demonstration can show that the sustained wind speed was at or above the high wind threshold at or proximately upwind of the location of the exceedance, then two streamlined approaches are available to meet the nRCP criterion:

1. Rely on an already-approved prospective controls analysis. A set of controls for an area could be approved with the high wind threshold in advance of submittal of a package for a specific event (see Section 3.7.1). Once the prospective controls analysis was approved, additional information on controls for specific packages would typically be limited to information on enforcement and implementation.
2. Conduct a basic controls analysis. Minimal amounts of information on sources and controls would be required for each event (see Section 3.1.5 and 3.1.5.1).

If the sustained wind speed for an event was below the high wind threshold, the EPA can still review the package and possibly concur provided the air agency submits additional controls information as described in the comprehensive controls analysis (See section 3.1.5 and 3.1.5.2).

The EPA believes that streamlined information (i.e., a pre-approved prospective controls analysis or a basic controls analysis) is sufficient when wind speeds are at or above the high wind threshold because, in this situation, controls to prevent windblown dust are likely to become overwhelmed. Thus, the event is more likely to be not reasonably controllable or preventable. If most controls on wind-blown dust become overwhelmed at or above the high wind threshold, air agencies would likely find it difficult to identify additional reasonable controls that could be put into place to reduce windblown dust.

In contrast, if the wind speeds associated with the event are below the threshold levels required to initiate dust emissions from natural or stable (i.e., reasonably-controlled) sources, the EPA is likely to require that air agencies submit more detailed information (i.e., a comprehensive controls analysis) to satisfy the nRCP requirement. The EPA believes air agencies should submit a comprehensive controls analysis when wind speeds are below the high wind threshold because events with wind speeds below this threshold should entrain very little dust from natural and reasonably-controlled disturbed surfaces. Further, the EPA expects that windblown emissions would include significant contributions from sources that are neither natural nor reasonably-controlled. Thus, the event is less likely to be not reasonably controllable or preventable. In these cases it is important for air agencies to identify the various land areas contributing to the event, evaluate the controls in place on those land areas, and determine whether those controls were reasonable based on those factors identified in Section 3.1.2.

3.1.5 Controls Analysis for Individual Events

Air agency demonstration submittals need a controls analysis for each specific high wind dust event. The extent of the controls analysis should primarily depend upon the level of the wind speed relative to that of the high wind threshold for the area. A basic controls analysis may be

sufficient for cases when the sustained wind speed at the source area[32] is greater than or equal to the high wind threshold, while a comprehensive controls analysis may be necessary when sustained wind speeds are below the high wind threshold (Table 3). If an air agency has not prospectively determined the high wind threshold for the area, then this determination, or establishing that the default threshold of 25 mph applies, is the first step in the controls analysis.[33] Next, the EPA recommends that air agencies develop their nRCP analysis to evaluate the sustained wind speed during the event. This process may indicate that only the streamlined basic controls analysis is needed. See Section 6.3.2.2 for wind speed considerations for nRCP.

Table 3. Summary of Recommended Controls Analysis Elements for not Reasonably Controllable or Preventable Demonstration

Control Analysis Elements	Basic Controls Analysis	Comprehensive Controls Analysis
Description of anthropogenic sources within the area and existing controls	X	X
Description of natural sources within the area and existing controls	X	X
Statement regarding reasonableness of controls	X	X
Explanation that emissions occurred despite controls	X	X
Identification and implementation status of controls previously recommended by the EPA as reasonable, if applicable	X	X
Evidence of effective implementation and enforcement of reasonable controls, if applicable	X	X
Back trajectories of source area		X
Source apportionment		X
Source-specific emissions inventories		X

3.1.5.1 Basic controls analysis

The most basic controls analysis would include a brief description of local/upwind sources that were suspected to significantly contribute to the event and a description of the controls on the anthropogenic sources in place at the time of the event (e.g., local BACM measures). The EPA also expects evidence that the controls determined to be reasonable, if any, were effectively implemented and appropriately enforced. For the sources identified, the analysis should explain how significant dust emissions occurred despite having reasonable controls in place (e.g., that controls were overwhelmed by high wind). In addition to identifying controls on anthropogenic sources, it is important that the analysis indicate whether the natural sources could have been

[32] Cases where dust was entrained by sustained winds at or above the high wind threshold upwind of the monitor and subsequently transported at lower wind speeds to the monitor could still qualify for the basic controls analysis category as long as the state shows that sustained winds were at or above the high wind threshold in the expected source area. Cases of long-range transport (e.g., >50 miles) could still qualify for a basic controls analysis but a robust trajectory analysis (and/or satellite plume imagery) would need to be included as part of the nRCP or CCR demonstration.

[33] See Appendix A3 for additional methods for establishing area-specific high wind thresholds.

reasonably-controlled. If the EPA recommended controls improvements as part of a previous high wind dust exceptional event review then the controls analysis should address the reasonableness and potential impact of these control improvements. See Section 6.3.2.3 for examples of a basic control analysis.
Even if a prospective controls analysis has been approved and included as part of the basic controls analysis, the air agency should specifically identify likely sources in the upwind source area and discuss specific controls if these were not discussed in the prospective analysis.

3.1.5.2 Comprehensive controls analysis

When events occur under conditions with sustained wind speeds below the high wind threshold, the EPA and the air agency must further consider the appropriateness, implementation, and enforcement of controls. For example, exceedances can occur when reasonable controls are in place but not properly enforced. Or, new or additional uncontrolled sources may be contributing to the exceedance. In these cases, the demonstration would need to be more complex and compelling for the EPA to concur. Examples of more complex analysis include: back-trajectories of source area, source apportionment, day specific emissions inventories of specific sources in source area, and evidence of effective implementation and enforcement, where appropriate, of controls. In addition to identifying controls on anthropogenic sources, it is important that a submitting agency indicate whether any natural sources could have been reasonably-controlled. As with the basic controls analysis, if the EPA recommended controls improvements as part of a previous high wind dust exceptional event review, then the controls analysis should address how these controls improvements have been addressed. See Section 6.3.2.4 for an example of a comprehensive controls analysis.

3.1.6 Consideration of Controls on Tribal Lands

When reviewing the “reasonableness of controls” element within tribal exceptional event demonstration submittals, the EPA will consider both controls on tribal sources and cultural factors for tribal lands. For example, the EPA could consider tribal cultural factors and subsequently identify “reasonable” controls. It might have been reasonable for the tribal government to encourage the use of certain practices, but not to have required them as a matter of tribal law.

3.2 Historical Fluctuations (HF)

Air agencies should include data showing historical fluctuations of concentration in the area in their demonstration package and make a conclusion as to whether the agency considers the data to be outside the normal historical fluctuations. This information satisfies the HF criterion and serves as an important basis for the CCR, NEBF, and AAQ criteria (see Table 2). The more a concentration stands out from historical concentrations, the more plausible it is that the event was the cause of the exceedance. The objective of the HF analysis is to give a full and accurate portrayal of the historical context for the claimed event day. The EPA expects, at a minimum:

1. comparison of concentrations on the claimed event day with past historical data (3-5 years), with previous high wind dust events identified;

2. percentile of concentration relative to annual data with and without high wind dust events; and
3. percentile of concentration relative to seasonal data with and without high wind dust events.
4. comparison of concentrations on the claimed event day with a narrower set of similar days

Because the methods of analyses influence the conclusions that can properly be drawn from the historical fluctuation statistics (e.g., percentile calculations are dependent on the number of data points included), the EPA recommends specific analyses, statistics, and calculations as described in Section 6.3.3 of this document.

It is important to note, however, that there is no outcome of the "historical fluctuation" statistical comparison that, by itself, can guarantee that the CCR and NEBF elements will also be successfully demonstrated. The EPA will use a weight-of-evidence approach to assess each demonstration and comparison of the concentrations during event(s) in question with historical concentration data on a case-by-case basis. The EPA acknowledges that natural events, such as high wind dust events, can recur and still be eligible for exclusion under the EER. Therefore, events do not necessarily have to be rare to satisfy this element.

3.3 Clear Causal Relationship (CCR)

40 CFR §50.14(c)(3)(iv) requires demonstration of a clear causal relationship between the ambient concentration measurement under consideration and the event that is claimed to have affected the air quality in the area. The CCR demonstration must show that dust from high wind caused an exceedance of the NAAQS. The CCR demonstration is expected to establish causality between the event and a portion of the ambient concentration. Simply showing that high wind was coincident with high concentrations is unlikely to establish causality. A correlation between high wind and high concentrations is important, but does not independently demonstrate that windblown dust from the natural undisturbed and/or reasonably controlled anthropogenic sources caused the high concentrations. CCR demonstrations should include analyses showing that the event in fact occurred and that emissions were transported in the direction of the monitors recording the elevated concentration measurements. CCR analyses should support the conceptual model and address the concepts identified in Table 4. Examples of the quantitative analyses that could be performed are included in Section 6.3.4.

Table 4. Example Evidence and Analyses for CCR Demonstration

Example CCR Evidence	**Types of Analyses/Information to Support Evidence**
1. Occurrence and geographic extent of the event	Special weather statements, advisories, news reports, nearby visibility readings, measurements from monitoring stations, satellite imagery
2. Transport of emissions related to the event in the direction of the monitor(s) where measurements were recorded	Wind direction data showing that emissions from sources identified as part of the nRCP demonstration were upwind of the monitor(s) in question, satellite imagery

Example CCR Evidence	**Types of Analyses/Information to Support Evidence**
3. Spatial relationship between the event, sources, transport of emissions, and recorded concentrations	Map showing likely source area, wind speeds, wind direction, and PM concentrations for affected area during the time of the event, trajectory analyses
4. Temporal relationship between the high wind and elevated PM concentrations at the monitor in question	24-hour time series showing PM concentrations at the monitor in question in combination with sustained and maximum wind speed data at area where dust was entrained
5. Chemical composition and/or size distribution of measured pollution that links the pollution at the monitor(s) with particular sources or phenomenon	Chemical speciation data from the monitored exceedance(s) and sources; size distribution data
6. Comparison of event-affected day(s) to specific non-event days	Comparison of concentration and wind speed to days preceding and following the event;; comparison to high concentration days in the same season (if any) without high wind; comparison to other high wind days without elevated concentrations (if any); comparison of chemical speciation data
7. Historical comparison of PM concentration and wind speed (e.g., 3-5 years) data	Identification of historical trends or relationships between wind speed and PM concentrations.

A demonstration will be less compelling if there is evidence that is inconsistent with the conceptual model of how the event caused the exceedance. For example, if the agency describes the event as a **regional** dust storm, then the EPA would expect monitors within the same **regional scale** to be similarly affected by the dust storm. Comparison of concentrations and conditions at other monitors could thus be very important for the demonstration of a clear causal relationship. Alternatively, eliminating plausible non-event causes may also support a causal relationship to the high wind dust event. (See Section 6.3.4.7 for an example of eliminating alternative hypotheses.)

3.4 Affects Air Quality (AAQ)

The AAQ element is generally supported by historical fluctuations in concentration data (HF) and demonstrated as part of the clear causal relationship (CCR).[34] Submitting agencies that

[34] In the definition of "exceptional event", 40 CFR §50.1(j) begins: "Exceptional event means an event that affects air quality…" The preamble clarifies this in section V.B. *What Does It Mean for an Event To "Affect Air Quality"?* (p. 13569) :

provide HF analyses and conclusions and that demonstrate the CCR element will generally, have also satisfied the "affects air quality" (AAQ) part of the definition of an exceptional event. The demonstration should nevertheless explicitly recognize this element, and describe how this requirement is met through meeting the HF and the CCR criteria.

3.5 Caused by Human Activity Unlikely to Recur at a Particular Location (HAURL) or a Natural Event (Natural Event)

According to both the regulatory and statutory definition, an exceptional event must be "an event caused by human activity that is unlikely to recur at a particular location **or** a natural event." High wind dust events that meet the criteria established in this guidance document would be considered natural events, thus the HAURL does not apply and would not need to be considered for a high wind dust event.

A natural event is defined as "an event in which human activity plays little or no direct causal role" (40 CFR §50.1(k)). An event involving windblown dust solely from undisturbed natural sources is clearly a natural event. However, many high wind dust events affecting the ambient monitoring network include significant contributions from anthropogenic sources of dust, and their treatment under the EER is more complicated. In these cases, a high wind dust event can be considered a natural event, even when a portion of the wind-driven emissions are anthropogenic, as long as those emissions were determined to be not reasonably controllable or preventable. Exceedances that include a significant contribution by anthropogenic sources of windblown dust that were not reasonably-controlled will not be considered as due to a natural high wind dust event. In addition, high dust concentrations outside the period of high wind (e.g., dust from rock-crushing or tilling that precedes the period of high wind) cannot be considered as due to a natural event and therefore could not be considered as part of a high wind dust event. In both of the above cases, it would be assumed that human activity played a large and direct causal role and therefore these exceptional events claims could only be considered under the criterion of "human activity unlikely to recur."[35]

> 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 the 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.* [emphasis added]

In this passage, the second criterion is (b) "clear causal relationship", and the third is (c) "concentration beyond typical fluctuations". These are the same as the EER requirements for CCR ("clear causal relationship") and HF ("in excess of normal historical fluctuations") at 40 CFR §50.14(c)(3)(iii)(B) and (C).

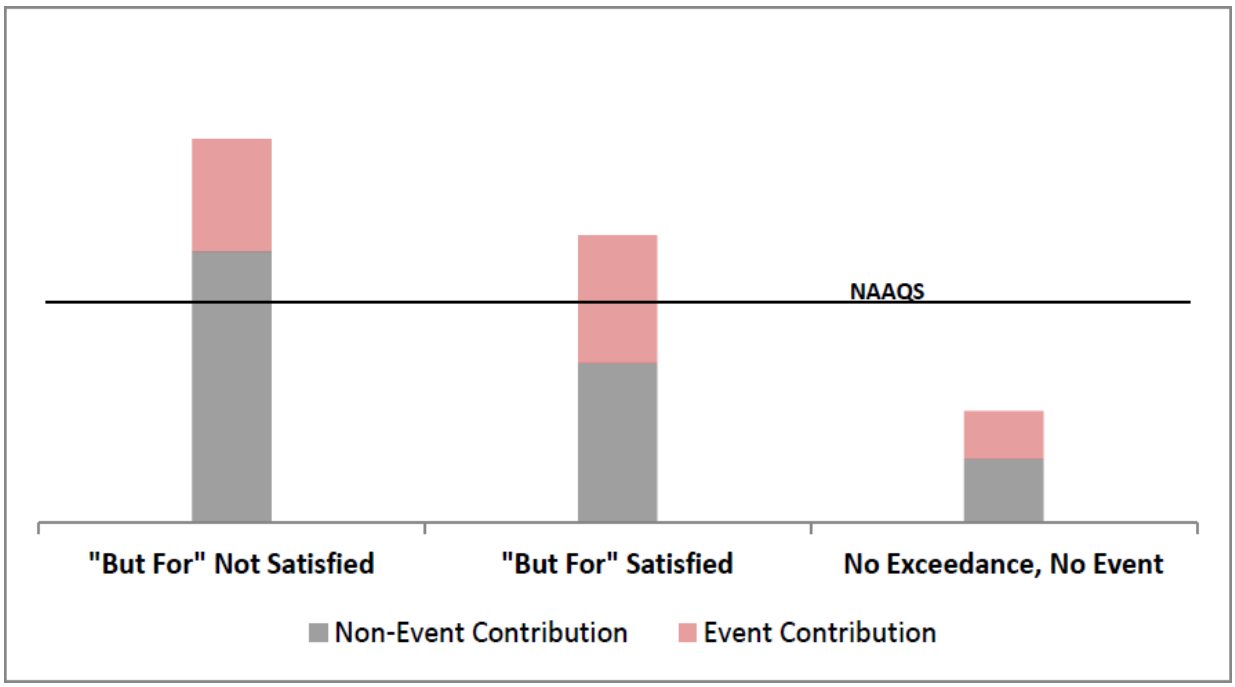
[35] In theory, a high wind dust event for which anthropogenic sources were not reasonably-controlled could be considered an anthropogenic event if the event satisfies certain criteria, including being unlikely to recur. However, if the event (which includes the dust from both natural and anthropogenic sources) was not "not reasonably controllable or preventable" then the event does not meet the definition of an exceptional event. For this reason, the EPA does not believe it is useful to pursue a line of reasoning that would consider a high wind dust event to be an anthropogenic event. If the very unlikelihood of recurrence of similarly high winds means that controls in addition to those that were in place would not have been reasonable, the event can be treated as a natural event and must then meet the criteria laid forth in the EER and explained in this document.

Since anthropogenic sources of windblown dust must be reasonably-controlled for the event to be considered a natural event under the EER, the air agency must demonstrate that the criterion for nRCP is met (see Section 3.1). Further, to satisfy the EER, air agencies must also demonstrate that the windblown dust generated by high wind has a clear causal relationship (CCR) to the measured exceedance. In summary, the EPA will generally consider a high wind dust event to be a natural event if the air agency demonstrates both the nRCP and CCR elements to the EPA's satisfaction.

3.6 No Exceedance or Violation But For the Event (NEBF)

40 CFR 50.14(b)(1) directs the EPA to exclude data only where an air agency demonstrates that an event caused a concentration in excess of a NAAQS. This means that there was a concentration in excess of the NAAQS when the event occurred that would have been below the NAAQS if the event had not occurred. §50.14(c)(3)(iv)(D) requires the air agency to submit evidence that "[t]here would have been no exceedance or violation but for the event."[36] Figure 1 depicts the NEBF concept.

Figure 1. Depiction of the Concept of No Exceedance But For the Exceptional Event.



This analysis generally does not need a single or precise approximation of the estimated air quality impact from the event. The EPA is not prescribing the type of analysis that air agencies need to perform to satisfy this regulatory requirement, but air agencies should show that the measured concentration would have been below the applicable NAAQS without the impact of the high wind dust event. For most cases, the EPA expects a **quantitative** NEBF analysis. For

[36] In addition, Section 319 of the Clean Air Act requires that a clear causal relationship must exist between the measured exceedances and the exceptional event, meaning that exceptional events dealt with in the EER must be exceedances

events where the typical concentrations on non-event days are well below the applicable NAAQS, the NEBF demonstration may be relatively straightforward and a qualitative NEBF demonstration may be acceptable. However, demonstrating NEBF becomes increasingly difficult if concentrations on non-event days during the same season exceed the standard and/or if the contribution of non-event pollution sources produce concentrations near the applicable NAAQS. For example, if days without high winds that neighbor the claimed event day were near the standard (e.g., 150 $\mu g/m^3$ for PM_{10}), the NEBF analysis would need to be very rigorous to show that the exceedance would not have happened but for the high wind dust event. Examples of how to conduct the NEBF analysis are provided in Section 6.3.7.

The NEBF demonstration builds upon and will be informed by the rigor of the nRCP and CCR analyses and further supported by information provided for HF. To illustrate the NEBF and CCR relationship, if there is no CCR, then NEBF becomes moot since there is no portion of the exceedance that can clearly be attributed to the event. For these reasons, the EPA recommends that the air agency complete the NEBF analyses after it completes all other analyses.

3.7 Optional Analyses for nRCP Requirement

3.7.1 Prospective Controls Analysis

As stated in Section 3.1.1, a high wind dust event that includes anthropogenic sources can meet the nRCP criterion if:

1. The anthropogenic sources of dust have reasonable controls in place.
2. The reasonable controls have been effectively implemented and enforced.
3. The wind speed was high enough to overwhelm the reasonable controls.

A prospective controls analysis is an optional, generic[37] review of the current windblown dust controls (item 1 above) and the high wind threshold (item 3 above) for an area. This optional step would occur in advance of the EPA's review of any particular event. In the prospective controls analysis, the air agency would provide information on attainment status, identify natural and anthropogenic windblown dust sources and emissions, provide the status of SIP submittals (if applicable), and identify the wind speed up to which the collective windblown dust controls are expected to be effective (see Section 6.2 for details on how to prepare a prospective controls analysis). Air agencies could submit their prospective controls analysis in advance of an agency submittal and the EPA review of any specific demonstration submittal, with the letter of intent, or with their demonstration package submittal. Once the EPA approves a prospective controls analysis, air agencies could reference this pre-approved analysis in subsequent packages for events with winds above the established/approved high wind threshold to satisfy items 1 and 3 above and provide information on implementation and enforcement of controls (item 2 above).

The EPA review and approval of controls identified in the prospective controls analysis would typically be effective for a minimum of three years. After the three-year time period, the EPA will notify the agency if the EPA intends to re-review the controls. In some limited cases, the EPA may re-review the controls within the three-year timeframe if information on sources or

[37] "Generic" means a general review rather than a review specific to an identified event.

enforcement suggests that controls may be inadequate or not implemented/enforced. The EPA may also re-evaluate the controls identified in the prospective controls analysis when an area that does not typically have recurring high wind dust events experiences unexpected recurrent events.

If the EPA has approved a SIP revision to windblown dust controls within the past three years of the event, then the submitting agency can use the SIP-approved controls to satisfy item 1 of a prospective controls analysis.

3.7.2 High Wind Action Plan

3.7.2.1 Purpose

Air agencies can develop High Wind Action Plans to document their plans to implement needed controls on newly-identified sources that could emit dust during subsequent high wind events (similar to the process used in a Natural Events Action Plan). A High Wind Action Plan is an optional mechanism to implement necessary controls more expeditiously than with the normal regulatory planning process. Preparation of such a plan and its approval by the EPA could promote a common understanding between the air agency and the EPA about whether subsequent high wind dust events are not reasonably controllable or preventable. In addition, the High Wind Action Plan could document current windblown dust controls and current and/or planned mitigation measures as part of §51.930.

3.7.2.2 How Does the High Wind Action Plan Option Work?

The EPA will judge the reasonableness of controls based on information that was available to the air agency at the time of the event (see Section 3.1.2). However, in the course of preparing or reviewing a high wind dust exceptional event demonstration submittal, the air agency or the EPA may identify previously unknown sources that should be subject to reasonable controls. The EPA and/or the air agency may determine that additional controls could minimize the likelihood or the health impact of future events. The EPA does not want to penalize air agencies for lack of controls on sources unknown to the air agency at the time of the event, but air agencies must recognize that EPA cannot consider the collection of sources and associated controls to meet the nRCP criterion for subsequent events once either party identifies a significant uncontrolled source. The High Wind Action Plan provides an optional mechanism that allows the EPA to concur on an air agency's request to exclude data associated with the current and subsequent events while the air agency implements controls on previously unidentified sources. Preparation of a High Wind Action Plan and its approval by the EPA could promote a common understanding between the air agency and the EPA about whether subsequent high wind dust events are not reasonably controllable or preventable. Note that a High Wind Action Plan does not replace planning actions required under the Clean Air Act based on an area's attainment status. For example, a PM_{10} serious nonattainment area is still required to implement BACM. In this type of case the High Wind Action Plan can address sources identified after BACM has been implemented.

An air agency can submit a High Wind Action Plan with the exceptional events demonstration package or as a separate submittal.[38] Establishing a High Wind Action Plan to address additional reasonable controls consists of the following steps:

1. Air agency development and submittal of the High Wind Action Plan after an opportunity for public comment
2. The EPA approval of the High Wind Action Plan
3. Air agency implementation of the identified and approved control measures

Assuming all other exceptional event criteria are met, once the EPA approves the High Wind Action Plan, the EPA could then concur upon the event under current consideration. If an air agency chooses to develop a High Wind Action Plan, it will have six months from the time the EPA provides notification that newly-identified sources require reasonable controls to submit an adequate (i.e., approvable) plan. If the air agency meets this timeframe, then the EPA will consider anthropogenic sources contributing to high wind dust events that occur within the six-month timeframe to be reasonably-controlled, assuming the air agency appropriately implemented and enforced required controls and wind speeds are high enough to overwhelm those reasonable controls.

If an agency does not meet the six-month timeframe and/or the High Wind Action Plan is not approvable, the EPA would treat any high wind exceptional events that occur within and beyond the six months as not meeting the nRCP criterion. Therefore, under most conditions, the EPA would not be able to concur on high wind exceptional events. Under this scenario, the EPA and the air agency would include associated event data in planning decisions. The High Wind Action Plan is unlikely to be an option for an area in the midst of a planning action since the planning timeframes are unlikely to accommodate a multi-month development of a High Wind Action Plan.

Once approved, an air agency's High Wind Action Plan is effective for three years and would establish that sources have reasonable controls for events where wind speeds exceed the high wind threshold. For future events that occur under an approved High Wind Action Plan, the EPA would consider whether controls were implemented effectively according to the High Wind Action Plan as part of the nRCP evaluation. While the High Wind Action Plan is not in itself enforceable, the EPA's concurrence of exceptional events relies upon the implemented plan (i.e., the newly-identified sources would not be considered to meet the nRCP criterion if the High Wind Action Plan is violated). Therefore, if an air agency does not effectively implement its plan, the EPA may be unable to concur on future exceptional events.

An approved High Wind Action Plan does not automatically mean that the EPA will find all subsequent events to meet the not reasonably controllable or preventable criterion. For example,

[38] If an air agency submits the High Wind Action Plan separately from the exceptional event demonstration package, the air agency should provide an opportunity for public comment as the High Wind Action Plan would be part of the basis for the EPA's decision on subsequent events.

the EPA may not concur if the EPA finds that an air agency did not effectively implemented or enforced the controls in place.[39]

3.7.2.3 Content of a High Wind Action Plan

At a minimum, a High Wind Action Plan to address new sources should include the following:

- identification of sources and proposed controls
- an assessment of reasonableness
- timeframes for implementation
- a plan for enforcement, if appropriate.

The High Wind Action Plan should also identify the current high wind threshold and whether this threshold should be revised as a result of the newly identified controls. As mentioned previously, a High Wind Action Plan could also document current controls, especially if these were not included in a previous demonstration package, and mitigation measures.

3.7.2.4 Comparison of a Natural Events Action Plan and High Wind Action Plan

The concept of a High Wind Action Plan originated from the Natural Events Action Plan (NEAP). Table 5 presents a comparison of the two plans.

Table 5. Comparison of Natural Events Action Plan and High Wind Action Plan.

Element	Natural Events Action Plan	High Wind Action Plan
Establish public notification and education programs	Required component of plan.	Optional component of plan to address mitigation requirement for EER (40 CFR 51.930).
Minimize public exposure to high levels of windblown dust	Required component of plan.	Optional component of plan to address mitigation requirement for EER (40 CFR 51.930).
Current reasonable controls on contributing controllable sources	Required component of plan (BACM).	Required component of plan (but not necessarily BACM).
Plan for putting reasonable controls in place on contributing controllable sources	Required component of plan.	Required component of plan if additional controls are needed as condition for concurrence on current event(s).
Re-evaluate the controls	Every five years.	≥ 3 years or if high wind dust patterns change and suggest new sources.
Timeframe for submittal	Within 18 months of violation.	Within 6 months from the

[39] Note that if and when the EPA takes a regulatory action that hinges on a decision to exclude data under the Exceptional Events Rule, the EPA may be required to consider and appropriately respond to public comments on whether the event was "not reasonably controllable or preventable."

Element	Natural Events Action Plan	High Wind Action Plan
		EPA's notification of newly-identified uncontrolled source(s).
Timing of EE concurrence	Prior to NEAP submittal.[40]	After the EPA's approval of High Wind Action Plan.
High wind threshold	Required part of Natural Events Policy[41] but not specifically required to be included in NEAP.	Required component of plan.

3.7.2.5 Attainment status and the role of High Wind Action Plan

The High Wind Action Plan can be a useful tool for any area that has newly identified sources requiring reasonable controls. However, depending on an area's attainment status, air agencies may have other options as identified below.

Attainment/unclassifiable/maintenance: As mentioned previously, the EPA agrees that controls are not expected for the *first* high wind dust exceptional event in a PM attainment area. However, the EPA is unlikely to consider a *first* high wind dust event, because the first event is unlikely to result in a violation of the NAAQS. If an area is violating the standard because of more than one high wind dust event in a three-year period, then the EPA will consider the area to "have a history" of high wind dust events. If wind speeds exceed a predetermined wind threshold, then the EPA may not consider the implementation of controls at the time of the event to be a condition for a determination that the event was not reasonably controllable. The EPA will determine this during the demonstration review process. The EPA does not expect to simply concur on events where sources that were *not controlled* caused a violation just because the area was previously in attainment. The EPA expects to look closely exceedances that occurred with wind speeds below the wind threshold to overwhelm reasonable controls or cause emissions from natural undisturbed areas. If an attainment area has violations below the high wind threshold and the EPA determines that the concentrations are attributable to sources that could be reasonably controlled going forward, the EPA will do one of the following:

1. Request that the submitting agency develop and implement an adequate High Wind Action Plan and concur upon approval of the HWAP going forward if all other EER criteria have been met.

2. Nonconcur. If the nonconcurrence results in an area's designation as non-attainment, then this nonconcurrence would also trigger preparation of a SIP incorporating appropriate PM controls.

[40] Unless the NEAP was not adhered to (e.g., BACM never implemented for previous events).
[41] "Areas Affected by PM10 Natural Events" (the PM10 Natural Events Policy), memorandum from Mary D. Nichols, Assistant Administrator for Air and Radiation, to EPA Regional Offices, May 30, 1996, page 7, "The conditions that create high wind events vary from area to area with soil type, precipitation and the speed of wind gusts. Therefore, the State must determine the unusually high wind conditions that will overcome BACM in each region or subregion of the State."

The EPA intends to work with the air agency to determine which approach listed above, or other approach, will get reasonable controls in place most effectively and efficiently.

Nonattainment: A PM nonattainment area is expected to have reasonable controls in place, but there may be new sources or improved controls that are identified after the original implementation of the reasonable controls. Additionally, during high wind conditions, sources outside the designated nonattainment area may contribute to violations in the nonattainment area. The EPA will consider the wind speeds in the event(s) in question relative to the high wind threshold in determining if additional controls are reasonable. In cases where additional reasonable controls are needed, the EPA may be compelled to do one of the following:

1. Request that the submitting agency develop and implement an adequate High Wind Action Plan, and concur on exceptional events upon approval of the HWAP if all other EER criteria have been met. Subsequent events with wind speeds above the high wind threshold could similarly be concurred upon.

2. Nonconcur in the absence of additional actions beyond what is required by the SIP and its associated deadlines. In these cases, the EPA would not remove the events from regulatory decisions. As a result, the event-related concentrations may play a role in regulatory actions such as a clean data finding or a failure to attain decision. For example, this option may be most sensible to all parties early in a planning cycle when an agency is working on implementing controls that are expected to result in significant improvements in an area's dust control.

3. Nonconcur and conduct a SIP call. If the EPA identifies a major deficiency in the SIP controls, then the EPA may choose to nonconcur and issue a SIP call to expedite implementation of reasonable controls on particular sources.

The EPA intends to work with the air agency to determine which approach listed above, or other approach, will get reasonable controls in place most effectively and efficiently.

4. Mitigation

The EER was promulgated pursuant to Section 319 of the Clean Air Act which contains a provision that each air agency "must take necessary measures to safeguard public health regardless of the source of the air pollution..." This provision was the basis for the mitigation requirements in 40 CFR §51.930 and the requirement in the EER at 40 CFR §50.14(c)(1)(i) that all air agencies 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." The language at 40 CFR §51.930 requires that:

"(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."

Although the language at 40 CFR §51.930 does not require the preparation or submittal of a mitigation plan, it does require that the air agency develop and implement processes and measures that could easily become the elements of a formal, written plan. The mitigation criteria focus on specific measures and actions to protect public health, rather than on measures that control or prevent emissions associated with a specific event. So, a mitigation plan may include measures that apply to emissions sources in general (e.g., dust suppression or covering techniques for mineral processing) rather than those measures or controls that might be discussed in the "not reasonably controllable or preventable" portion of an event demonstration (e.g., controls/measures X, Y, and Z were in place on sources A, B, and C during the time of the event). A mitigation plan may also include procedures and responsibilities for public alerts and sheltering advisories. Because having a mitigation plan in place will help air agencies meet the EER requirements at 40 CFR §50.14(c)(1)(i) related to public notification more systematically, the EPA encourages the development and submittal of a mitigation plan with the demonstration package if one has not already been adopted.

5. Process Issues for Exceptional Events Including High Wind Dust Events

5.1 Demonstrations Package Submittal and Review

The EPA encourages air agencies to engage in regular communication with the EPA to prepare complete demonstration packages that meet the requirements of the EER as interpreted by this document, but that also avoid unnecessary detail and the associated preparation effort. The EPA will make its decision based on information presented by the air agency, along with any information that the EPA may have or generate. Determinations on Exceptional Event demonstrations do not constitute final agency action until they are relied upon in a regulatory decision such as a finding of attainment or nonattainment which will be made through notice-and-comment rulemaking process.

5.2 Timeframes

The EPA recommends the following timeframes for exceptional events processes as outlined in Table 6 below.

Table 6. Timeframe for Exceptional Event Processes.

Exceptional Event Demonstration Action	Timing	Timing Specified by EER?
Air agency submits a prospective controls analysis	Any time in advance of the EPA's review of a particular event or set of events.	No
1. Air agency places flags in AQS	Flags and an initial event description should be placed in AQS in accordance with the schedules for submission of data to the AQS database (i.e., within 90 days of the end of the previous quarter) but not later than July 1st of the calendar year following the event in which the flagged measurement occurred.	Yes
2. Air agency submits letter of intent to submit a package *(optional)*	To promote early communication, the EPA suggests that air agencies provide a letter of intent to submit a demonstration package for flagged data in AQS as soon as possible after the agency identifies the significance of the event, if possible within 12 months from the event occurrence.[42] This is an optional step that would alert the EPA of an air agency state's intention to submit a package for a flag. See Appendix C for an example letter of intent.	No

[42] The Letter of Intent is an optional step and the EPA recognizes that states may need additional time to prepare and submit demonstration packages particularly where the basis of the exclusion is violating an annual standard or a 3-year design value. Similarly, a state could consider submitting an annual letter of intent if annual submittal makes sense for resource planning or for historically seasonal events. If a state decides to submit a letter of intent, the EPA recommends that it be submitted as expeditiously as possible following the state identifying the event or events as having significance.

Exceptional Event Demonstration Action	Timing	Timing Specified by EER?
3. The EPA responds to an air agency's notice of intent and informs the air agency of EPA's review plans.	Anticipated to be within 60 days of receipt of letter of intent to submit a package from air agency. The EPA response will provide the regional office's best assessment of the priority that can be given to the submission once received and any case-specific advice the EPA may have to offer for the preparation of the demonstration. The EPA will generally give priority to exceptional event decisions that affect near-term regulatory decisions.	No
4. Air agency submits exceptional event package to the EPA	The EER allows air agencies to submit packages up to 3 years following the end of the calendar quarter in which the event occurred, or 12 months prior to the date that a regulatory decision must be made by the EPA, whichever is sooner. Schedules are generally tailored in 40 CFR Part 50 when NAAQS revisions result in initial designations for new NAAQS.	Yes
5. Air agency submits High Wind Action Plan (optional)	Submit with EE package or within 6 months from the EPA's notification of newly-identified uncontrolled source(s).	No
6. The EPA completes initial review of exceptional event package & sends letter to air agency outlining preliminary assessment of completeness of package/need for additional information[43]	Anticipated within 120 days of receipt by the EPA.	No
7. Air agency provides supplemental information requested by the EPA, if needed	Requested within timeframe identified by the EPA in the initial review letter (step 4). This will typically be 60 days from receipt of the letter from the EPA. The EPA recognizes that air agencies may need more than 60 days to prepare and submit some types of supplemental information. The EPA is willing to work with agencies on supplemental timeframes; however, the mandatory timing of EPA actions may limit the response time the EPA allows.	No

[43] The EPA may also request additional information during later steps (e.g., as part of the final review (step 8)).

Exceptional Event Demonstration Action	Timing	Timing Specified by EER?
8. The EPA final review of EE package	For EE packages that impact a regulatory decision the EPA intends to make a decision regarding concurrence within 18 months of submittal of the complete package, or sooner if required by a regulatory action.	No

5.3 Public Comment

If an air agency submits substantial supplemental information to the EPA after the air agency's initial opportunity for public comment, the air agency may need to provide an additional opportunity for public comment. The EPA will make a case-by-case decision regarding supplemental opportunities for public comment during the demonstration preparation, submittal, and review process and will inform the air agency of this decision. As part of this decision, the EPA may consider potential impact and/or expressed public interest in the claimed event, data uncertainty, historical application of demonstration approach, etc. Additionally, certain regulatory actions that may rely on exceptional event data exclusions (e.g., proposed designation or redesignation classifications and attainment determinations) require the EPA to provide an opportunity for public comment prior to the EPA's taking final Agency action.

If an additional opportunity for public comment is needed, the air agency should submit the additional information to the EPA within the timeframe outlined in step 7 above and then make the information available for public comment. Once the opportunity for public comment has closed, the air agency should submit the public comments, if any, along with the air agency's responses, to the EPA within 30 days of the close of the public comment period. If air agencies do not submit High Wind Action Plans as part of the exceptional event demonstration package, air agencies should also provide opportunity for public comment for the Plan.

6. Recommendations for Preparing High Wind Dust Exceptional Event Demonstrations

Section 6 provides practical information on preparing and evaluating exceptional events demonstrations for high wind dust events based on the guidance in this document and the EPA's experience from demonstrations that the EPA has reviewed since the promulgation of the EER. Section 6.1 provides the general, suggested framework to prepare a high wind dust event demonstration. Section 6.2 outlines the suggested steps to creating a prospective controls analysis. Section 6.3 provides details and examples for the technical elements. The EPA encourages air agencies to include a description of mitigation strategies as part of the demonstration although submission of a mitigation plan is not a regulatory requirement.

6.1 Framework for Preparing Evidence to Support a High Wind Dust Exceptional Event

While the technical elements outlined in the EER suggest that each element can be demonstrated independently, many of the elements are linked. The EPA suggests the following approach to a demonstration, as depicted in Figure 2.

Optional Pre-Step. Provide a prospective controls analysis to EPA for approval, which can subsequently be used to supplement the evidence in step 2.

Step 1. Develop a conceptual model of how the event unfolded and resulted in the exceedance(s).

Step 2. Address not Reasonably Controllable or Preventable (nRCP).

- Identify high wind threshold (see Appendix A)
- Calculate sustained wind speed: wind speed will inform whether a basic or comprehensive controls analysis is needed.
- Assess general wind direction and identify potential sources
- Develop controls analysis

Step 3. Present Historical Fluctuations analyses and a conclusion for EPA's review of whether the event was in excess of normal historical fluctuations (HF).

Step 4. Address Clear Causal Relationship (CCR).

- Conduct CCR analyses
  - Consider whether CCR identified sources not addressed in nRCP.

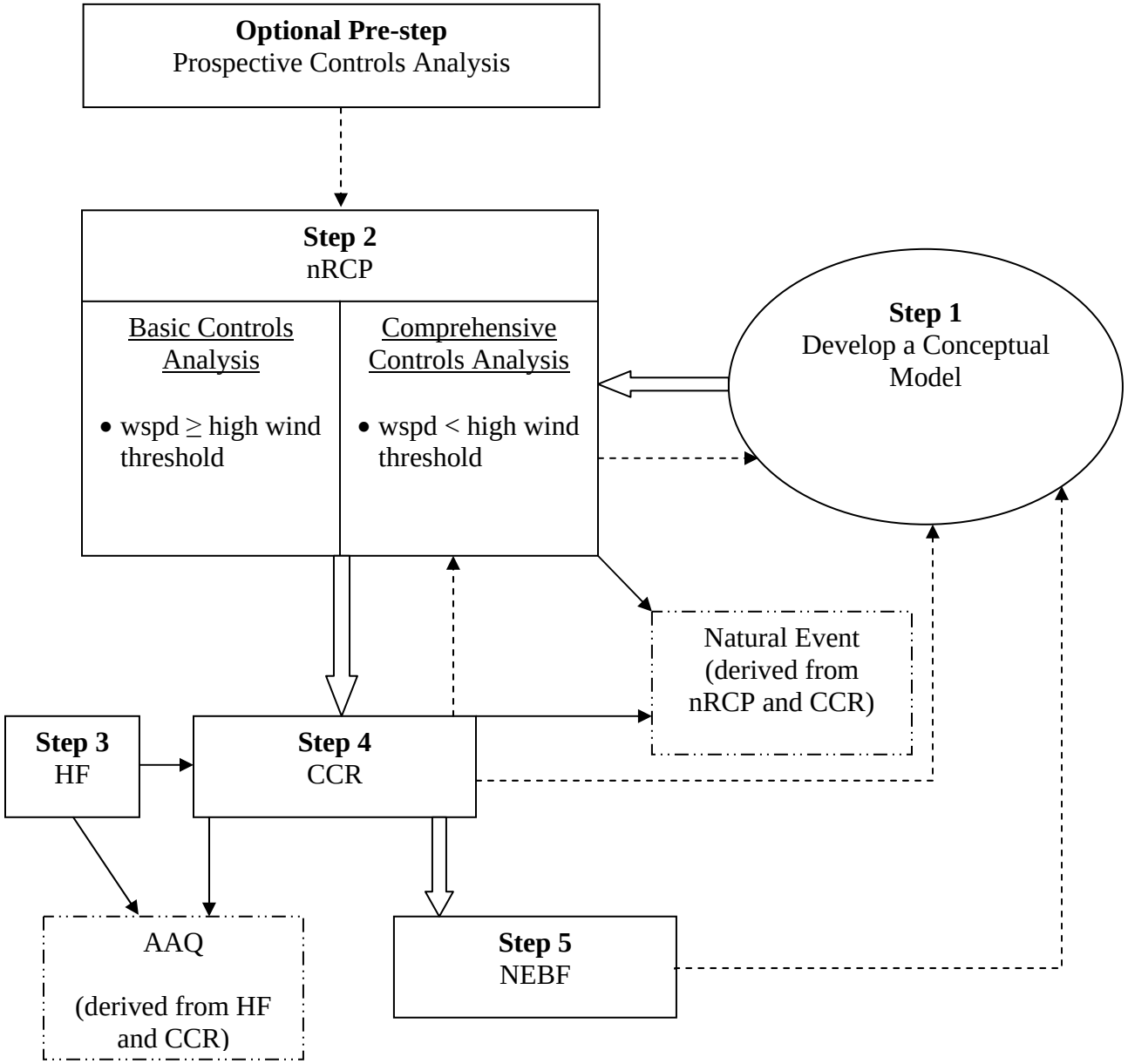
Step 5. Once sufficient HF analyses have been completed and CCR has been demonstrated, then Affects Air Quality (AAQ) will generally have also been satisfied. Provide information that AAQ has been met by providing HF analyses and demonstrating CCR.

Step 6. Once nRCP and CCR have been satisfied, then the element for Natural Event will generally have also been satisfied. Provide information that Natural Event has been satisfied by demonstrating nRCP and CCR.

Step 7. Address No Exceedance But For the event (NEBF) only after all previous criteria have been satisfied.

The EPA recommends reviewing and revising if necessary the conceptual model after the air agency completes each identified step.

Figure 2. Suggested order for preparing technical elements for demonstration packages for high wind dust events.



6.2 Preparing a Prospective Controls Analysis (Optional)

An air agency's request for a prospective determination of reasonable controls, independent of a specific exceptional event request, should include the following elements:

1. Statement of which NAAQS (i.e., pollutant, date of relevant NAAQS, averaging time), area (e.g., Ventura County, California) and time period (e.g., January 1, 2012 – December 31, 2015) are to be covered by the prospective determination.

2. Statement of the area's attainment status for the pollutants (e.g., serious nonattainment with an extended attainment date for the 2006 24-hour $PM_{2.5}$ standard) and resultant required CAA control level (e.g., nothing, RACT, RACM, BACT, BACM and/or Most Stringent Measures (MSM)).

3. Current emissions inventory quantifying natural (if available) and anthropogenic sources of the pollutants and identifying all those the air agency considers significant.

4. Information on whether natural sources are reasonably controlled.

5. Chronology of agency SIP (and NEAP) submittals to address the required CAA control level and EPA actions on these submittals. This should identify whether the submittals relied on any commitment for subsequent action and whether the EPA actions were less than full approval. *The air agency's request for a prospective determination should summarize the status of SIP submittals and EPA action for each significant source category. The EPA will consider this in its review.*

6. Summary of all exceptional event requests and other exceedances for the pollutants in the area over the last 10 years. This should include the number, location, cause (sources) and EPA action for all requests.

7. Discussion of any and changes to presence/understanding/requirements for controls and/or emission sources since EPA's approval in #5 including:
    a. Significant evolution in understanding of control levels in #2 (e.g., while 15 ppm was approved as BACM in 2001, 4 ppm is now widely accepted as BACM).
    b. Significant changes in the emissions inventory since #5 suggests possible additional significant sources (e.g., past planning efforts focused on wood-smoke, but recent information suggests significant wind-blown dust sources as well).
    c. Exceptional event requests and other exceedances discussed in #6 (e.g., newly recurring exceptional event requests might suggest a new source that lacks reasonable controls despite previous EPA approval of controls and an attainment demonstration).
8. A wind speed threshold up to which controls are expected to be effective (i.e., high wind threshold (See Section 3.1.4 and Appendix A)). Should address controlled anthropogenic sources as well as undisturbed natural surfaces.

Upon review of the prospective controls analysis EPA will approve, disapprove, or request additional information. The EPA expects to approve prospective controls determinations when all of the following occur:

- The air agency provides all the above items.
- EPA has fully approved the required CAA control level in #5.
- EPA has confirmed fulfillment of all underlying commitments in #5.
- The air agency certifies there are no additional considerations in #7 and EPA agrees.
- EPA agrees with the wind threshold (#8).

EPA does not expect to approve prospective determinations if any of the following occur:

- The air agency's request does not include all the items listed above.
- The air agency has not demonstrated the required CAA control level in #5.
- The air agency has not confirmed fulfillment of commitments in #5.
- Considerations in #7 indicate that some significant sources are lacking reasonable controls and/or implementation of controls.
- EPA disagrees with the wind threshold (#8).

The EPA may subsequently approve an initially unapprovable prospective controls analysis, if the submitting air agency revises the demonstration to address EPA concerns (e.g., missing elements are provided, the high wind threshold is altered, or new information on existing controls is provided). If the EPA's inability to approve the prospective controls analysis is based on the need for reasonable controls on additional sources, then EPA may not be able to approve the prospective controls analysis until the submitting agency develops, submits, and establishes a plan (e.g., High Wind Action Plan) to implement the needed controls.

6.3 Recommended Methods for the Technical Elements of a High Wind Dust Exceptional Events Package

This section contains recommendations for preparing and demonstrating the technical elements for high wind dust events. These recommendations and examples do not represent the full suite of analyses that could be conducted as part of a high wind dust exceptional events package, but are intended to show the kinds of analyses and descriptions that EPA expects. The examples were taken from EPA Region 9 analyses and the following high wind dust event demonstration packages that were submitted to EPA Region 9:[44]

[44] Full exceptional event demonstration packages are available as follows:

- Anaheim (SCAQMD, event date: October 13, 2008) at http://www.aqmd.gov/pub_edu/notice_exceptional_events_2009.html
- Assessment of Qualification for Treatment under the Federal Exceptional Events Rule: High Particulate (PM10) Concentration Event in the Phoenix Area on April 30, 2008. Technical report prepared by the Arizona Department of Environmental Quality, Air Quality Division. August 16, 2010.
- State of Arizona Exceptional Event Documentation for the Events of July 2nd through July 8th 2011, for the Phoenix PM10 Nonattainment Area. Report prepared by Arizona Department of Environmental Quality (ADEQ), March 8. 2012.

- Anaheim: South Coast Air Quality Management District (SCAQMD)
- Phoenix: Arizona Department of Environmental Quality (ADEQ)

6.3.1 Step 1: Develop a Conceptual Model

A demonstration package for a high wind dust event should include a conceptual model of how the event occurred. A conceptual model is generally used to describe various concepts and their relationships. For exceptional events, the conceptual model should identify the various phenomena (e.g., high wind conditions and emissions) that occurred that resulted in the exceedance. In its simplest form, this could be a narrative description of how the event unfolded and resulted in the exceedance(s). The conceptual model will be similar to an abstract and should help tie the various rule criteria together into a cohesive explanation of the event. The following information is suggested to be included in the conceptual model:

- Description of weather phenomena that resulted in high wind
- Description of sources (land areas, industrial sources, other anthropogenic sources, natural sources, types of PM/dust) likely entrained by the high wind
- Explanation of the path by which the dust reached the monitor(s)
- Description of and map showing relevant monitors, topography, and other relevant geographic features that assist in understanding how the event developed and resulted in the exceedance.
- Description of how the event day differs from non-event days
- Description of concentration and wind patterns for the exceeding monitor(s) and for surrounding area

The following is an example of the type of narrative EPA suggests for the conceptual model.[45]

> Southern California's South Coast Air Basin (Basin) consists of 10,743 square miles and consists of Orange County and the non-desert portions of Los Angeles, Riverside and San Bernardino Counties. The population of the Basin is approximately 16 million people, with approximately 11 million gasoline powered vehicles and 300,000 diesel vehicles. The coastal plain contains most of the population of the Basin, which is surrounded by tall mountains, including the San Gabriel Mountains to the north, the San Bernardino Mountains to the northeast, and the San Jacinto Mountains to the east. The coastal range of the Santa Ana Mountains separates the inland part of Orange County from Riverside County. The proximity of the Pacific Ocean to the west has a strong influence on the climate, weather patterns and air quality of the Basin. The mountains also have a significant impact on the wind patterns of the Basin. Offshore winds flow down slope and are warmed and dried by compressional heating, gaining momentum through the passes and canyons. Northeasterly winds, known as Santa Ana winds, typically account for the highest wind events in the Basin, occurring several times each year. Onshore high-wind

[45] Letter dated November 22, 2010 to Matthew Lakin, Manager Air Quality Analysis Office USEPA Region 9, from Karen Magliano, Chief Air Quality Data Branch California Air Resources Board, transmitting final report dated August 5, 2010 entitled, "Analysis of Exceptional Events Contributing to High PM10 Concentrations in the South Coast Air Basin on October 13, 2008."

events also occur with the strongest winds typically occurring in the mountains and deserts.

Violations of the PM_{10} NAAQS were recorded at the South Coast Air Basin Anaheim monitoring station on October 13, 2008, due to high winds. The 24-hour mass concentration at Anaheim was measured with a federal equivalent method (FEM) Tapered Element Oscillating Microbalance (TEOM) continuous monitor, with a midnight-to-midnight 24-hour average concentration of 199 $\mu g/m^3$. This was not a sampling day for the Federal Reference Method (FRM) filter measurements in the Basin. While no other PM_{10} measurements exceeded the federal standard level (150 $\mu g/m^3$), other stations in the Basin had elevated concentrations during the same period.

A strong Santa Ana wind event developed on October 13th, causing very high northerly through easterly winds in the mountains and deserts, especially through and below the wind-favored passes and canyons in the Basin. National Weather Service (NWS) weather stations measured extremely high peak wind gusts throughout the day in areas upwind of the high SCAQMD PM_{10} stations, including: 87 mph by in [*sic*] the Santa Ana Mountains of Orange County (Freemont Canyon RAWS); 87 mph in the San Gabriel Mountains of Los Angeles County (Chilao RAWS); 79 mph in the Malibu Hills of Los Angeles County; 61 mph at Ontario International Airport in San Bernardino County; 55 mph at Corona Airport in Riverside County; 51 mph at Chino Airport in San Bernardino County and 41 mph at the Santa Ana – John Wayne Airport in Orange County.
Due to the widespread winds, sources of the windblown dust were both natural areas, particularly from the mountains and deserts, and BACM-controlled anthropogenic sources. The timing of this event is verified with the high wind observations and reports of reduced visibility and blowing sand and dust, in conjunction with the hourly TEOM and BAM PM_{10} measurement data from nearby monitors in the Basin, when available.

The following maps support the conceptual model:

- Map of the South Coast Air Basin Showing Air Monitoring Stations and Forecast Areas
- Map of South Coast Air Basin with Selected Cities and Topography
- Map of South Coast Air Basin PM_{10} Monitors

6.3.2 Step 2: Address not Reasonably Controllable or Preventable (nRCP)

The nRCP demonstration should identify the emissions that were expected to have contributed to the event, both natural and anthropogenic, and indicate how they were not reasonably controllable or preventable. Generally, the nRCP will include identification of natural sources and whether they are reasonably controllable, and identification of anthropogenic sources and the associated reasonable controls.

6.3.2.1 Identify source areas and source categories expected to have contributed to the event

EPA recommends that the first step of the nRCP demonstration is to identify the likely source area and source categories expected to have contributed to the event. The source areas and categories can be general, such as, “The area upwind of the monitor includes portions of the

Santa Ana Mountains to the NE of the station and extending down into the Basin. Sources of the windblown dust were both natural areas, particularly from the mountains and deserts, and BACM-controlled anthropogenic sources."[46] It is important to identify the geographic references on a map.

6.3.2.2 Consideration of wind speed

The demonstration should indicate what the expected high wind threshold is for the local area and whether the sustained wind speed exceeded this level (See Appendix A2 and A3 for information on developing a high wind threshold). The wind speed data do not necessarily have to be at the location of the exceedance, but they should represent the source area generating the emissions. Generally, the EPA will accept that high winds could be the cause of a high 24-hour average PM_{10} or $PM_{2.5}$ concentration if there was at least one full hour in which the hourly average wind speed was above the area-specific high wind threshold. Potential issues arise when determining the hourly average wind speed if wind speeds are not recorded at specified intervals throughout each hour. While some sources of wind speed data use hourly averages, other data sources employ 1 - 5 minute ("short-period") averages. When the available wind speed data consist of only the wind speed during a fixed short period of each hour (e.g., the first or last five minutes of each hour) or the wind speed during the variable short period when wind speed was at its maximum during the hour, the EPA will generally accept that the hourly average wind speed was above the threshold if the reported short-period wind speed was above the threshold. Where wind speed is recorded at specified intervals throughout each hour, agencies should use all recorded data to calculate the hourly average wind speed.[47] EPA may, however, consider multiple occurrences of high wind measured at these shorter averaging times as part of the weight-of-evidence demonstration. At a minimum, demonstrations should include the maximum sustained wind speed for each hour of the event and also the number of periods above the high wind threshold.
The EPA notes that The National Climate Center has started archiving the 2-minute winds for every 2-minute period of each hour for all ASOS stations in the country. Almost all sites have data since March 2005, with most archiving data since 2000. The EPA has further developed a preprocessor to AERMOD, called AERMINUTE, that takes short-period wind speed observations and calculates an hourly average wind that can be fed into AERMET, the AERMOD meteorological processor. The AERMINUTE output is user friendly. AERMET can also accept, process, and calculate hourly average wind speeds from sub-hourly data with a resolution equal or greater than 5-minutes from sources other than AERMINUTE.

The EPA will consider shorter-term "snapshots" of wind data such as National Weather Service hourly summaries as part of the weight-of-evidence demonstration.

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[46] Letter dated November 22, 2010 to Matthew Lakin, Manager Air Quality Analysis Office USEPA Region 9, from Karen Magliano, Chief Air Quality Data Branch California Air Resources Board, transmitting final report dated August 5, 2010 entitled, "Analysis of Exceptional Events Contributing to High PM10 Concentrations in the South Coast Air Basin on October 13, 2008."
[47] While the National Weather Service defines a "sustained wind" as the wind speed determined by averaging observed values over a two-minute period, the EPA believes that it would take a longer period of high wind speeds to raise enough dust to significantly influence measured 24-hour average values of PM10 or PM2.5

Generally, the EPA recommends using NWS data or the National Climate Data Center. Where meteorological data are not available for a particular area and such data are critical for the demonstration, agencies may substitute modeled surface wind speeds for actual measured data. Models that agencies can use to develop estimates for actual measured wind speed surface measurements include MM5, WRF, and, possibly, NAM. Wind speed data from a multitude of sources and with different averaging times, including model outputs may be included in a high wind dust event demonstration.

6.3.2.3 Basic controls analysis

Generally, if the wind speed data is at or above the area-specific high wind threshold, the air agency can provide a basic controls analysis to show that the event was not reasonably controllable or preventable (see Section 3.1.5.1). A basic controls analysis should identify all contributing emission sources in upwind areas and provide evidence that those sources were reasonably controlled, whether anthropogenic or natural.

A basic controls analysis would include a brief description of local/upwind sources contributing to the event and a description of the controls on the anthropogenic sources in place at the time of the event (e.g., local BACM measures). In general, EPA expects all upwind areas of disturbed soil to be considered potential contributing sources. For the sources identified, the submitter should explain that dust emissions occurred despite having reasonable controls in place (e.g., controls that overwhelmed by high wind). The EPA may request additional information on specific sources once the information has been reviewed.

An example of a basic controls analysis for the anthropogenic sources in a nonattainment area is:[48]

> This requirement is met by demonstrating that despite reasonable and appropriate measures in place, the October 13, 2008 wind event caused the NAAQS violation. During this event, there were no other unusual PM_{10}-producing activities occurring in the Basin and anthropogenic emissions were approximately constant before, during and after the event. SCAQMD has implemented regulatory measures to control emissions from fugitive dust sources and open burning in the South Coast Air Basin. Implementation of Best Available Control Measures (BACM) in the Basin has been carried out through SCAQMD Rule 403 (Fugitive Dust), as well as source-specific rules. With its approvals of the South Coast PM_{10} Attainment Plans in the State Implementation Plan (SIP), EPA has concluded that this control strategy represents BACM and Most Stringent Measures (MSM) for each significant source category, and that the implementation schedule was as expeditious as practicable.
>
> - SCAQMD Rule 403 establishes best available fugitive dust control measures to reduce fugitive dust emissions associated with agricultural operations, construction/demolition activities (including grading, excavation, loading, crushing, cutting, planning, shaping or ground breaking), earth-moving activities,

[48] Letter dated November 22, 2010 to Matthew Lakin, Manager Air Quality Analysis Office USEPA Region 9, from Karen Magliano, Chief Air Quality Data Branch California Air Resources Board, transmitting final report dated August 5, 2010 entitled, "Analysis of Exceptional Events Contributing to High PM10 Concentrations in the South Coast Air Basin on October 13, 2008."

track-out of bulk material onto public paved roadways, and open storage piles or disturbed surface areas.

- SCAQMD Rule 1156, Further Reductions of Particulate Emissions from Cement Manufacturing Facilities, is a source-specific rule that applies to all operations, including material handling, storage and transport at cement manufacturing facilities. It restricts visible emissions from facility operations, open piles, roadways and unpaved areas and requires enclosed systems for loading, unloading and transfer of materials. Other operations must employ wind fencing and wet suppression systems or be enclosed with permitted control equipment.
- SCAQMD Rule 1157, PM_{10} Emissions Reductions from Aggregate and Related Operations, is a source-specific rule applicable to all permanent and temporary aggregate and related operations that produce sand, gravel, crushed stone or quarried rocks. Like Rule 1156, this rule restricts the discharge of fugitive dust emissions into the atmosphere through plume opacity tests and limiting visible plume travel to within 100 feet of the operation. This rule requires: prompt removal of material spillage; stabilization of piles with dust suppressants; the control of loading, unloading, transferring, conveyors, and crushing or screening activities with dust suppressants or other control methods; stabilization of unpaved roads, parking and staging areas; sweeping of paved roads; and the use of track-out control systems.
- SCAQMD Rule 1158, Storage, Handling, and Transport of Coke, Coal and Sulfur, is a source-specific rule that applies to any facility that produces, stores, handles, transports or uses these materials. This rule restricts visible emissions and requires that piles be maintained in enclosed storage and that unloading operations be conducted in enclosed structures with water spray systems or venting to permitted air pollution control equipment. It also has specific requirements to control emissions from roadways, other facility areas, and conveyors and the loading of materials.
- SCAQMD Rule 1186, PM_{10} Emissions from Paved and Unpaved Roads and Livestock Operations, requires rapid removal of paved road dust accumulations and establishes a treatment schedule for unpaved roads, street sweeper procurement standards, and design standards for new road construction. SCAQMD Rule 1186.1, Less-Polluting Sweepers, requires procurement of alternative-fueled equipment when governmental agencies replace street sweepers.
- SCAQMD Rule 444, Open Burning, ensures that open burning is conducted in a manner that minimizes emissions and impacts, and that smoke is managed to protect public health and safety. This rule requires authorization for agricultural and prescribed fire, limited to days that are predicted to be meteorologically conducive to smoke dispersion and that will not contribute to air quality that is unhealthy for sensitive groups or worse. It also restricts residential and waste burning.
- SCAQMD Rule 445, Wood Burning Devices, reduces pollution from wood-burning fireplaces and other devices through requirements for new construction, curtailment of wintertime wood burning in specified areas when poor air quality is forecast and restriction of the sale of unseasoned firewood. The SCAQMD Healthy Hearths program provides public education on how to reduce air

pollution from wood burning and encourages the conversion to natural gas burning fireplaces through an incentive program.

October 13, 2008 was designated an agricultural and prescribed wildland "no-burn" day, in accordance with SCAQMD rule 444. The $PM_{2.5}$ 24-hour averages at all stations in the Basin, including Anaheim, were well below the 24-hour $PM_{2.5}$ NAAQS and the PM_{10} was estimated to be composed of 87% PM-Coarse particles ($PM_{10-2.5}$) and only 13 percent $PM_{2.5}$. This shows that mostly crustal material comprised the PM_{10} mass and not transported or locally generated urban pollution or combustion sources.

A survey of the SCAQMD complaint records and inspection reports for Anaheim and all other areas of the Basin indicated no evidence of unusual particulate emissions on October 13, 2008 other than related to the strong winds. The complaints are summarized in Table 2-7 from the SCAQMD Clean Air Support System (CLASS) database for complaints and compliance actions. Due to the windy conditions, SCAQMD compliance staff responded to 17 complaints related to windblown dust on October 13. Most were in Riverside and San Bernardino County, but two were in Orange County with no further compliance action taken. No Notices of Violation or Notices to Comply were issued in the Basin for fugitive dust on this day. Several complaints were directly related to the strong winds and windblown dust that overwhelmed the strict fugitive dust controls that are enforced in the Basin. The control methods were generally effective throughout the Basin, but were apparently overwhelmed in several instances by the strong, gusty winds, causing windblown dust and sand to be entrained in the atmosphere.

In addition to the information provided in the example above, the basic controls analysis should also include an explanation of why the control measures should be considered as reasonable. For example, an explanation could include statements similar to: "the source area is within the boundaries of a serious nonattainment area and therefore control measures required to reduce windblown dust as part of the area's approved SIP should suffice as reasonable controls, as additional controls, beyond what is currently required, are economically and technically infeasible." The basic controls analysis should also ensure that the controls discussed include controls for disturbed areas and materials open storage areas susceptible to winds, as well as controls on production sources such as materials loading and unloading.

While the above example provided a basic controls analysis for anthropogenic sources in a non-attainment area, an area attaining the NAAQS can similarly present the current rules, if any, and how the identified rules are reasonable given the attainment status.

In addition to identifying controls on anthropogenic sources, it is important to indicate whether the natural sources could have been reasonably-controlled. For example, the following statement could fulfill this need: "Wind speeds were high enough to entrain dust from natural areas including undisturbed mountain and desert areas upwind of the monitor. Emissions from these sources were not reasonably controllable due to the cost of applying controls over such a large land area and because of the detrimental effect on the natural ecosystem that could result." Finally, if EPA recommended controls improvements (e.g., as part of a previous high wind dust exceptional event review) then the controls analysis should address how these controls improvements have been addressed.

6.3.2.4 Comprehensive controls analysis

Generally, if the wind speed data is below the area-specific high wind threshold, the air agency will be expected to provide a comprehensive controls analysis to show that the event was not reasonably controllable or preventable (see Section 3.1.5.2). Significant emissions from reasonably-controlled anthropogenic or natural sources are not expected below the high wind threshold, and therefore the analysis should further consider whether all contributing sources are reasonably-controlled. Comprehensive controls analysis should include detailed analyses such as: back-trajectories indicating specific sources in the upwind area, a day specific inventory of the contribution for significant sources, detailed descriptions of controls and their effective implementation and enforcement (where appropriate), and also include a detailed explanation of why the control measures should be considered as reasonable.

For comprehensive controls analysis, EPA will place significantly more weight on the wind speed data associated with high particulate matter concentrations. The demonstration is likely to be increasingly difficult as sustained wind speeds decrease below the applicable high wind threshold and many of these cases may not be concurrable.

One type of analysis that an air agency could use when developing a comprehensive controls analysis is a source contribution analysis, similar to the analysis presented below, for multiple hours of the day. For most events, a single back trajectory may not account for wind direction fluctuations during the event and may not accurately capture all the sources that may be contributing to the exceedance, and where continuous PM measurements are available, trajectories for hours with the greatest PM concentrations are most critical. Also, when moderate winds are responsible for high levels of measured particulate matter, considerably more attention should also be placed on the hours of the day preceding the event to adequately assess the sources contributing to the exceedance that may have influenced particulate matter concentrations before the arrival of the claimed event.

Following is an example of a methodology of a back-trajectories and inventory for a comprehensive controls analysis[49]:

> Back-trajectories were plotted in 5-minute links based on 5-minute average wind speed and wind direction data recorded at the West 43rd Avenue station. The back-trajectory plot for April 30, 2008 is shown in the following figure. These back-trajectories revealed that winds accompanying peak PM_{10} concentrations typically blew from the west-southwest to the West 43rd Avenue station, crossing a mosaic of agricultural, residential, industrial, and riverbed lands. GIS files were used to determine the zoned uses of all lands within ½ mile of each back-trajectory track over which wind parcels travelled during the two hours prior to delivering the peak PM_{10} concentration to the West 43rd Avenue monitor. Lands under active construction on each exceedance day were identified from earthmoving permit records. Parcel areas were aggregated within seven general

[49] Assessment of Qualification for Treatment under the Federal Exceptional Events Rule: High Particulate (PM10) Concentration Event in the Phoenix Area on April 30, 2008. Technical report prepared by the Arizona Department of Environmental Quality, Air Quality Division. August 16, 2010.

categories for which limited emission factor data were available: vacant, agriculture, construction, open/restricted access, riverbed, sand and gravel/landfill, and other lands. The uses of these land categories are generally defined as follows:

Vacant – represents undeveloped land to which public access is not restricted;
Agriculture – represents lands under agricultural cultivation;
Construction – represents lands being developed for long term use that will include ground coverage elements such as pavement, structures, or landscaping that will prevent the generation of windblown dust;
Passive/restricted open space – represents undeveloped or partially developed lands to which public vehicular access is restricted (these lands include public parks, national forests, military posts, and Indian reservations);
Riverbed – represents riverbed channels of the Salt and Gila River branches;
Landfill/sand and gravel – represents lands being used for mineral extraction or waste deposit;
Other – represents developed lands that are protected from windblown dust generation by elements such as paving, structures, and landscaping.

PM_{10} emissions were calculated for each back-trajectory hour using emission factors derived from the Nickling and Gillies data, 5-minute wind speed averages recorded at the West 43rd Avenue monitoring station, and the land use acreage along each back-trajectory computed by MAG staff. The emission factor equations were used to compute PM_{10}

emissions for each 5-minute portion of each back-trajectory hour. For each 5-minute period, the measured average wind speed was compared to the threshold friction velocity calculated at a 10-meter height to determine whether the threshold wind speed necessary to the generation of windblown PM_{10} on each land use, undisturbed and disturbed, had been exceeded. If the threshold velocity was exceeded, the appropriate Nickling and Gillies emission factor equation was used to compute PM_{10} emissions in units of gm/cm2-sec. Emissions for each 5-minute period within each hour and within each land use category were converted to units of lb/acre-hr and then summed to produce hourly average PM_{10} emission rates per land use category. The emission rates for the other land use categories and the 2nd hour were calculated using a similar methodology. The land use category emission rates were then multiplied by the acreages within each appropriate land use category to derive PM_{10} emissions for each back-trajectory hour by land use category. The PM_{10} emissions for each of the back-trajectory hours on each exceedance day were summed together to calculate total emissions over each exceedance day back-trajectory by land use category. These land use category emissions were then grouped by anthropogenic and nonanthropogenic categories to assess the relative contribution of nonanthropogenic sources to exceedances recorded at the West 43rd Avenue monitoring station during 2008. A summary of the results of these calculations for the April 30, 2008 exceedance day is presented in the following table.

Table 5-2. Anthropogenic and Nonanthropogenic Windblown PM_{10} Emissions From W. 43rd Ave. Monitor Back-Trajectory Lands on April 30, 2008

Land Use Category	PM_{10} Emissions (lb)		% of Anthropogenic
	Anthropogenic	Nonanthropogenic	
Vacant/Undisturbed	-	0	
Vacant/Disturbed	1,501	-	20.7%
Agriculture/Undisturbed	0	-	0.0%
Agriculture/Disturbed	0	-	0.0%
Construction/Undisturbed	0	-	0.0%
Construction/Disturbed	277	-	3.8%
Passive-Restricted/Undisturbed	-	0	
Passive-Restricted/Disturbed	0	-	0.0%
Riverbed/Undisturbed	-	8,234	
Riverbed/Disturbed	2,408	-	33.3%
Sand & Gravel Landfill/Undisturbed	0	-	0.0%
Sand & Gravel Landfill/Disturbed	3,053	-	42.2%
Other		-	
Total	7,240	8,234	
% of Grand Total	46.8%	53.2%	

The analysis should also include information on controls on anthropogenic sources were appropriately implemented and enforced during the time of the event. In addition to identifying

controls on anthropogenic sources, it is important to indicate whether the natural sources could have been reasonably-controlled. Available inspection reports and/or notices of violations (NOVs) in upwind areas should be submitted, if available. The EPA recognizes that agencies have varied methods of permitting and enforcement and does not expect all agencies to have these records for all events. The EPA does, however, expect agencies to make a general showing that the agency has a program in place to ensure controls are being enforced as appropriate (even if no specific evidence exists for the particular day of the event). The EPA will also consider the overall compliance rates for specific source categories in determining whether reasonable controls were in place.

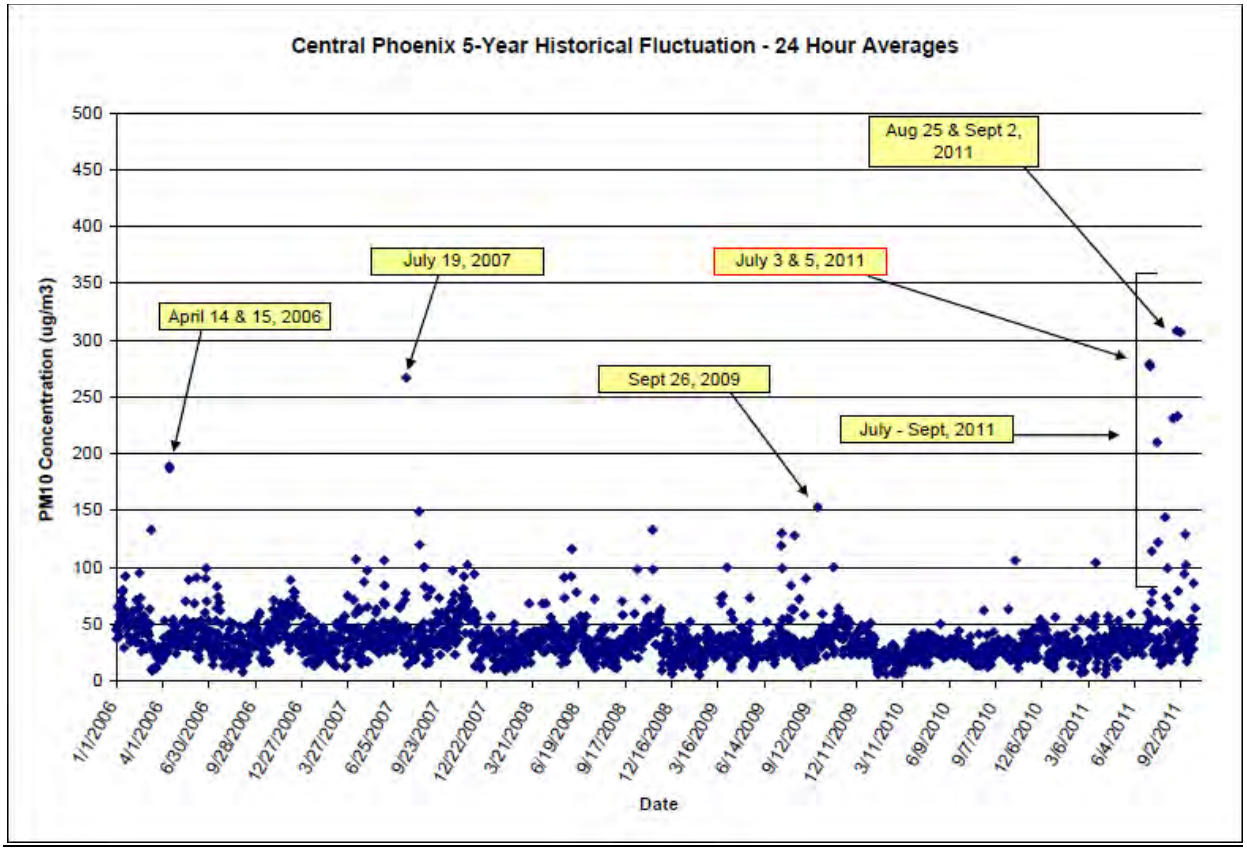
The controls analyses when wind speeds are below the high wind threshold should address whether control improvements were recommended by EPA (e.g., as part of a previous high wind dust exceptional event review). If controls improvement had been previously recommended then the controls analysis should address how these controls improvements have been implemented.

6.3.3 Step 3: Present Historical Fluctuations (HF) Analyses

As described in Section 3.2, the historical fluctuations (HF) analyses and an air agency conclusion will aid EPA's review and will also inform CCR, NEBF, and AAQ. Specific analyses expected to provide the historical context for the event include:

1. A time series for concentration for the event area for the previous three years, or longer if available, with high wind dust events identified: Concentration data should be 24-hour concentrations for each day. Depending on the quantity of data, it may be appropriate to present monthly maximums (note that it is not appropriate to present monthly-averaged daily data or any other average of the daily data as this masks other high values). It is appropriate to identify information such as: seasonal or monthly 24-hour means, other event days, and relevant standards. The following figure[50] is an appropriate example of this type of analysis.

[50]State of Arizona Exceptional Event Documentation for the Events of July 2nd through July 8th 2011, for the Phoenix PM10 Nonattainment Area. Report prepared by Arizona Department of Environmental Quality (ADEQ), March 8. 2012.



2. Percentile of concentration relative to annual data with and without all high wind dust events: The percentile of the 24-hour average PM concentration should be provided for the event day relative to all measurement days over the previous three years or longer. The EPA expects a minimum of 300 data points to be included in this calculation. If the sampling schedule is 1-in-6 day sampling then this percentile should include five years of data (60 sample days/year for five years provides 300 data points). Higher frequency sampling can utilize fewer years of data but not fewer than three years. If three years is not available, consult with EPA.

3. Percentile of concentration relative to seasonal data with and without all high wind dust events: The percentile of the 24-hour average PM concentration should be provided for the event day relative to all measurement days for the season (or appropriate alternative 3-month period) of the event over the previous three years or longer. It is appropriate to use the same time horizon as used for the percentile calculated relative to annual data.

6.3.4 Step 4: Address Clear Causal Relationship (CCR)

As described in Section 3.3, the following types of evidence can support the CCR demonstration:

- Occurrence and geographic extent of the event
- Transport of emissions related to the event in the direction of the monitor(s) where measurements were recorded
- Spatial relationship between the event, sources, transport of emissions, and recorded concentrations
- Temporal relationship between the high wind and elevated PM concentrations at the monitor in question
- Chemical composition and/or size distribution of measured pollution that links the pollution at the monitor(s) with particular sources or phenomena
- Comparison of event-affected day(s) to specific non-event days

Each of these types of evidence is treated in detail below. Note that information generated in this portion of the demonstration submittal may result in revisions to the conceptual model and controls analysis. As the flow diagram (Figure 2) suggests, preparation of a high wind dust exceptional event package is not necessarily a step-wise process.

6.3.4.1 Occurrence and geographic extent of the event

Air agencies can provide the following information to help establish the occurrence and geographic extent of the event: special weather statements, advisories, news reports; nearby visibility readings; measurements from monitoring stations; MODIS and other satellite maps; and description of weather conditions that created the high wind.

- Special weather statements, advisories, news reports on both predictions and occurrence of the event:
  SCAQMD provided the following information for an exceptional event showing for Anaheim *(Note that Appendices from the SCAQMD demonstration submittal are referenced in the excerpt below, but they are not provided as part of this document or the example).*

> The National Weather Service had predicted this first strong Santa Ana event of the season well in advance and Governor Schwarzenegger issued a press release on October 10 to prepare the state for Santa Ana winds and the associated wildfire potential (see Appendix A.7).
>
> The Appendix to this document (Sections A.2 through A.6) contains the forecast discussions, short-term forecasts (nowcasts), fire weather forecasts, warnings and significant wind reports, as available from the NWS Los Angeles/Oxnard and San Diego Forecast Offices, whose areas of responsibility cover the Basin and much of southern California. These show that the strong Santa Ana wind event was well predicted in advance, warning the public of potentially damaging winds and windblown dust and sand, along with reduced visibilities.
>
> NWS advisories and warnings for high winds (Appendix, Section A.5) were already in place on October 12, extending through Tuesday, October 14, or longer. A Wind Advisory is

issued by NWS when sustained winds of 30 to 39 mph are expected for 1 hour or longer. A High Wind Warning is issued when sustained winds of 40 mph or more are expected for 1 hour or longer, or for wind gusts of 58 mph or more with no time limit. NWS Oxnard issued High Wind Warnings on October 12, extending through the period for the Los Angeles and Ventura County Mountains and Wind Advisories for the Santa Monica Mountains, the Ventura County coastal and interior valleys, the Santa Clarita Valley, the Los Angeles County San Fernando Valley, and the Ventura and Los Angeles County coasts, including Downtown Los Angeles. NWS San Diego issued High Wind Warnings for the San Bernardino and Riverside County valleys (Inland Empire) and the Santa Ana mountains and foothills and Wind Advisories for the San Bernardino County mountains, Orange County coastal areas, the Riverside County mountains, the San Diego County mountains, and the San Diego County valleys, In short, High Wind Advisories and Warnings were in place for most of the South Coast Air Basin and much of southern California to warn the public of this high wind event. Northeasterly winds with sustained speeds in the 35 to 45 mph range were predicted throughout the region, along with damaging gusts to 70 mph, especially in the mountains and below passes and canyons in the Inland Empire. Hazardous driving conditions were predicted, especially through and below canyons and passes, as well as blowing dust and sand with reduced visibility, broken tree limbs and downed power lines.

The AQMD Meteorology Section predicted high winds for October 13 in the Coachella Valley for AQMD Rule 403.1, which requires specific actions in this area when wind gusts exceed 25 mph. While there are no other AQMD rule requirements to forecast winds in the Basin, the daily forecast discussion by AQMD issued on October 12 for Monday, October 13 predicted the strong winds. A smoke advisory was already in effect in the morning of October 12 and the strong winds were prominent in the forecast discussion, as follows:

- *SMOKE ADVISORY for Sunday: Concentrations of fine particulates may reach Unhealthy for Sensitive Groups or higher in areas of Los Angeles County directly impacted by smoke from a wildfire in the Angeles National Forest north of Pacoima.*

- *Monday will be mostly clear, windy and warmer as the offshore Santa Ana winds strengthen. Gusty winds through and below canyons and passes will cause elevated particulate concentrations due to windblown dust and possibly continued wildfire activity.*

PM10 predictions were increased throughout the Basin for October 13 and agricultural and prescribed burning was prohibited with a No-Burn declaration for the entire Basin. AQMD issued a Smoke and Windblown Dust Advisory in the morning of October 13, reproduced in the Appendix, Section A.10, that warned of the likelihood of strong Santa Ana winds causing high PM10 concentrations in several areas of the Basin, including Central Orange County (Forecast Area 17, including Anaheim), as follows:
In addition, strong Santa Ana winds will likely cause PM10 concentrations to reach Unhealthy for Sensitive Groups concentrations or higher in areas throughout the Basin downwind of the winds areas. This includes any areas where windblown dust is visible, especially through and below passes and canyons, until the winds subside. Wind prone areas

are likely to include: the San Bernardino Valley (Areas 32, 33, 34, 35), Riverside County Valleys (Areas 22, 23, 24, 25, 26), Orange County (Areas 16, 17, 18, 19, 20) and the Los Angeles County northern and southern coastal areas (Areas 2 and 4).

- Nearby visibility readings:
  SCAQMD supplied the visibility readings and ADEQ submitted the visibility pictures for nearby airports during Arizona events.

- MODIS satellite maps:
  SCAQMD provided the following maps showing the spatial distribution of windblown dust.

- Description of weather conditions that created the high wind:
  SCAQMD provided the following description of weather conditions around the time of the event:

An upper level trough of low pressure moved through California, between October 9 and 11. The low pressure system did not create much rain in California during this period, but temperatures were cool throughout the state. By Sunday, October 12, the backside of the trough was over California, providing upper level support for a developing strong Santa Ana wind event. The strong pressure gradients that developed between the high and low pressure aloft created strong winds. The National Weather Service (NWS) 500 millibar (MB) analyses every 12 hours between 0400 PST on October 12 and 0400 PST on October 14 are shown in the Appendix, Section A.11. The winds over California at the 500 MB pressure level started out northwesterly in the morning of October 12 with speeds to 81 mph (70 knots), then became more northerly by the morning of Monday, October 13 with speeds to 57 mph (50 knots). The strong northerly flows aloft, coupled with strong northeasterly surface pressure gradients, enhanced the offshore flows at the surface.

The passage of the low pressure trough aloft brought the first strong cold front of the season at the surface. Section A.12 in the Appendix shows the NWS sea-level pressure analyses, every three hours between 1600 PST on October 12 and 0100 PST on October 14. By 1600 PST October 12, the surface low and cold front was over the northeastern border of New Mexico and high pressure was building over northern Nevada, increasing the northerly gradients. By 0100 PST on October 13, the high pressure over Nevada had increased to 1033 MB, strengthening the gradient flows across California. By 0700 PST, the area of high pressure had expanded and peaked at 1037 MB. The strength of the high pressure remained nearly the same through the rest of the day, while the broad area of high pressure slowly moved to the east, causing the winds to shift from northerly to northeasterly, then easterly throughout the day. The strong pressure gradients caused strong winds, especially in southern California as the flow of cold air from the area of high pressure further enhanced the winds as it flowed across the mountains. Some gusty winds had already been observed on October 12, but they increased considerably in the early morning of October 13.

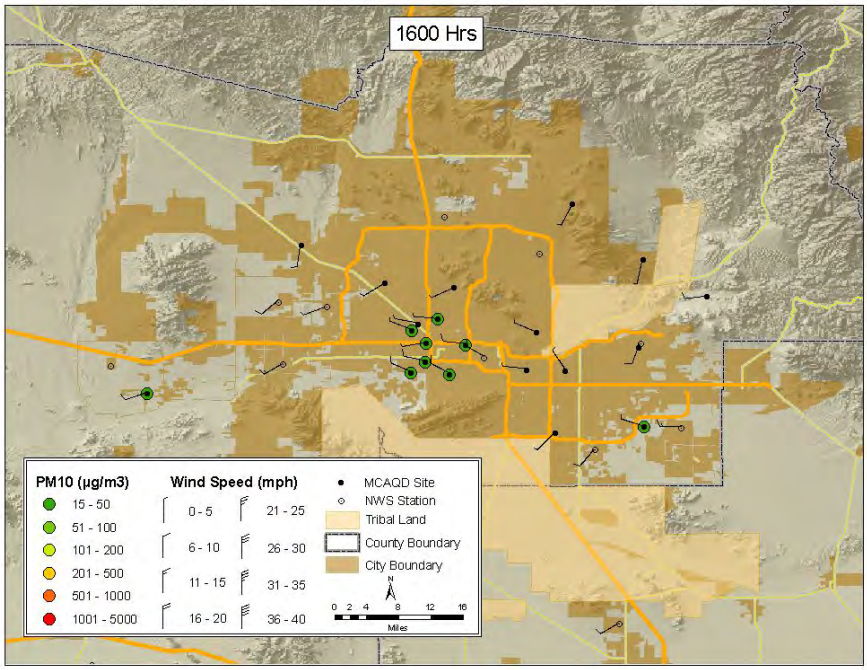
This is the classic Santa Ana wind pattern that brings strong winds to southern California. High pressure builds over the Great Basin desert region of the western United States in the cold air behind the front with lower pressure off the southern California coast. This pressure gradient creates strong north through northeasterly winds, enhanced by thermal gradients due to denser cold air over the Great Basin. The relatively cool air from the Great Basin deserts flows over the southern California mountains, gaining momentum on the lee side. The downslope flow causes compressional warming and drying of the air in the South Coast Air Basin. This combination of strong wind, high temperatures and low relative humidities make these Santa Ana conditions highly conducive to wildfires in southern California.

The AQMD Meteorology Section routinely analyzes sea-level pressure gradients in southern California to assess winds and air pollution potential. The Summation Pressure Gradient (SPG) is a good indicator of the strength of the flow and whether it is onshore (positive) or offshore (negative), where

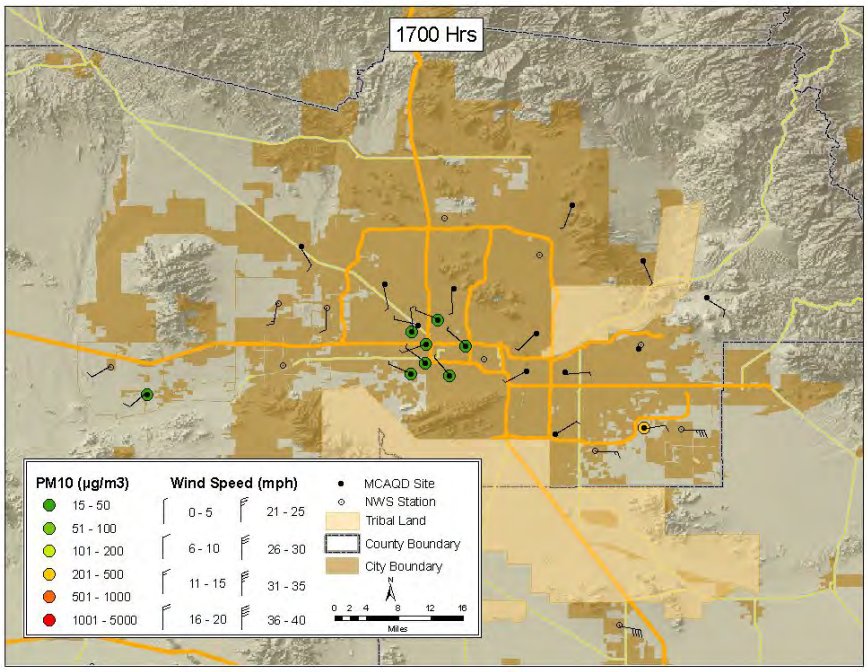
SPG = (SAN-LAS)[51] + (LGB-DAG)[52] + (RIV-DAG)[53]

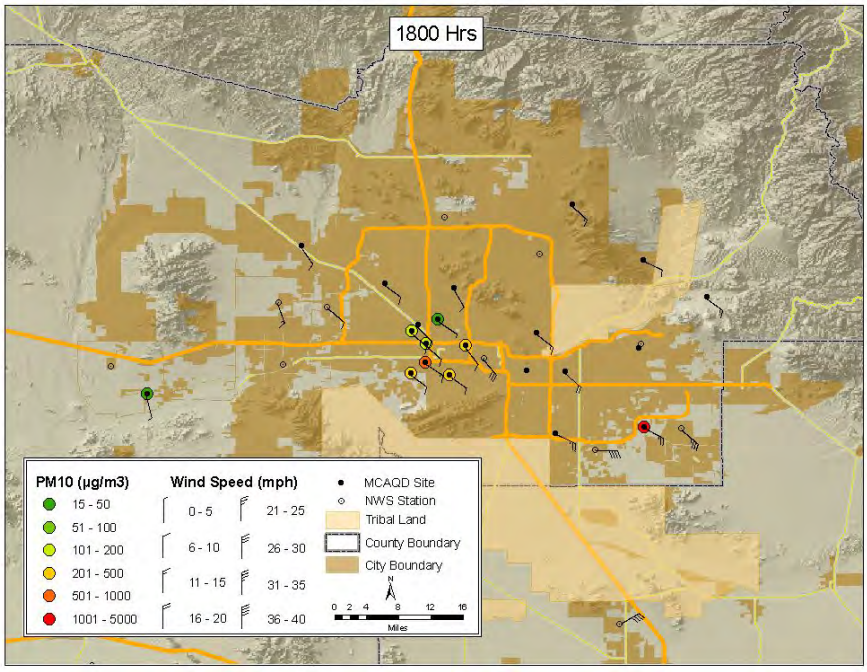
In the morning of October 12, the 0700 PST SPG was –5.5 MB, indicating moderate offshore flow. At the same time in the morning of October 13, the SPG strengthened to –14.7 MB, indicating a stronger offshore gradient. The gradient was enhanced by the upper level pattern and thermal gradient as described above, to create a strong wind event, especially for several hours through the morning of October 13.

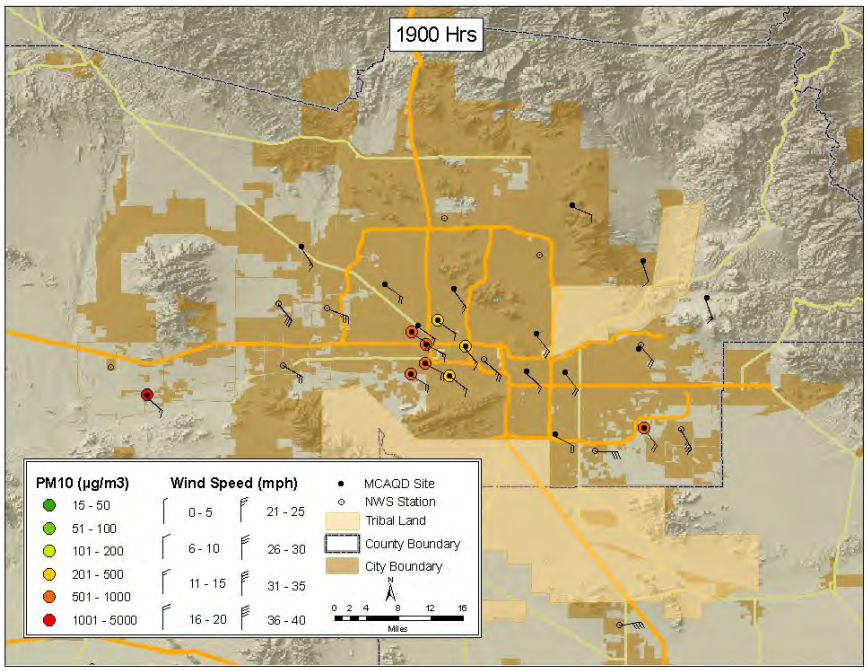
- Measurements from monitoring stations:
  The following figures show the kind of analyses based on measurements from air monitoring and meteorological stations that could be used to show the occurrence and geographic extent of the event.[54] The figures also show that only when the wind speeds became elevated did PM_{10} concentrations also become elevated, supporting the causal relationship.



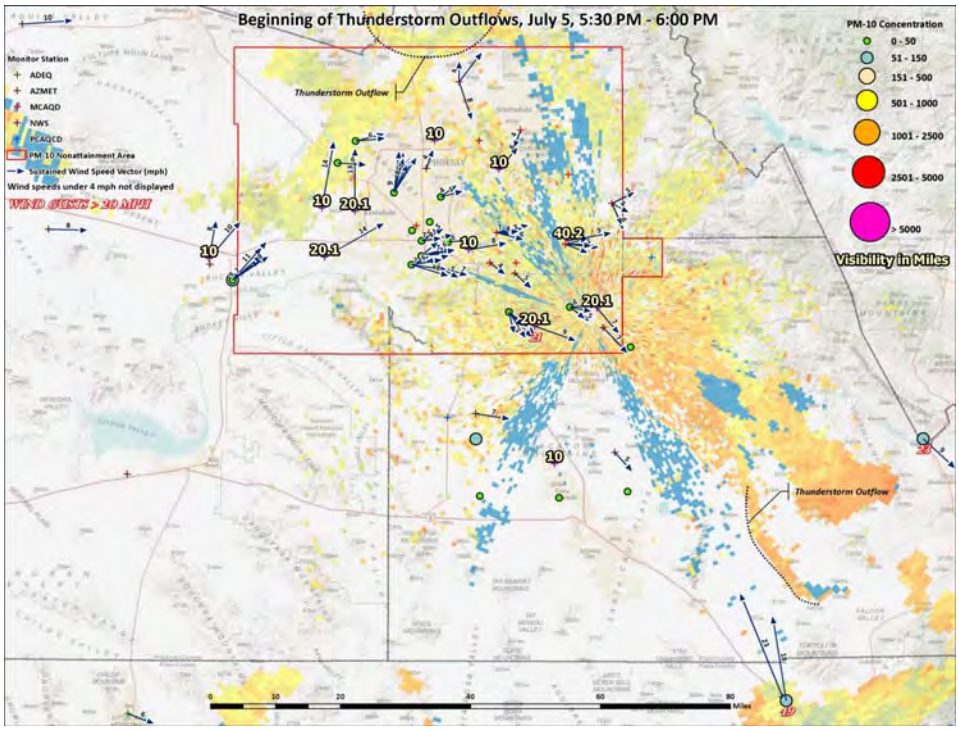
[51] Sea Level Pressure difference between San Diego and Las Vegas
[52] Sea Level Pressure difference between Long Beach and Daggett
[53] Sea Level Pressure difference between Riverside and Daggett
[54] EPA Region 9. ArcGIS analysis using PM10, wind speed, and wind direction data from AQS.


1700 Hrs
PM10 (µg/m3)
15 - 50
51 - 100
101 - 200
201 - 500
501 - 1000
1001 - 5000
Wind Speed (mph)
0 - 5
6 - 10
11 - 15
16 - 20
21 - 25
26 - 30
31 - 35
36 - 40
MCAQD Site
NWS Station
Tribal Land
County Boundary
City Boundary
N
0 2 4 8 12 16
Miles

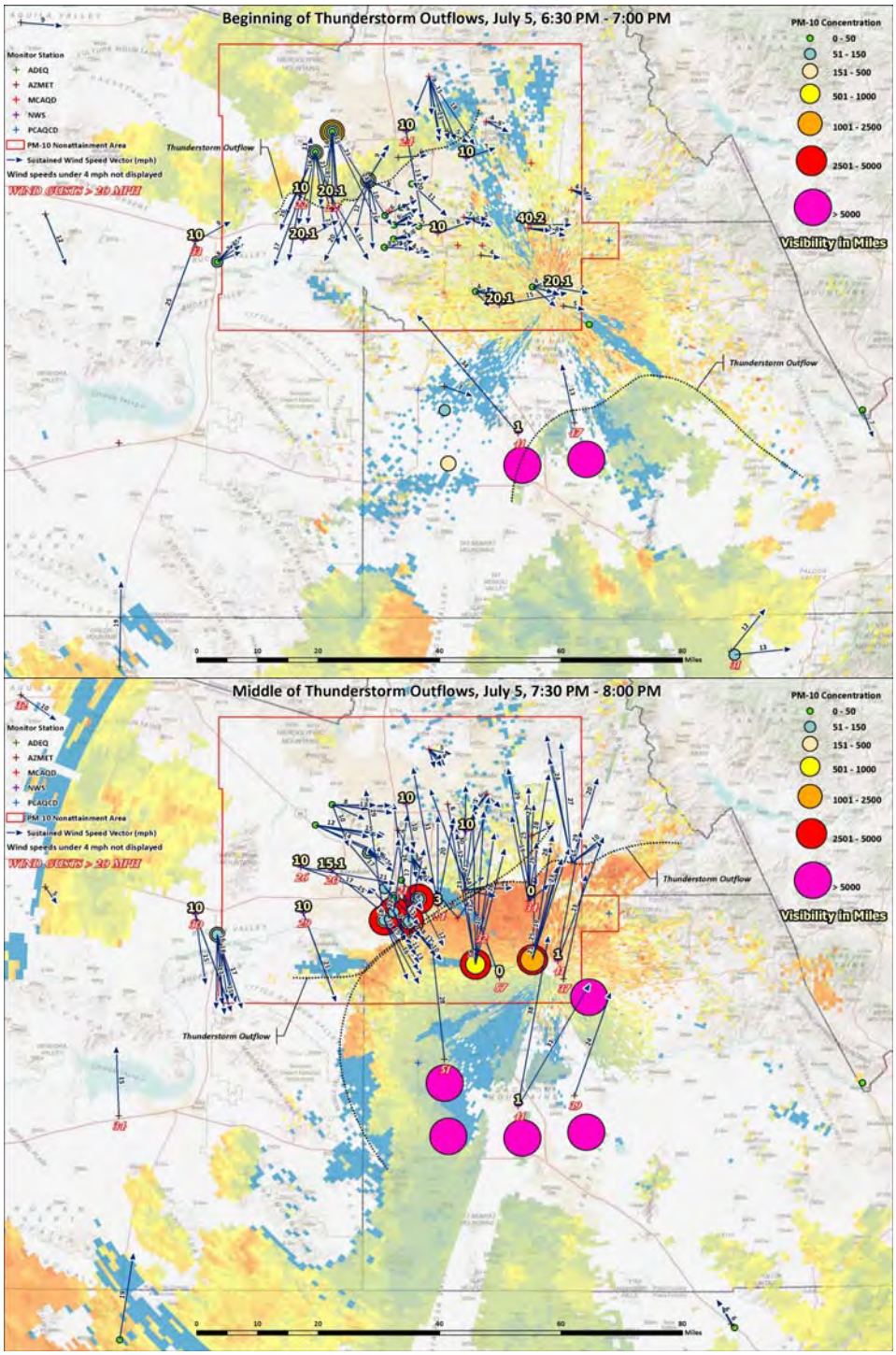

1800 Hrs
PM10 (µg/m3)
15 - 50
51 - 100
101 - 200
201 - 500
501 - 1000
1001 - 5000
Wind Speed (mph)
0 - 5
6 - 10
11 - 15
16 - 20
21 - 25
26 - 30
31 - 35
36 - 40
MCAQD Site
NWS Station
Tribal Land
County Boundary
City Boundary
N
0 2 4 8 12 16
Miles

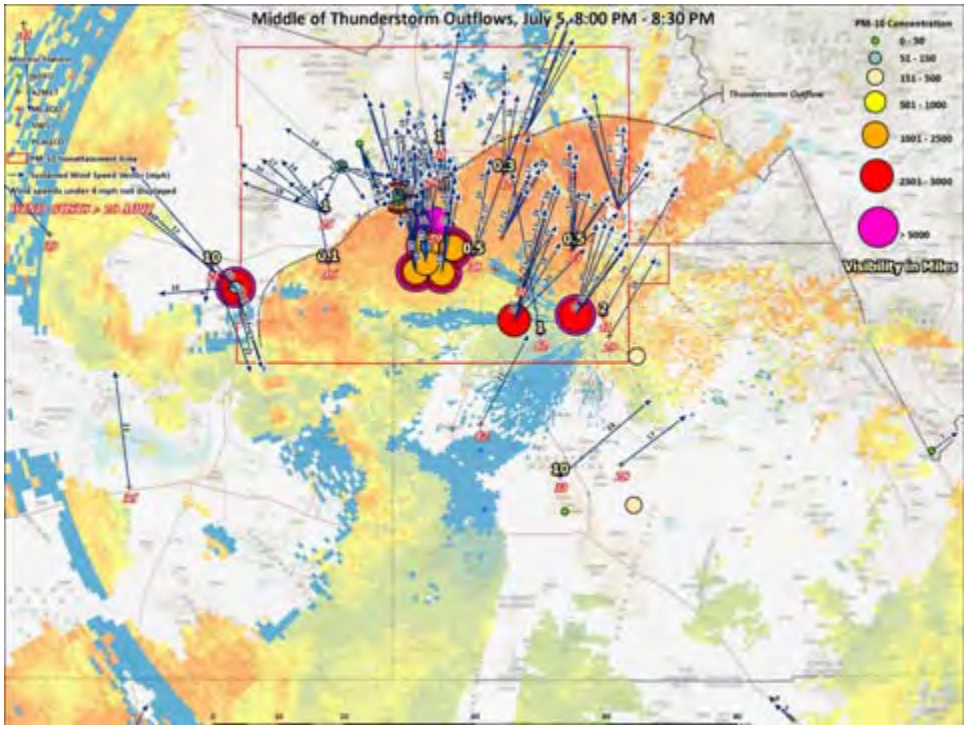


Further analysis may include more refined GIS data combined with surface measurements from various sources. The EPA acknowledges that there are few areas, except large metropolitan areas that have the number of monitors to document the sequential nature of an event. The following is an example [55]of the type of analysis that can occur with these types of resources.



[55] ADEQ


Beginning of Thunderstorm Outflows, July 5, 6:30 PM - 7:00 PM
Monitor Station
ADEQ
AZMET
MCAQD
NWS
PCAQCD
PM-10 Nonattainment Area
Sustained Wind Speed Vector (mph)
Wind speeds under 4 mph not displayed
WIND GUSTS > 20 MPH
Thunderstorm Outflow
PM-10 Concentration
0 - 50
51 - 150
151 - 500
501 - 1000
1001 - 2500
2501 - 5000
> 5000
Visibility in Miles
Miles
Middle of Thunderstorm Outflows, July 5, 7:30 PM - 8:00 PM

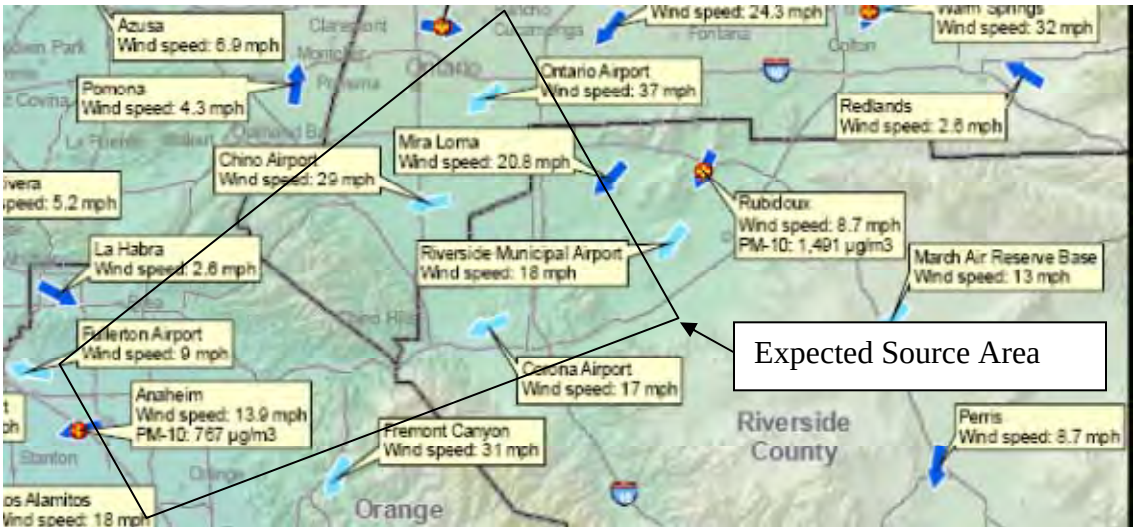


6.3.4.2 Transport of emissions related to the event in the direction of the monitor(s) where measurements were recorded

Example information to support transport of event-related emissions in the direction of monitor includes wind direction data showing that emissions from sources identified as part of the nRCP demonstration were upwind of the monitor(s) in question.

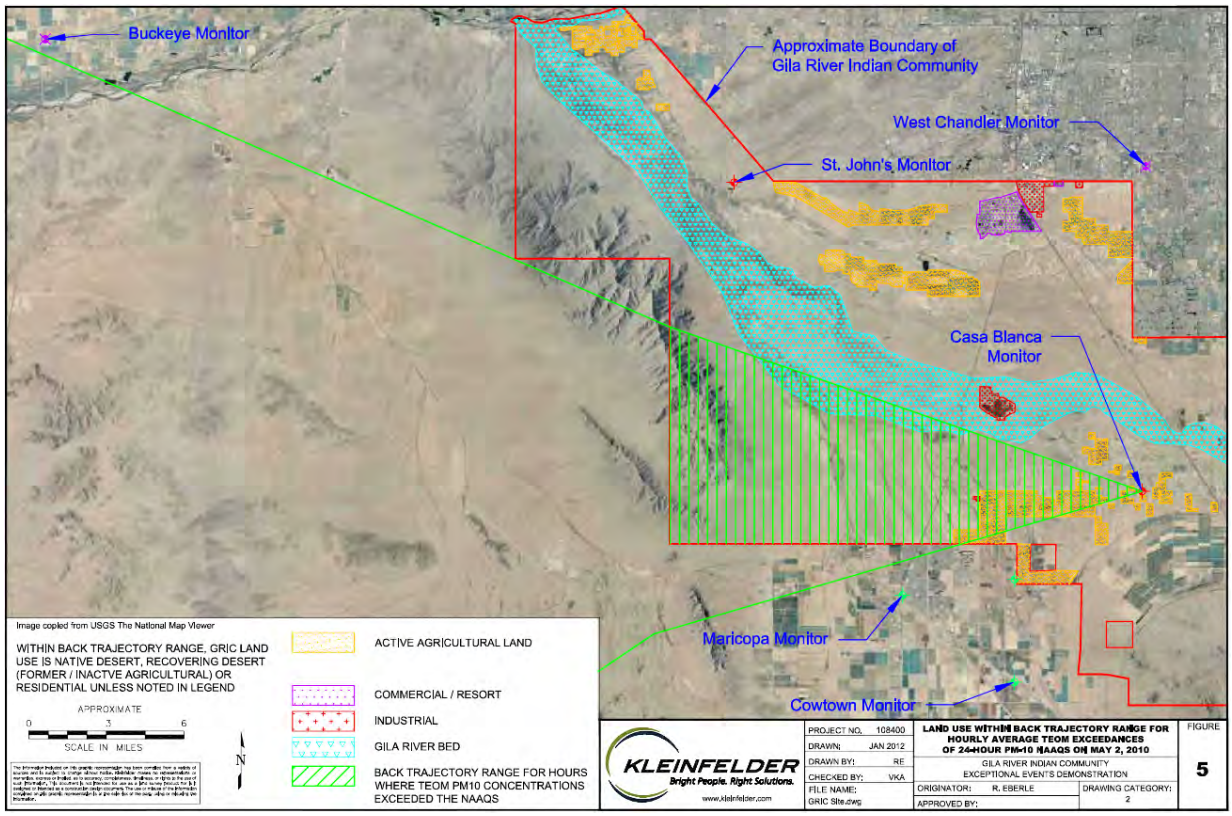
- Map showing local sources and wind direction[56]
  Note that the topography gives an indication of sources in this map. Ideally, the likely significant sources such as agriculture fields, desert areas, mountains, and industrial sources would be identified (see next example).

[56] EPA Region 9



- Back Trajectories:
  Even if extensive comprehensive controls analysis is not needed, a back-trajectory analysis as shown in Section 6.2.2.5 would be appropriate as part of the CCR demonstration. Note that HYSPLIT trajectories that cover hundreds of miles are of limited use if the sources of dust are local. The example[57] below uses 1-hour back trajectories based on local surface wind measurements during periods of high PM_{10} and GIS data to identify contributing source categories as well as the geographic extent of the event. The total area between the green lines represents the range of hourly back trajectories during periods of high PM_{10}, while the hatched green area represents the portion of the total area that is located with the Gila River Indian Community boundaries (signified by the solid red line).

[57] GRIC

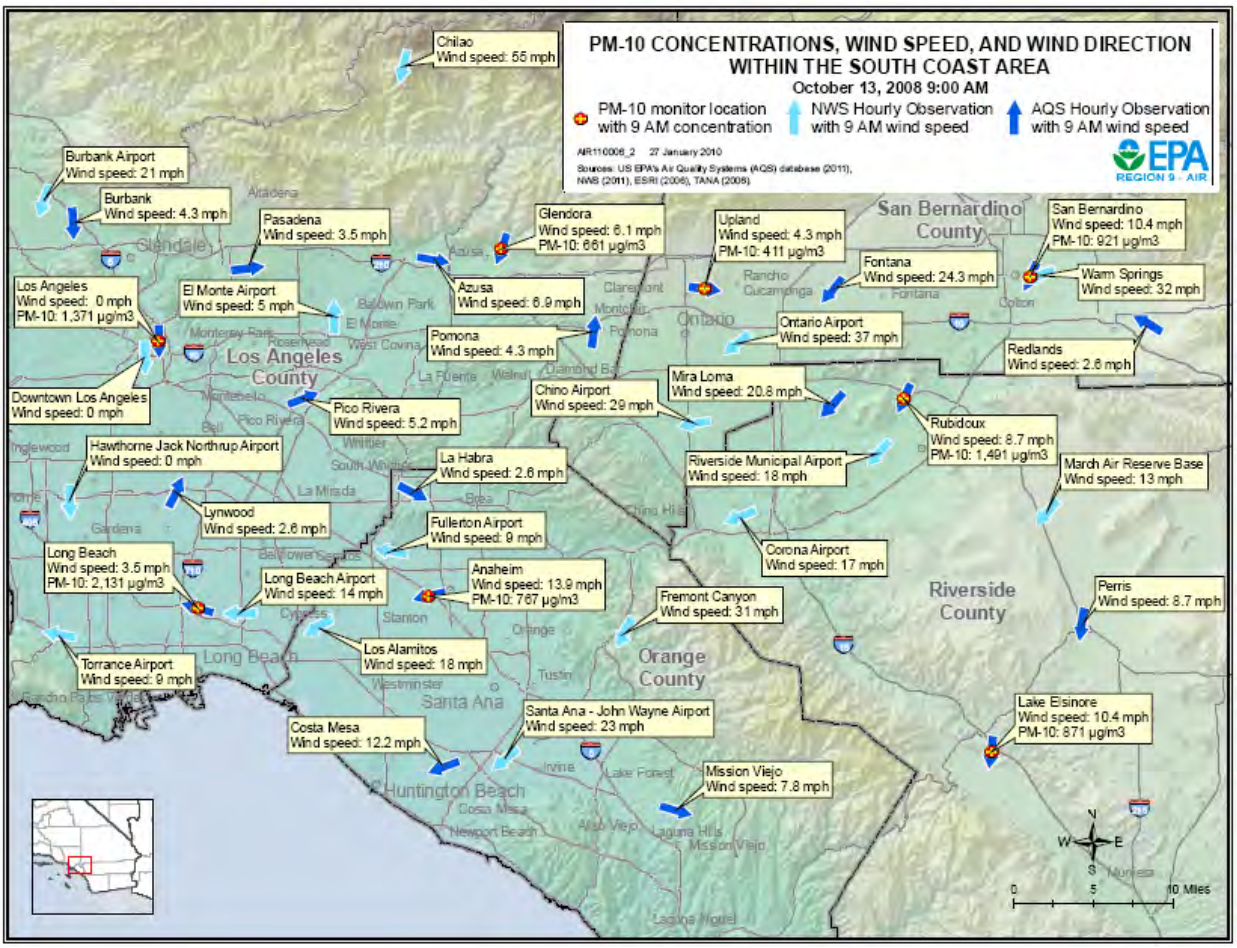


- Wind roses:
  A wind rose for periods of the event day showing wind speed and direction at or near the concentration monitor, coupled with a description of the area suggested by the wind rose, could provide evidence of where the dust was transported from. This approach may not suffice for situations where the sources of dust are not proximate to the monitor.

6.3.4.3 Spatial relationship between the event, sources, transport of emissions, and recorded concentrations

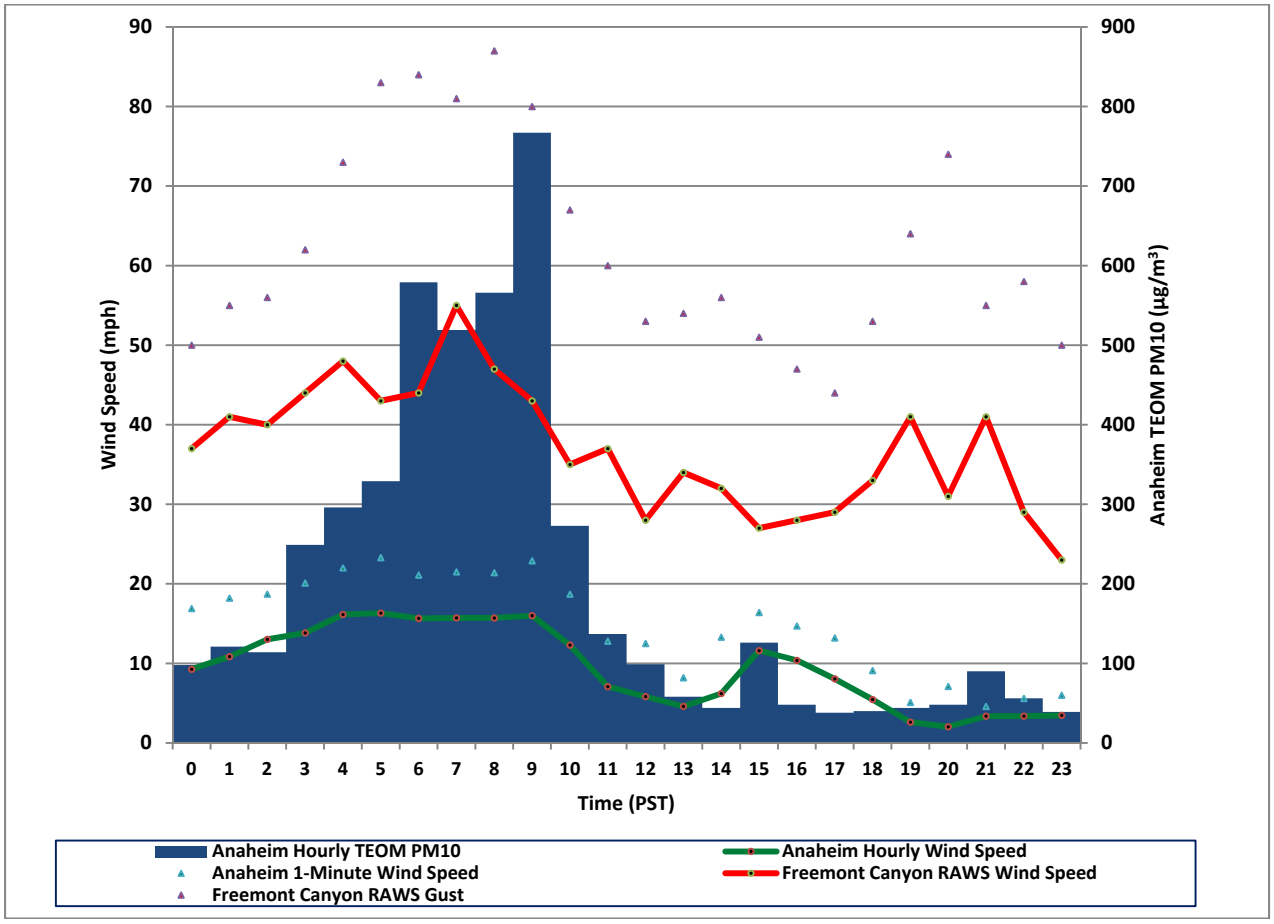
The type of information that would support this evidence could be a map showing likely source area, wind speeds, wind direction, and particulate matter concentrations for the affected area during the time of the event: see the example figure below.[58]

[58] EPA Region 9



6.3.4.4 Temporal relationship between the high wind and elevated PM concentrations at the monitor in question

Evidence for establishing the temporal relationship can include 24-hour time series showing PM concentrations at the monitor in question in combination with sustained and maximum wind speed data at the area where emissions originated. As shown below, it is most informative to include the sustained wind speed data and the concentration data on the same figure.



6.3.4.5 Similarity of chemical composition of measured pollution with that expected from sources identified as upwind

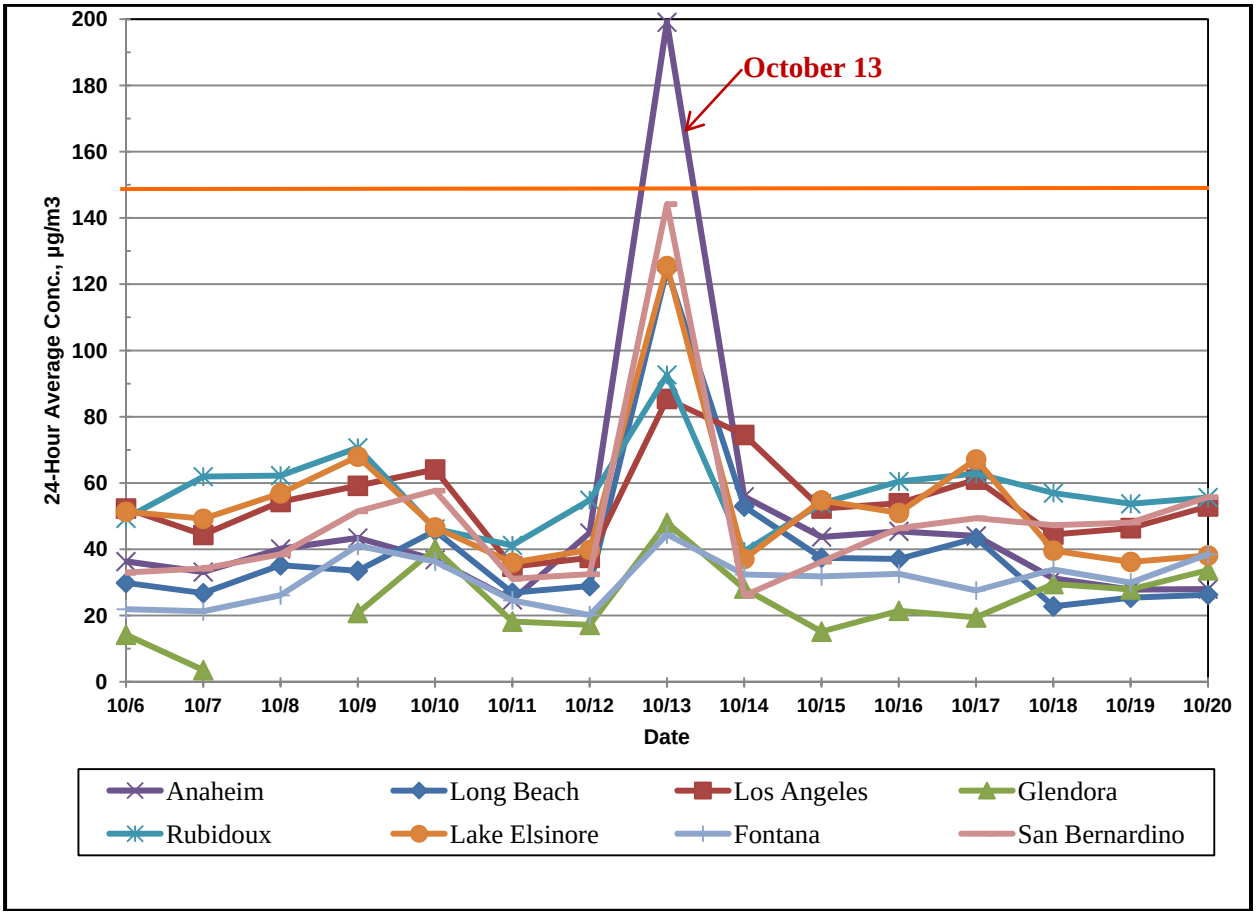
Information such as chemical speciation data from the monitored exceedance(s) and sources, or size distribution data, could be part of this type of evidence. These data are not always available, but should be included wherever possible. An example of this type of analysis will be incorporated in this document as one becomes available.

6.3.4.6 Comparison of event-affected day(s) to specific non-event days:

The following types of analyses could be part of this piece of evidence:

- comparison of concentrations and wind speed in the area to days preceding and following the event
- comparison of concentration data to specific days that are similar to the event day with respect to emissions and meteorology
- comparison to other high wind days without elevated concentrations
- comparison of chemical composition (if available)

The following figure is an example of a comparison of concentrations in the area to days preceding and following the event.[59]



6.3.4.7 Alternative Hypotheses

Eliminating other possible non-event causes supports the claimed causal relationship to the high wind event, although conclusively proving the absence of all possible or plausible other causes is not required or expected. For example, SCAQMD provided the following:

> Three wildfires were reported in southern California on October 13, fanned by the strong, dry Santa Ana winds, two in the San Gabriel Mountains north of the San Fernando Valley and one at Camp Pendleton in the north coastal part of San Diego County. Only one of these, the Marek Fire, was active during the early morning hours when the hourly PM_{10} concentrations spiked at Anaheim. Also, the northeasterly wind flows throughout the period, make it unlikely the smoke or ash from the fires contributed significantly to the PM_{10} measured at Anaheim. Crustal material from windblown dust was the primary

[59]Letter dated November 22, 2010 to Matthew Lakin, Manager Air Quality Analysis Office USEPA Region 9, from Karen Magliano, Chief Air Quality Data Branch California Air Resources Board, transmitting final report dated August 5, 2010 entitled "Analysis of Exceptional Events Contributing to High PM10 Concentrations in the South Coast Air Basin on October 13, 2008."

> component of the measured PM_{10}, as confirmed by comparing with the $PM_{2.5}$ measured on this day. Prescribed, agricultural or residential burning did not appear to have added any significant amount of PM_{10} to the concentrations measured in the Basin; these activities were not permitted on this day. The $PM_{2.5}$ portion of PM_{10}, which would indicate combustion sources, was very small throughout the Basin. PM_{10} was emitted from some BACM-controlled sources (mainly agricultural and construction activities) as BACM controls were locally overwhelmed by the high winds. Natural particulate sources areas also contributed to the measured PM_{10}, particularly the upwind mountain and desert areas.

6.3.5 Address Affects Air Quality (AAQ)

Once sufficient HF analyses have been provided and CCR has been demonstrated the event will generally have been considered to have affected air quality at the exceeding monitor, and thus the AAQ element will have been met. The demonstration should include a statement that AAQ has been met by providing HF analyses and demonstrating CCR.

6.3.6 Address [HAURL] / Natural Event

Once both CCR and nRCP have been demonstrated, the event will generally be considered a natural event, thus satisfying the [HAURL]/Natural Event element. The demonstration should include a statement that the Natural Event criterion has been met by demonstrating nRCP and CCR.

6.3.7 Step 5: Address No Exceedance But For the Event (NEBF)

The NEBF demonstration generally builds on information gathered to support other elements of an exceptional event demonstration. Further, if the exceptional events demonstration fails on a different element then the NEBF analysis becomes moot since there is no portion of the concentration than can be attributed to an exceptional event. For these reasons, EPA suggests that air agencies complete the NEBF demonstration last after addressing all other EER elements.

6.3.7.1 Qualitative NEBF

If non-event pollution levels are typically significantly below the NAAQS during the season of the event then a qualitative NEBF may be adequate. The following is provided as an example[60]:

> Activities that generate anthropogenic PM_{10} were approximately constant in the Basin immediately preceding, during and after the event. Activity levels in the Basin were typical for the time of year and PM_{10} emissions control programs were being implemented, not only for fugitive dust-generating activities, but also for agricultural burning in the Basin. Furthermore, due to the forecasts for high winds on October 13, the SCAQMD compliance teams were ready to act quickly to fugitive dust complaints to

[60]Letter dated November 22, 2010 to Matthew Lakin, Manager Air Quality Analysis Office USEPA Region 9, from Karen Magliano, Chief Air Quality Data Branch California Air Resources Board, transmitting final report dated August 5, 2010 entitled "Analysis of Exceptional Events Contributing to High PM10 Concentrations in the South Coast Air Basin on October 13, 2008."

minimize emissions and to enforce mitigation methods like watering and soil stabilization.

Vehicular traffic, cooking and residential fires do not directly cause PM_{10} 24-hour NAAQS violations in the Basin. Activity levels in the Basin were typical for the time of year and PM_{10} emissions control programs were being implemented, for fugitive dust-generating activities, as well as open burning. With the unsettled conditions on October 13, such emissions would not contribute significantly to the PM_{10} measured. There were reasonable and appropriate measures in place to control PM_{10} in the Basin on October 13, 2008, including SCAQMD Rules 403, 444, 445, 1156, 1157, 1158 and 1186.

Examining the make-up of the PM_{10} in the Basin on this day using $PM_{2.5}$ data, the coarse particles ($PM_{10-2.5}$), which are associated with windblown dust, represent well over 75% of the total PM_{10} mass collected in the Basin. The three wildfires that were burning in the Basin, one of which started on October 12 and two other after the high hourly PM_{10} concentrations started, were not the primary cause of the high PM_{10}. $PM_{2.5}$ remained relatively low throughout the Basin on this day with no exceedance of the 24-hour NAAQS. While there were no PM_{10} filters collected on this day for laboratory analyses for soluble potassium, an indicator of wood smoke, the predominance of coarse particles, the timing of the fires and the lack of supporting wind directions to bring smoke to Anaheim provide support the conclusion that while there could have been a minor contribution from the wildfires, it was relatively small portion of the PM_{10} measured.

Based on the data provided in this report, SCAQMD concludes that there would not have been exceedances of the PM_{10} NAAQS in the Basin on October 13, 2008 if high winds were not present. Even if the extreme 99.5 percentile concentration for the Basin, 139.5 $\mu g/m^3$, were used as the background concentration to compare to the measured PM_{10} concentrations, the particulate contribution from the high wind event clearly caused these exceedances. The causal connection of the measured PM_{10} and the strong winds in the Basin, and throughout southern California, along with the high contribution of fugitive dust to the PM_{10} mass indicate that but for the high wind event this NAAQS violation would not have occurred.

6.3.7.2 Quantitative NEBF

A quantitative NEBF will generally be expected if concentrations on days without events during the same season exceed the standard or are near the standard and/or if the contribution of non-event pollution produces concentrations near the applicable NAAQS. An example of a quantitative NEBF analysis will be incorporated in this document as one becomes available.

6.4 Prepare High Wind Action Plan (optional)

A High Wind Action Plan is primarily used to document controls on additional sources that need reasonable controls for future events to be considered not reasonably controllable or preventable. If an air agency discovers (an) uncontrolled source(s) of dust during the course of the event demonstration, the air agency may choose to submit a High Wind Action Plan, either separately or along with the demonstration package. Alternatively, EPA may identify a source previously

unidentified by the air agency that EPA considers to be reasonably controllable. In this case, an air agency could submit a High Wind Action Plan following the submission of the demonstration package. A High Wind Action Plan is developed to address sources that could reasonably be controlled to minimize the occurrence of future events. As such, the following information would be included:

- Source(s) targeted for controls
- Description of controls
- Oversight/enforcement plan, including on/before event days
- Implementation timeline
- Documentation of effective implementation and enforcement
- The high wind threshold for the collective set of high wind dust sources, including those previously subject to reasonable controls and those that are being proposed for reasonable controls in the High Wind Action Plan (refer to Appendix A3 for determining this threshold).

EPA has not established a particular format for the High Wind Action Plan but notes that most of the information needed for an approvable High Wind Action Plan was required in a Natural Events Action Plan (see Section 3.7.2); therefore, a NEAP may provide a useful template. When the High Wind Action Plan is submitted with a demonstration package, EPA recommends including it as an appendix and referencing it in the nRCP section. As mentioned in Section 3.7.2, the High Wind Action Plan can be submitted before, with, or after submittal of a demonstration package.

Appendix A1. Summary of Studies on Windblown Dust Emissions

Windblown dust is often but not always a controllable and preventable form of PM_{10} pollution. To ensure effective implementation of the EER, it is useful to determine the wind speed at which windblown dust no longer becomes reasonably controllable. Agencies may develop a high wind threshold for each area experiencing high wind dust events. Appropriate area-specific thresholds would consider local conditions, sources, and controls and specify a speed above which these controls would be overwhelmed. This approach is consistent with the Natural Events Policy where the EPA required the states/local agencies to define the conditions in which BACM level controls were overwhelmed. If an agency is unable to develop an area-specific wind threshold, the EPA will accept a default threshold of 25 mph. Areas with local data supporting of an area-specific high wind threshold should submit this information to EPA for review and approval.

The default 25 mph high wind threshold is mainly based on extensive windblown dust emissions research performed by the University of Nevada, Las Vegas (UNLV). The Clark County Department of Air Quality and Environmental Management (DAQEM) contracted with the Department of Civil and Environmental Engineering, University of Nevada, Las Vegas (UNLV) to conduct field studies to generate refined wind-blown PM_{10} emissions factors for stable natural, and unstabilized, disturbed surfaces. [61] The latest study was performed in 2004 using a portable wind tunnel at 31 locations in the Las Vegas valley that represented nine different soil groups.[62] All of the test sites were determined to be stable through the same methods as outlined in DAQEM's fugitive dust rules for open areas and vacant lots and thus provide a consistent measure of "stable" conditions.[63] The sites chosen for the wind tunnel tests were determined to be stable "as-is" (i.e. no physical stabilization was performed to alter the site conditions).These same test sites were then intentionally destabilized and subsequently retested using the same wind tunnel approach that had been used on the previously stabilized surfaces. A summary of the 2004 field study results can be seen in Figure ES-1. The 2004 data show that non-linear increases in PM_{10} flux generally begin to occur at sustained 10 meter velocities exceeding 25 mph. Note that the Clark County study found small amounts of entrainment below 25 mph. The small PM_{10} fluxes observed at lower winds speeds could be attributed to aerodynamic entrainment, which occurs primarily when fine particles are lifted directly off the ground and remain elevated. While it is expected that small amounts of aerodynamic entrainment could occur when wind speeds are below 25 mph, these are not expected to result in exceedances in most western areas, particularly the desert areas such as in Clark County.

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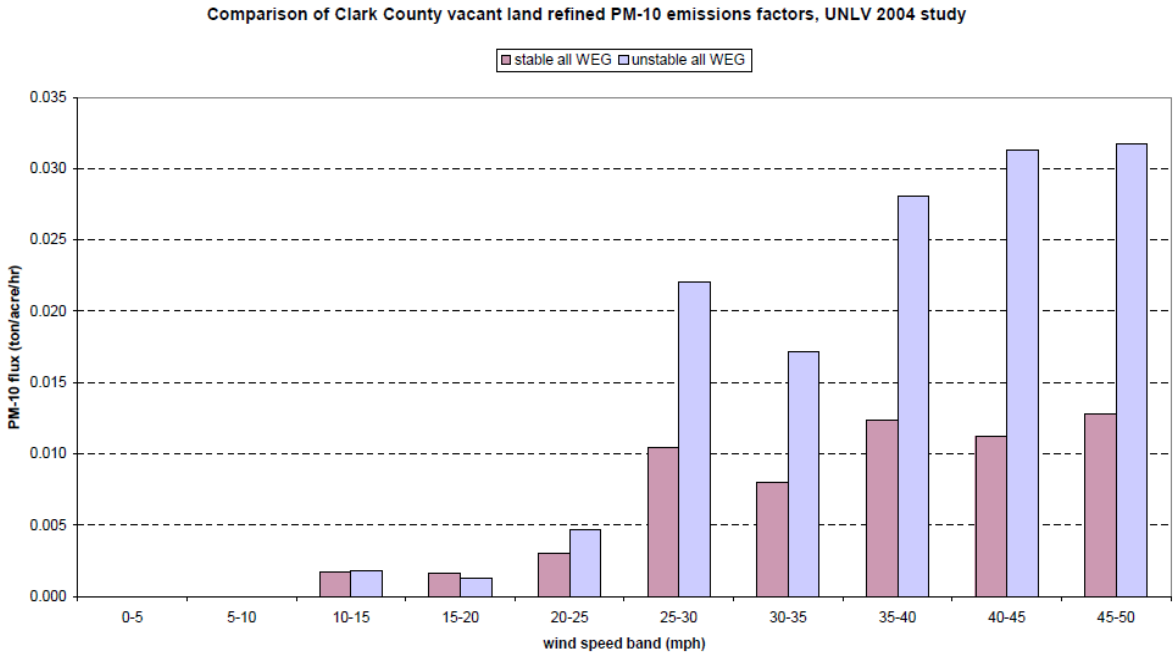
[61]Refined PM_{10} Aeolian Emission Factors for Native Desert and Disturbed Vacant Land Areas. Final Report, June 30, 2006, http://www.clarkcountynv.gov/Depts/daqem/Documents/Planning/SIP/PM10/App_E_-Refined%20Emission%20Factors.pdf.

[62] Sites were characterized in terms of Wind Erodibility Groups (WEGs).

[63]Clark County Department of Air Quality and Environmental Management Air Quality Regulations, Section 90 – Fugitive Dust from Open Areas and Vacant lots, Subsection 90.4. Test Methods, revised 12/17/2002.

Figure ES-1 – Summary of wind-blown geometric mean PM-10 Emissions factors, averaged over all wind erodibility groups. UNLV 2004 wind tunnel field study. Error bars omitted to clarify differences between wind speed bands.

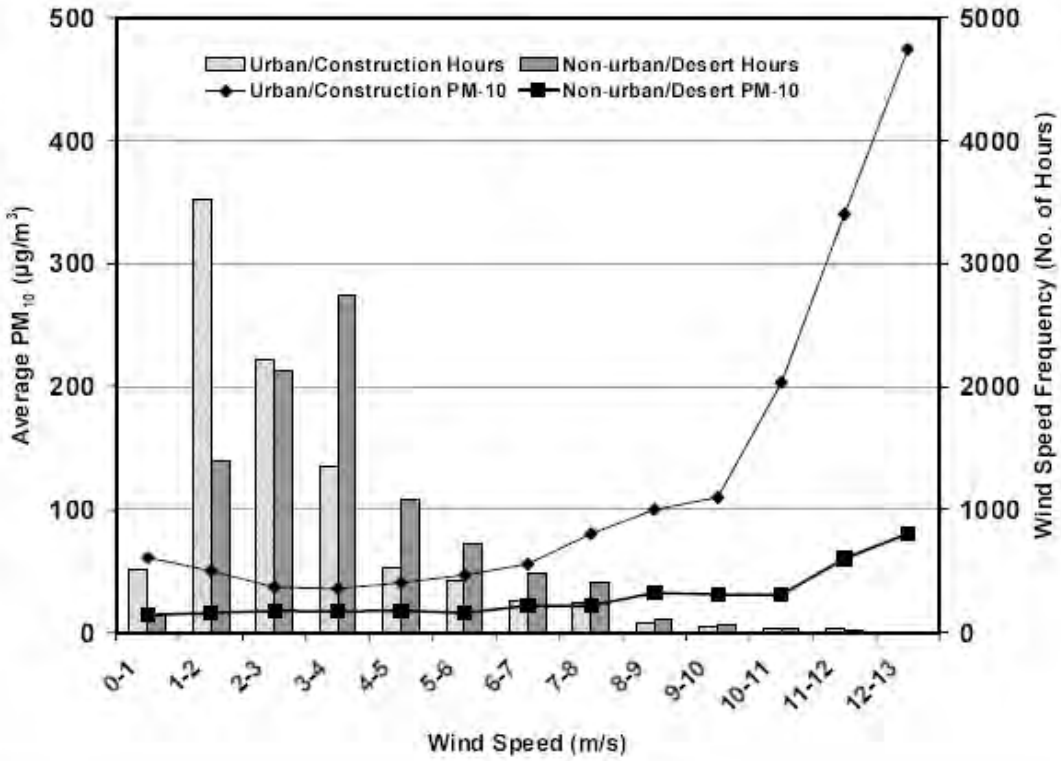


The EPA believes that for Clark County and areas similar to it, these results clearly differentiate emissions from stable and disturbed conditions and provide a reasonable baseline for establishing a high wind threshold for exceptional events purposes.

Furthermore, studies conducted by the Desert Research Institute (DRI) in Clark County, NV have concluded that windblown desert dust contributes to approximately 20% of measured PM_{10} in urban areas and that only desert soils that have been disturbed by anthropogenic activities are large emitters under common high wind conditions.[64] These studies also conclude that windblown PM_{10} from urban/disturbed surfaces are not seen until 10 meter hourly average wind speeds are greater than 7 m/s (16 mph), while nonurban desert show a significant increase in PM_{10} emissions only when hourly average wind speeds are greater than 11 m/s (25 mph). See Figure 3-1 for a graphical representation of these data. The authors note that these results refute the argument that most urban dust derives from natural surfaces.

[64] Watson, J.G. and Chow, J.C. 2000. Reconciling Urban Fugitive Dust Emissions Inventory and Ambient Source Contribution Estimates: Summary of Current Knowledge and Needed Research. *DRI Document No. 6110.4F*.

Figure 3-1.. Average PM_{10} classifed by wind speed from hourly beta attenuation monitor (BAM) measurements at an Urban/Construction site and a Non-Urban/Desert site near Las Vegas, NV during 1995 (Chow and Watson, 1997b; Chow et al., 1999). Wind speeds were measured at 10 m above ground level.



These results are also consistent with results obtained from wind tunnel studies performed throughout the state of Arizona.[65] These studies suggest that windblown dust emissions from scrub desert and dune flat areas occur when wind speeds are greater than 11.3 m/s (25 mph) and 18.31 (41 mph), respectively. The same study revealed that surfaces that had been disturbed by anthropogenic activities began to produce emissions when wind speeds ranged from 5.11 m/s (11 mph) to 8.11 m/s (18 mph). The effect of surface disturbance on threshold wind speeds was further examined for a number of natural desert soils by a number of researchers.[66] The main conclusion was that disturbance of soils profoundly lowers the threshold friction velocity of desert soils.

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[65] Nickling, W.G. and Gillies, J.A. 1989. Emission of Fine Grained Particulates From Desert Soils. In *Paleoclimatology and Paleometeorology: Maodern and Past Patterns of Global Atmospheric Transport*. Leinen, M. and Sarnthein, M., (Eds.) Kluwer Academic Publishers. 133-165.

[66] Gillette, D.A. 1980. Threshold Velocities for Input of Soil Particles into the Air by Desert Soils. *Journal of Geophysical Research*. 85: 5621-5630; Gillette, D.A. 1982. Threshold Friction Velocities and Rupture Moduli for Crusted Desert Soils for the Input of Soil Particles into the Air. *Journal of Geophysical Research*. 87: 9003-9015; Belnap, J. 2007. Wind Erodibility of Soils at Fort Irwin, California (Mojave Desert), USA, Before and After Trampling Disturbance: Implications for Land Management. *Earth Surface Processes and Landforms.* 32: 74-84; Belnap, J. 1998. Vulnerability of Desert Biological Soil Crusts to Wind Erosion: The Influences of Crust Development, Soil Texture, and Disturbance. *Journal of Arid Environments.* 39: 133-142.

In EPA's weight-of-evidence analysis of high wind dust events, the EPA will assumed that sustained wind speeds above the applicable high wind threshold (area specific or 25 mph default) are capable of overwhelming reasonable controls on anthropogenic sources or causing emissions from natural undisturbed areas in arid, semi-arid, or seasonally dry regions, such as in Clark County, NV. The EPA will further assume that wind speeds below this threshold will entrain more dust emissions per acre or square mile from disturbed anthropogenic sources that have not been reasonably-controlled than from natural surfaces and stabilized disturbed surfaces.

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Appendix A2. Summary of Available Relevant Literature Related to Establishing Area-Specific High Wind Thresholds

Alfaro, S. 2004. Estimation of PM20 Emissions by Wind Erosion: Main Sources of Uncertainties. *Geomorphology*, 59: 63-74.

Alfaro, S. 2001 Modeling Mineral Aerosol Production by Wind Erosion: Emission Intensities and Aerosol Size Distributions in Source Areas. *Journal of Geophysical Research*, 106: NO. D16, 18075-18084.

Benlap, J. and Gillette, D. 1998. Vulnerability of Desert Biological Soil Crusts to Wind Erosion: the Influences of Crust Development, Soil Texture, and Disturbance. *Journal of Arid Environments.* 39: 133-142.

Brazel, A.J. and Nickling, W.G. 1986. The Relationship of Weather Types to Dust Storm Generation in Arizona (1965-1980). *Journal of Climatology*. 6: 255-275

Brazel, A.J. and Nickling, W.G. 1984. Temporal and Spatial Characteristics of Arizona Dust Storms (1965-1980). *Journal of Climatology.* 4: 645-660.

Breed, C.S., and Reheis, M.C. (Eds.) 1999. Desert Winds: Monitoring Wind-Related Surface Processes in Arizona, New Mexico, and California. *U.S. Geological Survey Professional Paper 1598.*

Chow, J.C., Pace, T.G., and Watson, J.G. 2000. Fugitive Dust Emissions. In *Air Pollution Engineering Manual*, Davis, W.T., (Ed.) Van Nostrand Reinhold, New York, NY.

Countess Environmental. 2006. WRAP Fugitive Dust Handbook. Prepared for Western Governors' Association by Countess Environmental, Westlake Village, California. September 7.

Cowherd, C. 1995. Wind Tunnel Studies of BACM Effectiveness. Final Test Report. Prepared for South Coast Air Quality Management District by Midwest Research Institute (MRI). Contract No. 95017. MRI Project No. 3826.

Cowherd, C. 2000. Wind Erodibility Assessment of the Stabilized Soils in the Antelope Valley. Test Report. Prepared for Southern California Edison and the City of Los Angeles Department of Airports by Midwest Research Institute (MRI). Contract No. U1109008. MRI Project No. 110028

ENVIRON. 2004. Determining Fugitive Dust Emissions from Wind Erosion. Final Report. Prepared for Western Governors' Association by ENVIRON International Corporation, Novato, California; ERG, Inc., Sacramento, California; Desert Research Institute, Reno, Nevada, MACTEC Engineering & Consulting, Gainsville, Florida and University of California Riverside, Riverside, California. March 12.

ENVIRON. 2006. Fugitive Windblown Dust Emissions and Model Performance Evaluation Phase II Final Report. Prepared for Western Governors' Association by ENVIRON International Corporation, Novato, California and University of California Riverside, Riverside, California. May 5.

Environmental Quality Management and MRI. 2006. An Inventory of Vacant Land Soil Stability and Private Unpaved Roads in the Las Vegas Valley Using Remote Sensing Imagery. Prepared for Clark County Department of Finance Purchasing and Contracts by Environmental Quality Management, Inc. and Midwest Research Institute. PN 70204.001.

Gillette, D.A. 1978. Tests with a Portable Wind Tunnel for Determining Wind Erosion Threshold Velocities. *Atmospheric Environment*. 12: 2309-2313.

Gillette, D.A., Adams, J., Endo, A., and Smith, D. 1980. Threshold Velocities for Input of Soil Particles into the Air by Desert Soils. *Journal of Geophysical Research*. 85: 5621-5630

Gillete, D.A., Adams, J., Muhs, D., and Kihl, R. 1982 Threshold Friction Velocities and Rupture Moduli for Crusted Desert Soils for the Input of Soil Particles into the Air. *Journal of Geophysical Research.* 87: 9003-9015.

Gillette, D.A and Stockton, P.H. 1989. The Effect of Nonerodible Particles On Wind Erosion of Erodible Surfaces. *Journal of Geophysical Research.* 94: 12855-12893.

Gillette, D.A. 1999. A Qualitative Geophysical Explanation for "Hot Spot' Dust Emitting Source Regions. *Contr. Atomos. Phys*. 72: 67-77.

Gillies, J.A. and Berkofsky, L. 2004. Eolian Suspension Above the Saltation Layer, the Concentration Profile. *Journal of Sedimentary Research.* 72: 176-183.

Goudie, A.S. and Middleton, N.J. 1992. The Changing Frequency of Dust Storms Through Time. *Climatic Change*. 20: 197-225

Houser, C.A. and Nickling, W.G. 2007. The Emission and Vertical Flux of Particulate Matter <10 μg from a Disturbed Clay Crusted Surface. *Sedimentology*. 48: 255-267.

Fitz, D.R. 1996. Field Study to Determine Limits of Best Available Control Methods for Fugitive Dust Under High Wind Conditions. Final Report. Prepared for South Coast Air Quality Management District by University of California Riverside, CA. Contract R-C94159.

Kjelgaard, J. 2004. PM10 Emission from Agricultural Soils on the Columbia Plateau: Comparision of Dynamic and Time-Integrated Field-Scale Measurements and Entrainment Mechanisms. *Agriculture and Forest Meteorology*. 125: 259-277.

Mansell, G.E., Lau, S., Russell, J. and Omary, M. 2006. Fugitive Wind Blown Dust Emissions and Model Performance Evaluation Phase II. Prepared for Western Governors'

Association by ENVIRON International Corporation and the University of California at Riverside College of Engineering.

Macpherson, T., Nickling, W.G., Gillies, J.A., and Etyemezian, V. 2008. Dust Emissions from Undisturbed and Disturbed Supply-Limited Desert Surfaces. *Journal of Geophysical Research*. doi: 10.1029/2007JF000800.

Neuman, C.M., Boulton, J.W., and Sanderson, S. 2009. Wind Tunnel Simulation of Environmental Controls on Fugitive Dust Emissions from Mine Tailings. *Atmospheric Environmen*t. 43: 520-529.

Nickling, W.G. and Gillies, J.A. 1989. Emission of Fine Grained Particulates From Desert Soils. In *Paleoclimatology and Paleometeorology: Maodern and Past Patterns of Global Atmospheric Transport*. Leinen, M. and Sarnthein, M., (Eds.) Kluwer Academic Publishers. 133-165.

Ono, D. 2006 Application of the Gillette Model for Windblown Dust at Owens Lake, CA. *Atmospheric Environment*. 40: 3011-3021.

Roney, R.A. and White, B.R. 2004. Definition and Measurement of Dust Aeolian Thresholds. *Journal of Geophysical Research*. doi: 10.1029/2003JF000061.

Shao, Y., 2000a. Physics and Modelling of Wind Erosion. Kluwer Academic Publishers, Dordrecht, 393 pp.

Sharratt, B., Feng, G, and Wending, L. 2007. Loss of Soil and PM10 From Agricultural Fields Associated with High Winds on the Columbia Plateau. *Earth Surface Processes and Landforms*. 32: 621-630.

Sierra Research. 2003. Final BACM Technological and Economic Feasibility Analysis. Prepared for San Joaquin Valley Unified Air Pollution Control District by Sierra Research, Inc, Sacramento, California. March 21.

U.S. EPA 1992. Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures. EPA-450/2-92-004.

Wancaser, R., James D., Jeong, H., and Pulurgurtha, S. 2006. Refined PM10 Aeolian Emission Factors for Native Desert and Disturbed Vacant Land Area. Final Report, June 30,2006.

Watson, J.G. and Chow, J.C. 2000. Reconciling Urban Fugitive Dust Emissions Inventory and Ambient Source Contribution Estimates: Summary of Current Knowledge and Needed Research. *DRI Document No. 6110.4F*.

Appendix A3. Methods for Establishing Area-Specific High Wind Thresholds

As explained in Appendix A1, the EPA primarily based the 25 mph threshold on extensive windblown dust emissions research performed by the University of Nevada, Las Vegas (UNLV). During UNLV's studies, researchers used a wind tunnel to quantify emissions from undisturbed areas meeting the definition of "stable" surfaces within Clark County's (Nevada) BACM level fugitive dust regulations and mechanically disturbed open areas. The research performed by UNLV is one of the few field studies that clearly relate BACM level control of windblown dust from open areas and PM_{10} emissions. The EPA believes that the study results clearly differentiate emissions from these two types of conditions and provide a reasonable baseline for establishing a high wind threshold for exceptional events purposes for such areas.

While the UNLV study stands out as the most definitive source of information concerning wind speeds capable of overwhelming BACM for open area windblown dust sources and/or causing emissions from natural undisturbed areas, EPA believes that other sources of information can be used to develop an area-specific high wind threshold.

First, the EPA encourages state, local, and tribal agencies to evaluate the existing windblown dust literature identified in Appendix A2 when developing an area-specific threshold and determine if any of the preexisting information is applicable to their area.

Secondly, while full-scale windblown dust emissions field studies are not always feasible, agencies may deploy temporary monitoring stations or use existing monitoring data to evaluate the effects of wind speed on different source categories. For example, as explained in Appendix A1, DRI used existing monitoring sites in Clark County to evaluate the relationship between urban/construction and non-urban/desert conditions.[67] While this data was independent of the detailed wind tunnel emissions studies performed by UNLV in the same area, the results were similar: nonurban desert show a significant increase in PM_{10} emissions only when wind speeds are greater than 11 m/s (25 mph). The EPA believes that this is valid method for determining an area-specific threshold, but the use of existing monitoring sites (or temporary sites) to establish a wind speed/PM relationship for different source categories should be carefully evaluated for representativeness. For example, sites used to evaluate emissions from natural undisturbed desert areas should not be located downwind of any potential anthropogenic sources, as the influence from such sources would lower the expected high wind threshold. Also, simply correlating PM to wind speed without assessing representativeness of the monitoring site locations does not provide useful information for exceptional events purposes.

Finally, area and/or source specific research may be performed, if needed. Specific information on the techniques used to assess windblown dust emissions can be found within the literature listed in Appendix A2.

Regardless of the method used, an area-specific high wind threshold must consistent with the requirements of the EER, specifically nRCP, and representative of wind speeds capable of

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[67] Watson, J.G. and Chow, J.C. 2000. Reconciling Urban Fugitive Dust Emissions Inventory and Ambient Source Contribution Estimates: Summary of Current Knowledge and Needed Research. *DRI Document No. 6110.4F*.

overwhelming reasonable controls or causing emissions from natural undisturbed areas. The EPA will not approve the use of an area-specific threshold if these basic principles are not upheld. The EPA encourages the state, local, and tribal agencies responsible for developing an area-specific threshold to consult with their respective regional office during the development process.

Appendix B1. Checklist for High Wind Exceptional Events Demonstration Submission

Completeness Checklist for High Wind Dust Exceptional Events.

Instructions: This checklist is provided as a guideline to help submitting agencies identify the types of information and analyses to include in an exceptional events demonstration package. In some cases (e.g., wind speeds above the identified high wind threshold), agencies will not need to include all parameters under each criterion. The EPA encourages agencies to include a completed checklist with their submitted exceptional events demonstration package. Note that completion of this checklist does not indicate that the event in question is concurrable nor does it guarantee a "complete" package. The EPA may ask for clarification or additional information to support a specific criterion.

Site Name/AQS ID: _____

Pollutant: _____

Date(s): _____

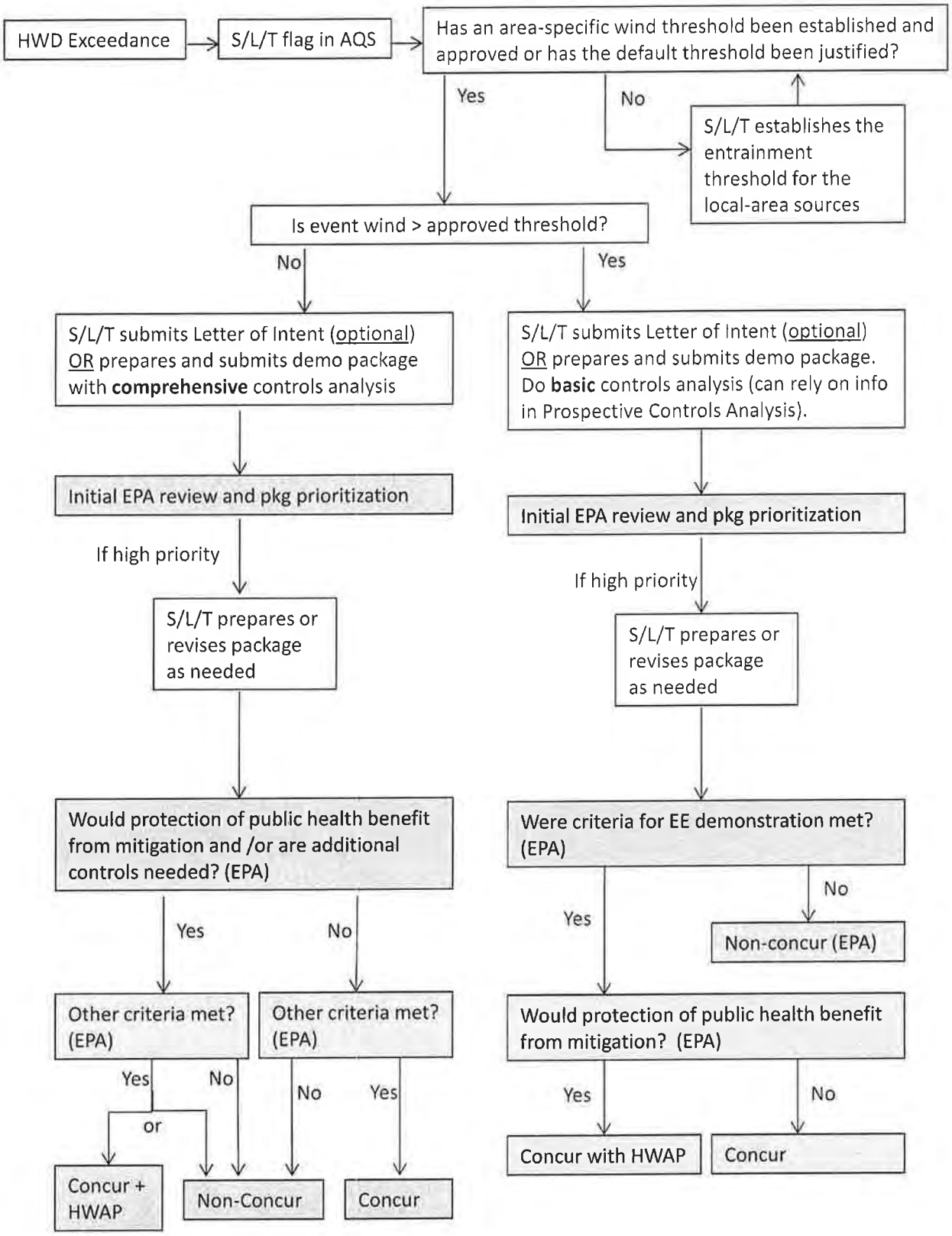
Procedural Criteria		EPA Use
Did an exceedance of the NAAQS occur?	[Y/N]	
Were data flagged by July 1st of following year?	[Y/N]	
Was there a 30-day public comment period? Is documentation for the comment period included?	[Y/N] [Y/N]	
If public comments were received, are the public comments and responses included?	[Y/N]	
Was the package submitted within 3 years of the end of the quarter in which the event occurred and 12 months prior to the date that any regulatory decision must be made by EPA?	[Y/N]	

(over)

Evidence	**Information Included**	**Page(s)**	EPA Use
Conceptual Model			
-description of weather phenomena resulting in high wind	[Y/N]	[page #]	
-description of what sources were likely entrained by the high wind	[Y/N]	[page #]	
-explanation of the path by which the dust reached the monitor(s)	[Y/N]	[page #]	
-map showing relevant monitors, topography, other relevant geographic features	[Y/N]	[page #]	
-description of how the event day differs from non-event days	[Y/N]	[page #]	
-description of concentration and wind patterns for the exceeding monitor(s) and surrounding area	[Y/N]	[page #]	
Wind Statistics			
-max sustained wind (Hourly avg)	[X mph]	[page #]	
- max sustained wind (1-5 min avg)	[X mph]	[page #]	
-max gust (1 min avg)	[X mph]	[page #]	
-wind trajectories included?	[Y/N]	[page #]	
-other:	[list other wind analyses]	[page #]	
nRCP			
-Area-specific high wind threshold (default = 25mph)	[25 mph]	[page #]	
-sources contributing to event identified, including anthropogenic vs. natural?	[Y/N]	[page #]	
-controls identified for anthropogenic sources? (note: level of control analysis depends on wind speed)	[Y/N]	[page #]	
-are natural sources not reasonably controllable?	[Y/N]	[page #]	
-was a High Wind Action Plan included?	[Y/N]	[page #]	
HF			
-were time-series analyses for concentration and wind data included?	[Y/N]	[page #]	
-annual comparison to historical data (wind and concentrations)	[%ile]	[page #]	
-seasonal comparison to historical data (wind and concentrations)	[%ile]	[page #]	
CCR (=> AAQ & / Natural Event)			

-were spatial analyses included, establishing a spatial relationship between the event, sources, transport of emissions, and recorded concentrations?	[Y/N]	[page #]	
-were temporal analyses included, establishing a temporal relationship between the high wind and elevated PM concentrations at the monitor?	[Y/N]	[page #]	
-comparison of event-affected day(s) to specific non-event days?	[Y/N]	[page #]	
-was the dust shown to be from the sources discussed in the nRCP section?	[Y/N]	[page #]	
-were alternative hypotheses discussed?	[Y/N]	[page #]	
-was a causal (not just correlational) relationship established?	[Y/N]	[page #]	
NEBF			
-was a but-for analysis included?	[Y/N]	[page #]	

Appendix B2. Flowchart of Potential Review Process



Appendix C. Sample Letter of Intent

September 16, 2011

Matthew Lakin
U. S. Environmental Protection Agency, Region 9
75 Hawthorne Street
Mail Code: AIR-7
San Francisco, CA 94105

SUBJECT: Exceptional Event Documentation
District: San Luis Obispo APCD
Event Type: PM2.5 - Wildfire/Smoke Impact
Event Date: August 14, 2009

Site	AQS No	POC	Pollutant/Monitor	Concentration
Atascadero	060798001	3	PM2.5 FEM BAM	51.6 $\mu g/m^3$

Dear Mr. Lakin:

The San Luis Obispo County Air Pollution Control District (APCD) submitted Exceptional Event Documentation on July 22, 2010 to the U. S. Environmental Protection Agency and the California Air Resources Board (CARB) that addresses wildfire emission impacts on PM2.5 concentrations at the Atascadero monitoring station on August 14, 2009. This data has been appropriately flagged in the AQS data base. The EPA was notified of the intent to submit this documentation via a CARB email on June 21, 2010. CARB provided comments to the APCD and the APCD revised and resubmitted the report to CARB on May 25, 2011. On June 15, 2011, CARB provided additional comments to the APCD illustrating how the documentation should be specifically modified to ensure acceptance by EPA.

Before the APCD proceeds with further modifications to the documentation based on CARB comments, the APCD respectfully requests that EPA provide feedback as to whether EPA will act on this Exceptional Event Documentation package. In addition, please indicate whether the 2009 data year will be used for future San Luis Obispo County PM2.5 attainment demonstrations.

The Exceptional Event Documentation dated July 22, 2010 is located on the APCD website:

http://www.slocleanair.org/air/pdf/2010/ExceptionalEventAug_14_2009_AtascaderoPM2.pdf

The revised working draft dated May 25, 2011 that was submitted to CARB for comment is located on a not-public location on the APCD website:

http://www.slocleanair.org/air/epa.php

If you have need for additional materials, please contact me at (805) 781 5743 or garcemont@co.clo.ca.us.

Sincerely,

Gary Arcemont
Air Quality Specialist

GJA/arr

cc: Karen Magliano, ARB

Attachment 3
Request for Comments on the Draft Guidance Documents on the Implementation of the Exceptional Events Rule

1. The EPA has developed draft exceptional event implementation guidance with the goal of establishing clear expectations to enable affected agencies to better manage resources as they prepare the documentation required under the EER. These draft guidance documents identify mechanisms (e.g., demonstration prioritization, review time lines, High Wind Action Plans) to streamline the demonstration development, submittal, and review process. The EPA seeks comment regarding other specific, broadly applicable, streamlining mechanisms that the EPA could incorporate into the exceptional event implementation process.

2. The EPA has modified the exceptional events website at http://www.epa.gov/ttn/analysis/exevents.htm to include additional links to tools, such as the DataFed website, that submitting agencies may use in the development of their demonstration submittals. The EPA has also posted exceptional event demonstrations that have already been reviewed and acted upon by the EPA. The EPA solicits feedback regarding other web-based information, links, tools, or methodologies that we can similarly post on our website.

3. In the draft exceptional events guidance documents, the EPA defines the high wind threshold as the minimum threshold wind speed capable of overwhelming reasonable controls on anthropogenic sources (i.e., capable of causing significant dust emissions from controlled sources) or causing emissions from natural undisturbed areas. The EPA further notes that this area-specific threshold, along with the submitter's analysis of implemented reasonable controls and other factors, helps inform the analysis of the "not reasonably controllable or preventable" criterion. The EPA intends to allow air agencies to use wind data from a multitude of sources in the development of high wind thresholds. The EPA has identified several sources of local wind speed data including the National Weather Service, the National Climate Center, and local air monitoring stations. In addition, states may use models such as MM5, WRF, and NAM, to develop local wind speed data. The EPA solicits feedback on additional available sources of wind data and their applicability in informing local high wind analyses.

4. As mentioned in Question 3, demonstrations for high wind dust events necessarily include wind speed analyses. Generally, the EPA will accept that high winds could be the cause of a high 24-hour average PM10 or PM2.5 concentration if there was at least one full hour in which the hourly average wind speed was above the area-specific high wind threshold. Potential issues arise when determining the hourly average wind speed if wind speeds are not recorded at specified intervals throughout each hour. While some sources of wind speed data use hourly averages, other data sources employ 1 - 5 minute ("short-period") averages. When the available wind speed data consist of only the wind speed during a fixed short period of each hour (e.g., the first or last five minutes of each hour) or the wind speed

during the variable short period when wind speed was at its maximum during the hour, the EPA will generally accept that the hourly average wind speed was above the threshold if the reported short-period wind speed was above the threshold. Where wind speed is recorded at specified intervals throughout each hour, agencies should use all recorded data to calculate the hourly average wind speed. AERMINUTE, a preprocessor to AERMOD that takes short-period wind speed observations and calculates an hourly average wind, can assist in this calculation. AERMINUTE data, or other sub-hourly data with a resolution equal or greater than five-minutes, can be fed into AERMET, the AERMOD meteorological processor to get a user-friendly output. The EPA solicits additional feedback and tools to convert 1 - 5 minute wind speed data to hourly averages.

5. Within the EPA's Air Quality System (AQS), monitoring agencies can use two types of data validation, or data qualifier, codes: the *Request Exclusion* flags ("R") and the *Informational Only* flags ("I"). Agencies should use the "I" series flags when identifying informational data and the "R" series flags to identify data points for which the agency intends to request an exceptional event exclusion and the EPA's concurrence. Given that the EPA can act/concur only on "R" flags, some agencies have questioned the utility of "I" flags. Do AQS users find "I" flags in AQS useful? If so, how do users employ these flags?

6. In response to comments received and in an effort to streamline the development of high wind demonstrations, the EPA has added an optional "Prospective Controls Analysis" process by which states, local agencies, and tribes can voluntarily provide information on attainment status, identify natural and anthropogenic windblown dust sources and emissions, provide the status of SIP submittals (if applicable), and identify the wind speed up to which the collective windblown dust controls are expected to be effective. This optional analysis can facilitate agreement between states/local agencies/tribes and the EPA as to what constitutes "reasonable" controls in advance of an actual event. The EPA has also added an optional "High Wind Action Plan" that states/local agencies/tribes can use to document current in-place controls, document controls on new sources that need reasonable controls for future events, and/or document current and/or planned mitigation measures. Both of these approaches are described in more detail in the revised draft High Winds Guidance document. The EPA anticipates that air agencies would submit the prospective controls analysis in advance of or with a demonstration package and similarly expects that air agencies would submit the High Wind Action Plan following the EPA's initial review of a demonstration package. The EPA recognizes that the information contained in the prospective controls analysis and the High Wind Action Plan is likely to overlap. The EPA solicits feedback on the anticipated use and functionality of these plans. Specifically, the EPA requests that commenters identify: (1) specific elements in the prospective controls analysis and High Wind Action Plan that are useful, (2) whether these concepts should be combined or kept separate, and (3) whether the flexibility to implement needed dust controls provided by the High Wind Action Plan as a voluntary alternative to the traditional regulatory nonattainment designation process is helpful.

7. In Table 3 of the revised draft High Winds Guidance document, the EPA identifies example technical analyses that air agencies should consider when preparing their high wind dust event controls analysis to demonstrate the not reasonably controllable or preventable criterion. The EPA solicits comment on the identified analyses and any additional technical analyses that air agencies could use to demonstrate that the wind exceeded an identified high wind threshold and that the exceedance was caused by emissions that were not reasonably controllable.

8. The EPA acknowledges that certain extreme exceptional event cases may require more limited demonstration packages. Whether a particular event should be considered "extreme" for this purpose depends on the type and severity of the event, pollutant concentration, spatial extent, temporal extent, and proximity of the event to the violating monitor. Several meteorological phenomena that could be considered extreme events include hurricanes, tornadoes, haboobs, and catastrophic volcanic eruptions. The EPA addresses "extreme" high wind dust events in the draft Q&A document, but solicits comment on whether and how specific events of various types should be considered to be "extreme."

Responses to Significant First-Round Comments on the Draft Guidance Documents on the Implementation of the Exceptional Events Rule

U.S. Environmental Protection Agency
June 2012

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List of Acronyms

AAQ	Affects Air Quality
ADEQ	Arizona Department of Environmental Quality
APCD	Air Pollution Control District
AQS	Air Quality System
BACM	Best Available Control Measures
BAM	Beta Attenuation Monitor
BMP	Best Management Practices
CAA	Clean Air Act
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	Clear Causal Relationship
CFR	Code of Federal Regulation
CO	Carbon Monoxide
EE	Exceptional Event
EER	Exceptional Events Rule
EPA	Environmental Protection Agency
GRIC	Gila River Indian Community
HAURL	Human Activity Unlikely to Recur at a particular Location
HF	Historical Fluctuations
HWAP	High Wind Action Plan
HYSPLIT	HYbrid Single-Particle Lagrangian Integrated Trajectory
MAG	Maricopa Association of Governments (Arizona)
MM5	Pennsylvania State University / National Center for Atmospheric Research Mesoscale Model
mph	Miles Per Hour
nRCP	not Reasonably Controllable or Preventable
NAAQS	National Ambient Air Quality Standards
NACAA	National Association of Clean Air Agencies
NAM	North American Mesoscale Model
NASA	National Aeronautics and Space Administration
NEAP	Natural Events Action Plan
NEBF	No Exceedance But For the event
NOAA	National Oceanic and Atmospheric Administration
NO_x	Nitrogen Oxides
NWCG	National Wildfire Coordinating Group

NWS	National Weather Service
OAQPS	Office of Air Quality Planning and Standards (U.S. EPA)
PM	Particulate Matter
Q&A	Question and Answer
QA/QC	Quality Assurance/Quality Control
RACM	Reasonably Available Control Measures
SIP	State Implementation Plan
UNLV	University of Nevada, Las Vegas
USDA	United States Department of Agriculture
USFS	United States Forest Service
VOC	Volatile Organic Compounds
WESTAR	Western States Air Resources Council
WOE	Weight-of-evidence
WRAP	Western Regional Air Partnership
WRF	Weather Research and Forecasting Model

List of First-Round Commenters

1. Chattanooga-Hamilton County Air Pollution Control
2. Torres Martinez Desert Cahuilla Indians
3. City of Albuquerque
4. California Air Pollution Control Officers Association
5. Great Basin Unified Air Pollution Control District
6. Pinal County (Arizona) Air Quality - comments from Mr. DiBiase
7. Santa Barbara County Air Pollution Control District
8. California Air Resources Board
9. South Coast Air Quality Management District
10. Gila River Indian Community
11. San Joaquin Valley Air Pollution Control District
12. Imperial County Air Pollution Control District
13. WESTAR
14. Clark County (Nevada) Department of Air Quality and Environmental Management
15. Maricopa Association of Governments
16. NACAA
17. Sacramento Metropolitan Air Quality Management District
18. State of Wyoming
19. Placer County (California) Air Pollution Control District
20. North Carolina Department of Environment and Natural Resources - Division of Air Quality
21. BP America Production Company
22. San Luis Obispo County Air Pollution Control District
23. Arizona Department of Environmental Quality
24. Georgia Air Protection Branch
25. Pinal County (Arizona) Air Quality - comments from Mr. Gabrielson
26. Washington Department of Ecology
27. Intertribal Council of Arizona, Inc.
28. Pete Lahm, USDA Forest Service

Responses to Significant First-Round Comments on the Draft Guidance Documents on the Implementation of the Exceptional Events Rule

A. INTRODUCTION

On May 2, 2011, the U.S. Environmental Protection Agency (EPA) released draft guidance on the implementation of the Exceptional Events Rule (EER). The released draft guidance documents included the "Draft Guidance to Implement Requirements for the Treatment of Air Quality Monitoring Data Influenced by Exceptional Events" (the Overview document), the "Draft Exceptional Events Rule Frequently Asked Questions" (the draft Q&A document), the "Draft Guidance on the Preparation of Demonstrations in Support of Requests to Exclude Ambient Air Quality Data Affected by High Winds under the Exceptional Events Rule" (the draft High Winds Guidance document), and the "Request for Comments on the Draft Guidance Documents on the Implementation of the Exceptional Events Rule" (the Request for Comments document). Together, these draft documents were intended to clarify key provisions of the 2007 Exceptional Events Rule (EER) and respond to questions and issues that stakeholders have raised since the EPA promulgated the rule. The EPA provided the draft guidance, along with examples of approved demonstrations on the EPA's website (http://www.epa.gov/ttn/analysis/exevents.htm), to state, local, and tribal agencies, etc. and to other parties as requested, to solicit comment and help ensure that the EPA's final guidance provides an efficient and effective process to make determinations regarding air quality data affected by events.

This document, together with the revised draft guidance documents identified above, presents the EPA's response to the 28 commenters who submitted numerous comments on the draft guidance documents. The EPA has addressed all significant issues raised during the initial comment period ending on June 30, 2011.

As reflected in the Table of Contents, the EPA organized the responses by the specific draft guidance document, where appropriate, or by general issues that transcend the three revised draft guidance documents. The EPA responses presented in this document explain the changes incorporated into the revised draft guidance documents or address comments that did not result in changes in the revised draft guidance documents.

At this time, as indicated in previous communications with reviewers, the EPA intends to solicit comments on the revised draft guidance documents by publishing a Notice of Availability with a 60-day comment period in the Federal Register. Following this comment period, the EPA will determine whether to pursue issuing final guidance or final guidance as an interim step prior to revising the Exceptional Events Rule.

The EPA intends to follow the revised draft guidance during the review and document finalization process because we believe it is consistent with the Exceptional Events Rule and the guidance already provided in the preamble to the rule.

B. RESPONSES TO SIGNIFICANT FIRST-ROUND COMMENTS ON THE EPA'S DRAFT GUIDANCE DOCUMENTS ON THE IMPLEMENTATION OF THE EXCEPTIONAL EVENTS RULE

1. Timing of EER Demonstration Package Submittal and Review
   1.1. Resource availability
      1.1.1. **Comment:** "There is a discrepancy between what a large agency and a small agency are able to do for documentation for exceptional events. On some past events, large agencies in the southeast have put 4 to 7 people working full-time on an event package. A small agency usually has one person working part-time on the package. A small agency does not usually have a meteorologist on staff or modeling capability….In some ways it has become a competition between agencies, and small agencies do not have the personnel or the financial resources to provide the same amount/types of documentation as a large agency."
      Specific reference to guidance text: none
      Submitter: Kathy Jones, Air Monitoring Manager, Chattanooga-Hamilton County Air Pollution Control, 423-643-5970, jones_kathy@mail.chattanooga.gov
      Date: 5/18/2011 via e-mail to EEGuidanceComments@epa.gov
      Response: The EPA recognizes the challenges that air agencies[1] face in preparing exceptional event demonstration packages. The EPA also recognizes the limited resources of the agencies that prepare and submit exceptional event demonstration packages and of the EPA regional offices that review these demonstration packages. One of the EPA's goals in developing exceptional event implementation guidance is to establish clear expectations to enable affected agencies to better manage resources as they prepare the documentation required under the EER. The EPA expects submitters to prepare and submit the appropriate level of supporting documentation, which will vary on a case-by-case basis using the weight-of-evidence approach. The EPA's draft guidance documents and the exceptional events website (http://www.epa.gov/ttn/analysis/exevents.htm) present examples to illustrate specific points and are not necessarily required for all demonstrations. The EPA further expects the resources required to prepare (and review) packages to decrease as we continue to identify ways to streamline the process and continue to build our database of example demonstrations and analyses. In addition, the EPA acknowledges that certain extreme exceptional event cases may require more limited demonstration packages.

      1.1.2. **Comment:** "Given the limited staff resources at the state, local, and federal levels, EPA must establish guidance that streamlines and focuses exceptional event documentation on the factors necessary to make defensible determinations that comply with the Exceptional Events Rule. We recommend that EPA work closely with CAPCOA and other state/local agencies to closely review and develop documentation guidance that is reasonable and consistent with prior approved exceptional events and the Exceptional Events Rule."
      Specific reference to guidance text: none
      Submitter: Ken Koyama (Exec Director) for Thomas J. Christofk (President), California Air Pollution Control Officers Association, kenk@capcoa.org
      Date: 6/14/2011 via e-mail to Gina McCarthy
      Response: The EPA will continue to work with state, local, and tribal air agencies as we finalize the guidance documents. As part of an upcoming public comment process, the

[1] References to "air agencies" are meant to include state, local, and tribal air agencies responsible for implementing the EER.

EPA will solicit feedback on a series of questions, some of which will seek specific, broadly applicable, streamlining mechanisms.

1.1.3. **Comment:** … in light of likely adoption of a more stringent federal ozone standard expected to drastically increase the number of non-attainment areas across the nation, EPA needs to give serious consideration to streamlining the guidance and the information required for demonstration submittals. It is equally important that EPA implement all necessary steps to assure EPA staff review submittals in a timely manner, especially those that affect attainment designations. In advance of the release of the wildfire exceptional events guidance, we also suggest EPA step back to reflect on how streamlining measures can be worked into that guidance.
Specific reference to guidance text: none
Submitter: Brian Shafritz, Santa Barbara County Air Pollution Control District, ShafritzB@sbcapcd.org
Date: 6/23/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA will continue to work with state, local, and tribal air agencies as we finalize the guidance documents. As part of an upcoming public comment process, the EPA will solicit feedback on a series of questions, some of which will seek specific, broadly applicable, streamlining mechanisms. The EPA has not adopted the more stringent ozone National Ambient Air Quality Standards (NAAQS) referred to in the comment, and intends to complete its reconsideration of the 2008 ozone NAAQS as part of the current five-year review.

1.1.4. **Comment:** It appears that EPA assumes that governmental entities with a large number of technical staff and other sophisticated technical resources will implement the guidance. These resources support air quality programs that have been in place for forty years or more. Although the Gila River Indian community (GRIC) air quality program has as much, if not more, resources devoted to protection of air quality as any tribe, it cannot match the resources in states and political subdivisions of states. Unfortunately, what is assumed to be the minimum level of information and data necessary to make the demonstration required by the guidance is far too resource intensive for GRIC or any other tribal environmental program with very limited staff and limited finances….it assumes that there are mechanisms available to gather the required evidence. …to devote the resources necessary to obtain the evidence would require shifting the Community air quality effort away from permits, permit compliance and ensuring regulatory compliance. We do not believe that such a shift would be consistent with the highest and best use of our limited resources….An example of why the assumption as to necessary resources is problematic is the level of effort necessary to demonstrate that an event was not reasonably controllable or preventable [GRIC's letter identifies the example components in the High Winds Guidance document and then says it does not have the resources to prepare a conceptual model, technical information for all six elements, time series graphs, etc. GRIC says that the examples provided are "complex" and "extensive."]
Specific reference to guidance text: High Winds Guidance document
Submitter: Leroy Williams (Environmental Engineer) for William Rhodes (Governor), Gila River Indian Community, williams@gilanet.net
Date: 6/23/2011 via letter to Gina with cc e-mail to EEGuidanceComments@epa.gov
Response: The EPA's guidance documents apply uniformly to state and local air quality agencies and to tribal agencies that have implemented air quality monitoring networks or have authority to implement air quality programs. We recognize that resources vary among agencies and we are developing exceptional event implementation guidance to establish clear expectations to enable affected agencies to better manage resources as they prepare the documentation required under the EER. The EPA's draft guidance documents and the exceptional events website (http://www.epa.gov/ttn/analysis/exevents.htm)

present examples and tools to assist submitting agencies prepare demonstration packages. The EPA further expects the resources required to prepare (and review) packages to decrease as we continue to identify ways to streamline the process and continue to build our database of example demonstrations and analyses.

1.1.5. **Comment:** Overall, the District is concerned that the draft guidance released by EPA will require significant additional, potentially unavailable resources to prepare documentation for exceptional events, and will subsequently require additional EPA resources for the review of this documentation. The District notes that EPA's draft guidance documents include "requirements that appear to go beyond the EER…[and create] additional requirements [such as] a comprehensive control analysis that includes back trajectories indicating specific sources in the upwind area, an inventory of the contribution for the significant sources, and detailed descriptions of controls and their effective implementation and enforcement…." The District recommends that EPA undertake a comprehensive review of its draft guidance and prior exceptional event approvals to develop revised guidance that provides for reasonable, robust, and streamlined exceptional event documentation."
Specific reference to guidance text: none
Submitter: Samir Sheikh (Director of Strategies and Incentives), San Joaquin Valley Air Pollution Control District
Date: 6/29/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: One of the required elements that air agencies must demonstrate under the Exceptional Events Rule for the EPA's concurrence is whether the event was "not reasonably controllable or preventable." Because neither the Clean Air Act nor the EER defines "reasonable," the EPA provides example factors in the revised draft High Winds Guidance document that air agencies can consider when determining the reasonableness of controls. The EPA notes that the presented factors are examples to illustrate specific points and not requirements for all demonstrations.

1.1.6. **Comment:** "The draft guidance, other background documents, and examples provided on EPA's website imply a level of expertise and resources that is simply not available in some State and local agencies, underscoring the importance of differentiating the simple cases from the more complicated. In this regard, a means of dispute resolution can reduce repeated requests for additional information where little gain may be realized. In any event, clear communication between EPA and the State on what is needed to approve a particular request is essential so that States can make informed decisions about whether to commit the resources to the task."
Specific reference to guidance text: none
Submitter: David Collier (President), WESTAR
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA's draft guidance documents and the exceptional events website (http://www.epa.gov/ttn/analysis/exevents.htm) present examples to illustrate specific points. The example analyses and level of rigor are not necessarily required for all demonstrations. The EPA encourages submitting agencies to use the review and prioritization process identified in the draft guidance documents and to communicate with the reviewing EPA regional office to determine the appropriate level of rigor needed for a complete demonstration package. As part of an upcoming public comment process, the EPA will solicit feedback on a series of questions, some of which will seek specific, broadly applicable streamlining mechanisms.

1.1.7. **Comment:** "Various requirements in the draft guidance and related documents, as well as the examples EPA provides on its website, assume a level of expertise and resources that some states and localities do not have. Accordingly, it is extremely important for

EPA to distinguish between the more straight-forward cases and the more complex and to communicate clearly to states and localities what their exceptional events demonstration package must include in order for a particular request to be approved, thus allowing them to determine whether and how they will proceed."
Specific reference to guidance text: none
Submitter: Tad Aburn (Co-Chair), NACAA Criteria Pollutants Committee
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA's draft guidance documents and the exceptional events website (http://www.epa.gov/ttn/analysis/exevents.htm) present examples to illustrate specific points. The example analyses and level of rigor are not necessarily required for all demonstrations. The preamble to the Exceptional Events Rule at 72 FR 13569 recognizes that the weight-of-evidence approach means that in straightforward cases agencies may submit less information/evidence whereas complex events will likely require more documentation. The EPA encourages submitting agencies to use the review and prioritization process identified in the draft guidance documents and to communicate with the reviewing EPA regional office to determine the appropriate level of rigor needed for a complete demonstration package. As part of an upcoming public comment process, the EPA will solicit feedback on a series of questions, some of which will seek specific, broadly applicable, streamlining mechanisms.

1.1.8. **Comment:** Given the limited staff resources at the state, local and federal levels, EPA must establish future rule revisions that streamlines and focuses exceptional event documentation on the factors necessary to make defensible determinations that comply with the Exceptional Events Rule.
Specific reference to guidance text: none
Submitter: Larry Allen (Air Pollution Control Officer), San Luis Obispo Air Pollution Control District
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: As part of an upcoming public comment process, the EPA will solicit feedback on a series of questions, some of which will seek specific, broadly applicable, streamlining mechanisms.

1.1.9. **Comment:** Georgia states that EPA should strive for a more streamlined approach for state submittals. Georgia further notes that the EPA's responses in the draft Q&A document do not reflect streamlining. Specifically, Question 24 says that states need to present information to support their claim that emissions from wildfires are "not reasonably controllable or preventable." Georgia believes this requirement is ambiguous and puts the demonstration burden back on the state. Georgia believes that states should not have to provide information to support that wildfires are not controllable or preventable.
Specific reference to guidance text: Q&A document #24
Submitter: Jac Capp (Chief, Air Protection Branch), Georgia Environmental Protection Division
Date: 7/1/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA recognizes that emissions from wildfires are generally not reasonable to prevent or control. The EPA uses "generally" in this statement because the current United States Forest Service (USFS) definitions of "wildfire" and "prescribed fire" define these events in terms of purpose and deliberateness of ignition. Based on the USFS definitions, a wildfire may have started from an unintentional ignition, but the land manager may have allowed the fire to continue to burn although it could have been extinguished. In such a case, some of the explanation of the reasonableness of this decision is needed. Similarly, a prescribed fire might be one that could have been prevented but would be unreasonable to not undertake.

The EPA's expectation is that air agencies identify the origin and evolution of the wildfire in simple terms when documenting the "not reasonably controllable or preventable" criterion in their demonstration submittal. Fires started by lightning, volcanoes, unauthorized activity, or accidental human-caused actions are unplanned and unwanted fires and; therefore, despite efforts to prevent or control such fires[2] the emissions may not be reasonably controllable or preventable. In these cases, it is often sufficient for agencies to provide a statement such as the following to document the "not reasonably controllable or preventable" criterion: "Based on the documentation provided in [section X] of this submittal, [lightning] caused the unplanned, unwanted wildfire event. The responsible agencies did their reasonable best to control the extent of and extinguish the fire by taking the following actions [insert list or description of actions taken]. Therefore, emissions from this fire were 'not reasonably controllable or preventable.'" Emissions from intentionally ignited fires and escaped prescribed fires that burners allow to burn require additional supporting documentation to demonstrate the "not reasonably controllable or preventable" criterion. In these cases, the submitting agency must explain how the fire escaped or why the land manager allowed the fire to burn. Although the EPA expects to discuss the issue of control/prevention of wildfires in future guidance, the EPA also addresses this question in the draft Q&A document.

1.1.10. **Comment:** In the response to Question 24, the EPA should make it clear that a mitigation plan is not needed for wildfires. The EPA should also provide examples of information that states should submit to demonstrate that wildfire emissions are not reasonably controllable or preventable.
Specific reference to guidance text: Q&A document #24
Submitter: Sheila Holman (Director), NC Division of Air Quality
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The Exceptional Events Rule does not contain a requirement to submit a mitigation plan for any type of event, and the EPA is not creating such a requirement with this guidance. Air agencies must take mitigation actions, but no plan is required. In every event demonstration package, an air agency must demonstrate that the event was not reasonably controllable or preventable. See the response to comment 1.1.9. for additional information regarding demonstration examples for the "not reasonably controllable or preventable" criterion for wildfires.

1.1.11. **Comment:** "[Studies] show that the stratospheric contribution to surface ozone is significant and can lead to exceedances of the ozone NAAQS for a large area." EPA should allow states to work together on demonstration submittals to conserve resources. EPA requires separate demonstrations when the same pollutant and event result in exceedances of multiple NAAQS (e.g., different averaging periods). The averaging period should not matter. "Requiring multiple submittals for the same pollutant is only adding unnecessary work for the states and EPA."
Specific reference to guidance text: none
Submitter: Karen St. John (Sr. Director, Regulatory Affairs), BP America, Inc.
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA encourages states and air agencies to coordinate with each other in compiling demonstration package components, and these agencies may submit some of the same data and analyses when a single event affects multiple jurisdictions. Each NAAQS exceedance, however, will likely have some unique properties (e.g., unique monitoring locations, different surrounding and potentially contributing sources with

[2] Prevention/control efforts could include posting High Fire Danger signs to make people more careful and prevent accidental fires, or taking reasonable action to contain a fire once it has started.

varying levels of control, different historical concentration patterns, etc.). States/agencies need to address these unique characteristics in individual submittal packages. Similarly, where a single event results in exceedances of multiple NAAQS (e.g., annual and 24-hour PM), the submitting agency needs to address the unique features of each NAAQS exceedance or violation (e.g., potentially different monitoring locations, different historical concentration patterns). An air agency could submit a single demonstration package for a single event affecting multiple NAAQS provided the air agency clearly identifies the unique characteristics of each NAAQS.

1.1.12. **Comment:** "Tribes do not have the level of technical staff that more developed state and county air quality programs have. Even the minimum demonstration expectations are too resource intensive for tribes to fulfill on their own. Tribes do not have the budgets to fulfill the required expectations for excluding exceptional events data. Tribes request that EPA work with them through the demonstration process; providing assistance in the form of expertise, direct technical assistance and funding."
Specific reference to guidance text: none
Submitter: John R. Lewis (Executive Director), Inter Tribal Council of Arizona, Inc.
Date: 7/15/2011 via e-mail to Beth Palma and Rhea Jones
Response: The EPA's guidance documents apply uniformly to state and local air quality agencies and to tribal agencies that have implemented air quality monitoring networks or have authority to implement air quality programs. We recognize that resources vary among agencies. In general, the EPA will not prepare analyses or additional arguments to be included as components in a submitted demonstration package. Rather, the EPA will recommend demonstration package improvements to the submitting agency. However, the EPA may either assist with or independently prepare supporting analyses that could become part of the submission package or an EPA-prepared technical support document if a demonstration package is associated with an imminent regulatory action and the EPA's action will best serve the public interest. Analyses prepared by the EPA could support either approval or disapproval of an air agency's request for concurrence on flagged data.

1.2. Letter of intent

1.2.1. **Comment:** "When agencies have submitted letters of intent, EPA in several regions has briefly evaluated the "dates" listed in the intent letter, denied the event, and never looked at the documentation that followed….There should be no denial of an event based on the "dates" submitted in the letter of intent."
Specific reference to guidance text: Overview document, page 4
Submitter: Kathy Jones, Air Monitoring Manager, Chattanooga-Hamilton County Air Pollution Control, 423-643-5970, jones_kathy@mail.chattanooga.gov
Date: 5/13/2011 via e-mail to EEGuidanceComments@epa.gov
Response: A letter of intent is an option for an air agency to use in situations where it may help communication and prioritization. It is not a requirement, and may not be useful in every case. The EPA will generally give priority to exceptional event determinations that affect near-term regulatory decisions. Under the revised draft guidance, the EPA intends to respond to such a letter within 60 days, thus allowing an agency to prioritize resources for those packages that the EPA intends to review in the near-term. The EPA response will provide the regional office's best assessment of the priority that can be given to the submission once received and any case-specific advice the EPA may have to offer for the preparation of the demonstration.

1.3. Air agency submittal of demonstration package

1.3.1. **Comment:** "…supplemental information must be provided back to EPA as required in the review letter "typically be 60 days from receipt of the letter from EPA." Depending

on the information request from EPA, the Agencies may need more time to obtain this data. The District is requesting that language be included to allow this time frame to be negotiated on a case-by-case basis depending on the type of information being requested by EPA."
Specific reference to guidance text: High Winds Guidance document, page 28
Submitter: Samir Sheikh (Director of Strategies and Incentives), San Joaquin Valley Air Pollution Control District
Date: 6/29/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA is willing to work with agencies on timeframes for supplying supplemental information. The mandatory timing of EPA actions may limit the response time the EPA allows. The revised draft guidance documents indicate this willingness.

1.4. EPA prioritization of submitted demonstration packages

1.4.1. **Comment:** "EPA acknowledges the resource intensive process surrounding the preparation and submittal of demonstration packages but the guidance fails to explain EPA's process and intention on handling the thousands of submittals that have been submitted prior to this draft guidance being released that may have an impact on agency planning efforts. EPA only states that they will be prioritizing review on those submittals that have near term impacts on rule approvals or SIP submittals. How will those submittals that do not rise to this prioritization level be handled? Will there be an effort to establish an amnesty on those submittals? CAPCOA would like to see a clear explanation on how EPA will be handling those types of submittals and on what timeline."
Specific reference to guidance text: none
Submitter: Ken Koyama (Exec Director) for Thomas J. Christofk (President), California Air Pollution Control Officers Association, kenk@capcoa.org
Date: 6/14/2011 via e-mail to Gina McCarthy
Response: The Exceptional Events Rule requires air agencies to notify the EPA that exceptional events have influenced data by July 1 of the calendar year following the year in which the event occurred. Air agencies complete this notification process by flagging the data in AQS and providing an initial event description. Although flagging an event provides an initial notification to the EPA of potential exceptional event demonstration submittals, the EPA does not act on an agency's initial flags. The EPA acts on submitted demonstration packages and, if the EPA concurs with the submittal, the EPA indicates agreement in AQS by concurring with the flag (or flags) identified in the demonstration package. Not all agency-submitted flags in AQS have corresponding exceptional event demonstration submittals; therefore, it may appear that the EPA has not acted upon numerous flags. Once an air agency submits a demonstration package, the reviewing EPA regional office will prioritize the package. The EPA will generally give priority to exceptional event determinations that affect near-term regulatory decisions. Prioritization of in-process submittals may change as the EPA promulgates new rules and then makes decisions based on data that may be influenced by exceptional events (e.g., new or revised NAAQS, new attainment determinations).

1.4.2. **Comment:** Will EPA accept exceptional events packages for 2007 and the first half of 2008 events (past the 3-year submittal window) since it took so long for EPA to develop and release draft guidance?
Specific reference to guidance text: none
Submitter: Scott DiBiase, Pinal County Air Quality, scott.dibiase@pinalcountyaz.gov
Date: 6/23/2011 via e-mail to EEGuidanceComments@epa.gov
Response: Yes, if the demonstration is associated with a near-term regulatory decision. See response to comment 1.4.1. As indicated in the final area designations for the 2008 ozone NAAQS, the EPA based final area designations on air quality monitoring data

from 2008-2010 or 2009-2011, if states early certified these data (See 77 FR 30088 and 77 FR 34221).

1.4.3. **Comment:** During the June 9, 2011 EPA Region 9 sponsored exceptional events conference call, EPA staff stated that they will pick and choose which exceptional events packages they will review. According to them **"If they don't matter, we won't act on them."** What is the purpose of having a rule and providing guidance on that rule if EPA does not plan to review some or all submitted packages?
Specific reference to guidance text: none
Submitter: Scott DiBiase, Pinal County Air Quality, scott.dibiase@pinalcountyaz.gov
Date: 6/23/2011 via e-mail to EEGuidanceComments@epa.gov
Response: This comment is not in the draft guidance documents on which the EPA sought public comment. However, as indicated in the responses to previous comments in this section, not every requested exceptional event data exclusion has regulatory consequence. The EPA will place lower priority on demonstration submittals with no regulatory consequence.

1.4.4. **Comment:** In offline discussions with EPA, EPA staff have stated that they will not review any exceptional events packages submitted by certain agencies since according to EPA, a nonattainment designation is a foregone conclusion. However, EPA fails to see the relationship between exceptional events and potential design values and/or episode days associated with planning purposes for State Implementation Plans (SIP). This EPA attitude and practice appears to be arbitrary and capricious.
Specific reference to guidance text: none
Submitter: Scott DiBiase, Pinal County Air Quality, scott.dibiase@pinalcountyaz.gov
Date: 6/23/2011 via e-mail to EEGuidanceComments@epa.gov
Response: This comment is not in the draft guidance documents on which the EPA sought public comment. The EPA does, however, address the subject of this comment in Question 13 of the revised draft Q&A document.

1.4.5. **Comment:** South Coast Air Quality Management District staff greatly appreciates the efforts to provide guidance that will assist in both the preparation and the timely review of exceptional event documentation. It is our position that Agencies should flag all data that qualifies for exclusion under the Exceptional Events Rule so that the data are treated appropriately in regulatory decisions, progress demonstrations and strategic planning for air quality improvement. As such, EPA should review all exceptional events documentation for concurrence regardless of whether a pending regulatory decision hinges on that data. Inaction by U.S. EPA currently lapses to a non-concurrence with time. The proper treatment of data during exceptional events affects public perception of air quality and trends, as well as the use proper use of the data by researchers and air quality planners, with ramifications to planning of future control strategies and design values used for attainment demonstrations. Such considerations can extend beyond a simple view of pending regulatory decisions. Streamlining the event documentation, along with clear guidance as to what U.S. EPA will consider to concur with an exceptional event, will help everyone involved…. No submitted events should lapse into nonconcurrence by inaction on U.S. EPA's part. No nonconcurrence decision should be made by U.S. EPA without ample opportunity for discussion with the affected agency and opportunities to provide additional evidence or clarification. Communication through the process is critical.
Specific reference to guidance text: High Winds Guidance document
Submitter: Barry Wallerstein, South Coast Air Quality Management District
Date: 6/28/2011 via e-mail to Matt Lakin and EEGuidanceComments@epa.gov

Response: The EPA developed the draft guidance documents to aid submitting agencies as they internally prioritize and prepare demonstration packages. The EPA encourages submitting agencies to communicate with the reviewing EPA regional office to determine the appropriate level of rigor needed for a complete demonstration package. The EPA hopes that the submittal preparation, submission, and review process becomes more streamlined and efficient as both submitters and the EPA begin adhering to the principles in the draft guidance documents. Initially, this iterative process will require prioritization with higher priority given to exceptional event determinations that affect near-term regulatory decisions. The EPA encourages submitters to use query functions within AQS to include/exclude all flagged data or only concurred data to conduct "what if" analyses for planning purposes. The AQS scenarios may aid the submitter's and the EPA's prioritization efforts.

1.4.6. **Comment:** EPA has not reviewed or acted on a backlog of Exceptional Event documentation submittals. The District has expended significant resources in developing, compiling, composing, and submitting this documentation to EPA. The District is currently awaiting EPA review for the following exceptional events: July 4-5, 2007 ($PM_{2.5}$) Fireworks, October 9 and 30, 2008 (PM_{10}) High Winds, and October 13 and 27, 2009 (PM_{10}) High Winds. The District is currently compiling documentation for an April 11, 2010 (PM_{10}) High Winds. The guidance document does not clearly state if and how EPA will act on past submittals.
Specific reference to guidance text: none
Submitter: Samir Sheikh (Director of Strategies and Incentives), San Joaquin Valley Air Pollution Control District
Date: 6/29/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA will generally prioritize exceptional event determinations that affect near-term regulatory decisions. The EPA will follow-up with the commenter regarding the status of the identified submittals.

1.4.7. **Comment:** "We are impressed with the extent of the existing backlog of unanswered demonstration packages. We would encourage EPA to go beyond acting only on events upon which regulatory actions may be pending. The flagged data, much of which we think would be concurred (and excluded from the regulatory database) distorts the air quality values that are used for ongoing planning and regulatory purposes. It also affects eligibility for Limited Maintenance Plans."
Specific reference to guidance text: none
Submitter: David Collier (President), WESTAR
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA considers eligibility for a Limited Maintenance Plan to be a regulatory concern and would prioritize the related demonstration package. Submitters should clearly identify the Limited Maintenance Plan regulatory implications in the demonstration submittal cover letter.

1.4.8. **Comment:** "In San Luis Obispo County and elsewhere, exceedences caused by Exceptional Events can affect our nonattainment severity classification and pollutant design values that could result in unwarranted additional regulatory requirements that would cause negative economic impacts to industry. If such exceedances are not deemed exceptional by EPA, industry may be required to implement costly controls that will not solve the problem causing the exceedance. Thus, we believe it imperative that EPA Region 9 review and respond to all Exceptional Event submittals and request a definitive answer on whether or not EPA will be acting on San Luis Obispo County APCD submittals and on what timeline."
Specific reference to guidance text: none

Submitter: Larry Allen (Air Pollution Control Officer), San Luis Obispo Air Pollution Control District
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA refers the commenter to Question 13 of the revised draft Q&A document.

1.5. EPA review and response timeframes

1.5.1. **Comment:** Perhaps EPA Region 9 can elaborate on the exact internal office flow of exceptional events review and concurrence/nonconcurrence.
Specific reference to guidance text: none
Submitter: Scott DiBiase, Pinal County Air Quality, scott.dibiase@pinalcountyaz.gov
Date: 6/23/2011 via e-mail to EEGuidanceComments@epa.gov
Response: Demonstration package characteristics and prioritization dictate the precise review process and internal office flow. Typically, the EPA will prioritize review of the package based on whether it affects near-term regulatory decisions and any additional considerations raised by the submitting agency. In all cases, multiple regional staff and managers are involved in concurrence and nonconcurrence decisions. Depending on the nature of the event, the location, and the pollutant involved, the EPA review in Region 9 may also include discussions with other EPA regional offices and the EPA headquarters' staff. Other EPA regional offices follow a similar review and decision-making process for submitted demonstration packages.

1.5.2. **Comment:** GRIC provides a solution to their general comment that, even with the exceptional event guidance, demonstrations still require more resources than what GRIC can dedicate. GRIC states that they will file a notice of intent when an exceedance based on QA/QC'd data is attributed to an exceptional event and the Arizona Department of Environmental Quality makes the qualitative judgment that the exceedance is attributed to an exceptional event. The EPA will then determine the need for a demonstration based on regulatory significance. If the EPA determines that the exceptional event will affect a regulatory determination, then "EPA will collaborate with and assist the Community in preparing the exceptional event demonstration. Otherwise, no demonstration will be prepared."
Specific reference to guidance text: High Winds Guidance document
Submitter: Leroy Williams (Environmental Engineer) for William Rhodes (Governor), Gila River Indian Community, williams@gilanet.net
Date: 6/23/2011 via letter to Gina with cc e-mail to EEGuidanceComments@epa.gov
Response: The EPA agrees that the commenter's proposed prioritization process follows the prioritization process identified in the draft guidance documents. The EPA may choose to either assist with or independently prepare supporting analyses that could become part of the submission package or an EPA-prepared technical support document if a demonstration package is associated with an imminent regulatory action and the EPA's action will best serve the public interest. Analyses prepared by the EPA could support either approval or disapproval of an air agency's request for concurrence on flagged data.

1.5.3. **Comment:** "EPA should accelerate the contemplated timeframes for review and decisions on [submitted exceptional event demonstrations] and not require up to 18 months for Agency review of complete requests for treatment of data as an [exceptional event]."
Specific reference to guidance text: varies (additional documentation to support recommendation is provided in comment attachment at Submitted Comments\Need OCR\MAG_063011-ocr.pdf)

Submitter: Thomas Schoaf (Mayor, City of Litchfield Park and MAG Chair), Maricopa Association of Governments
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA will strive to review packages in less than 18 months, but the EPA's review of some demonstrations may take a full 18 months.

1.5.4. **Comment:** "Demonstration package submittal and review - We suggest that the guidance encourage 60 day response period for any EPA request for additional or supplemental information, and request that EPA acknowledge that they will work with state/locals on a case-by-case basis and provide additional time for requests, where appropriate…we suggest the following language change to 'Requested within timeframe identified by EPA in the initial review letter (step 6). EPA will work with agencies on a case-by-case basis if additional time is needed to provide the requested supplemental information.'"
Specific reference to guidance text: High Winds Guidance document, Section 5.2, EE Demonstrations Action #7, Timing, page 28
Submitter: Larry Greene (Executive Director), Sacramento Metropolitan Air Quality Management District
Date: 6/30/2011 letter via e-mail to Matt Lakin and EEGuidanceComments@epa.gov
Response: The EPA agrees with the commenter and can work with agencies on the timeframes for supplying supplemental information, provided the timing of associated EPA actions allows for the extended timelines. The EPA has clarified this concept in the revised draft guidance documents. See also response to 1.3.1.

1.5.5. **Comment:** Wyoming Air Quality Division supports the identified review timeframes.
Specific reference to guidance text: none
Submitter: Steven Dietrich (Administrator), Wyoming Air Quality Division
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA acknowledges commenter's support.

1.5.6. **Comment:** The North Carolina Division of Air Quality believes that submitting a data exclusion package within 12 months of the event occurrence may not be possible in situations where the basis of the exclusion is violating an annual standard or a 3-year design value. For example, in the case of an annual standard, one needs all 12 months of data to know what the annual average is going to be. If the event occurred during first quarter of the year, the necessary data to calculate the annual average may not be available until the end of the first quarter of the following year. Thus, the state could not notify the EPA of its intent to submit a data exclusion package until possibly 15 months after the event occurrence.

EPA also needs to provide guidance for the schedule for excluding exceptional event influenced data that result in violations of 3-year design values. The state may not know that data influenced by an exceptional event caused the design value exeeedance until 3 years after the event occurrence. How should the states handle these types of situations? When should the letter of intent be submitted and when should the demonstration package be submitted in these types of cases? The EPA should provide more guidance in Attachment 1 Section C Exceptional Event Data Flagging Schedules on how states should go about flagging and excluding a data point that only meets the criteria to be excluded after the deadline of July 1 of the calendar year following the datum year.
Specific reference to guidance text: Overview guidance document, page 4
Submitter: Sheila Holman (Director), NC Division of Air Quality
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA acknowledges the possible occurrence of the scenario identified in several parts of the comment. The Exceptional Events Rule and the draft guidance

documents provide timeframes for the separate and distinct tasks of initial event flagging and for demonstration submittals. The EPA will review data submitted outside of these timeframes where the air agency presents good reason for a "late" submittal. Adherence to timeframes is more critical with near-term, nondiscretionary regulatory action, such as an initial designation under a new or revised NAAQS.

1.5.7. **Comment:** 60 days to provide complicated supplemental information (e.g., modeling) is insufficient. San Luis Obispo County APCD recommends at least a 120-day timeframe for complicated analyses.
Specific reference to guidance text:
Submitter: Larry Allen (Air Pollution Control Officer), San Luis Obispo Air Pollution Control District
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA agrees that in some limited instances a 60-day response time may be insufficient. The EPA is willing to work with agencies on timeframes for supplying supplemental information when the agencies present good reason to do so. The mandatory timing of EPA actions may limit the response time the EPA allows. The revised draft guidance documents indicate this willingness.

1.5.8. **Comment:** Georgia states that EPA's use of the word "intends" when referring to EPA's anticipated review timeframes (120 days and 18 months) does not "reflect a strong commitment…to work towards a timely resolution."
Specific reference to guidance text: Q&A #27
Submitter: Jac Capp (Chief, Air Protection Branch), Georgia Environmental Protection Division
Date: 7/1/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA and air agencies are working towards the timely resolution of prioritized exceptional event demonstration submittals. Limited resources and changing regulatory promulgation dates create a need for flexibility for both air agency information submittal timeframes and for the EPA response timeframes. The EPA believes the word "intends" appropriately characterizes our desire for an expedient process.

1.5.9. **Comment:** Arizona Department of Environmental Quality (ADEQ) offers the following suggestions regarding the prioritization and response process identified in the draft guidance documents. ADEQ questions the value of the Letter of Intent given the requirement to provide initial descriptions by July 1. If EPA determines that a Letter of Intent is needed, ADEQ recommends that the 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 EPA regional office. Issuance of a guidance document to the Regions should be sufficient to ensure consistency between EPA 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."

ADEQ questions EPA's need for 18 months to make a decision on a submittal and suggests 6 months after completeness and decision deadlines. ADEQ also suggests that EPA add these deadlines to the EER regulatory text.
Specific reference to guidance text: none
Submitter: Eric Massey (Director), Arizona Air Quality Division
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: As the commenter indicates, **t**he Exceptional Events Rule requires air agencies to notify the EPA that exceptional events have influenced data by July 1 of the calendar year following the year in which the event occurred. Although flagging an event provides an initial notification to the EPA of potential exceptional event demonstration submittals, the EPA does not act on an air agency's initial flags. The EPA acts on submitted demonstration packages that may follow the data flagging task by as much as 3 years. It is the EPA's experience that not all agency-submitted flags in AQS result in corresponding exceptional event demonstration submittals. An air agency may flag numerous data entries and submit demonstrations for significantly fewer entries. The letter of intent is an option for the air agency to use in situations where it may help communication and prioritization. Air agencies could consider submitting an annual letter of intent if annual submittal makes sense for resource planning or for historically seasonal events. The EPA has clarified this concept in the revised draft guidance documents.

The commenter notes that the EPA has indicated that up to five people are responsible for reviewing each exceptional event demonstration and recommends reducing the layers of review. In most cases, demonstration review consists of the assigned staff, the staff supervisor, and a coordinating manager. Staff review, however, may consist of multiple, parallel reviewers. For example, the regional staff lead, a modeler, and a technical staffer from another EPA region with particular past wildfire event experience may all simultaneously review a submitted wildfire demonstration submittal. The intent of multiple reviewers is to expedite, rather than delay, the review process.

The EPA considers determinations of eligibility and continuing eligibility for Limited Maintenance Plans and Clean Data Findings to be types of regulatory actions that would result in prioritized demonstration submittal packages. The EPA has clarified this in the revised draft guidance documents. The EPA is deferring a decision on whether to include additional air agency or EPA timeframes in regulatory text.

1.5.10. **Comment:** EPA's suggested timeframes for submitting data exclusion packages (within 12 months of the event) and providing supplemental information (60 days) are insufficient. In addition, EPA's giving itself 18 months to make a decision effectively reduces the allowable time for states.
Specific reference to guidance text: none
Submitter: Karen St. John (Sr. Director, Regulatory Affairs), BP America, Inc.
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA is willing to work with agencies on timeframes for supplying supplemental information. The mandatory timing of EPA actions may limit the response time the EPA allows. The revised draft guidance documents indicate this willingness.

2. Exceptional Event Website
   2.1. Templates for demonstration documents
      2.1.1. **Comment:** NCDAQ believed that the EPA would provide a website with tools needed to perform the data exclusion analyses. For example, the existing Data Fed website provides all of the tools (satellite imagery, fire modeling tools, trajectory analysis, multiple datasets, and browser/editor) that the NCDAQ would like to see made available. The

NCDAQ would like to hear comments on the status of the functionality of this website or similar web sites where data exclusion analysis can be performed. The NCDAQ would also like to see a database established that provided the information needed on prescribed burns and wildfires for preparing exceptional event data exclusion packages.
Specific reference to guidance text:
Submitter: Sheila Holman (Director), NC Division of Air Quality
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA has added links to publicly available tools on the EPA Exceptional Events web page at http://www.epa.gov/ttn/analysis/exevents.htm under the heading Publicly Available Support Information and Tools. The EPA will also continue to post examples of successful demonstrations.

2.1.2. **Comment:** The EPA must develop quantitative criteria along with efficient protocols and analytical tools for evaluating exceptional events. There are no tools or protocols that have been developed by EPA to assist states in identifying and demonstrating exceptional events other than those developed by Rudy Husar for $PM_{2.5}$/fires (http://wiki.esipfed.org/index.php/Evidence_for_Flagging_Exceptional_Events). The EPA should develop peer-reviewed tools and protocols. This would ease the resource burden, expedite the demonstration process, and reduce the subjectiveness of the EPA's "weight-of-evidence" review.
Specific reference to guidance text: none
Submitter: Karen St. John (Sr. Director, Regulatory Affairs), BP America, Inc.
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA believes that the variability of exceptional events prevents the development of a set of "one size fits all" tools (or quantitative protocols) to support exceptional event demonstrations. The EPA believes that our guidance in combination with existing community-based analytical tools, such as those identified on the EPA Exceptional Events web page at http://www.epa.gov/ttn/analysis/exevents.htm, provides air agencies with the flexibility needed to develop exceptional event demonstration materials. The EPA will update the Exceptional Events web page with additional appropriate community tools and examples of successful demonstrations as they become available.

3. Draft Guidance Documents Still under Development
   3.1. Exceptional event wildfire / ozone guidance
      3.1.1. **Comment:** The wildfire event guidance document that the EPA is currently developing should address long-range smoke transport and documentation expectations. A satellite picture showing smoke over the location and a Calipso vertical profile showing mixing to the surface and/or a HYSPLIT showing mixing to the surface should be enough. The EPA has previously denied fairly well-documented long-range smoke transport events even though NOAA and NASA acknowledge them.
Specific reference to guidance text: General comment re ozone/wildfire event methodology
Submitter: Kathy Jones, Air Monitoring Manager, Chattanooga-Hamilton County Air Pollution Control, 423-643-5970, jones_kathy@mail.chattanooga.gov
Date: 5/13/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA's future wildfire / ozone exceptional event guidance document intends to include example applications of satellite imagery and HYSPLIT trajectories. The commenter's example evidence may satisfy one of the criteria, e.g., the Clear Causal Relationship criteria, in an exceptional events demonstration. This same evidence, however, may not be sufficient to meet other criteria such as the No Exceedance But For criteria. Without additional supporting information, satellite imagery with a Calipso profile and/or a HYSPLIT trajectory does not show that the measured concentration

would have been below the applicable NAAQS in the absence of the event. Providing an analysis of event and non-event contributions or a seasonal analysis of concentrations might be ways to demonstrate the "but for" prong.

3.1.2. **Comment:** The EPA has indicated that concurrence on exceptional event demonstrations for ozone exceedances related to wildfires will be difficult due to several reasons. These include wildfire smoke reducing solar radiation that is necessary for ozone formation and the fact that wildfires generally occur during the same seasons that exhibit high ozone making it difficult to differentiate between anthropogenic and wildfire precursor emissions. While we agree that wildfires may occur under the same meteorological conditions that are conducive to higher ozone concentrations, we believe that evidence the EPA has required thus far for exceptional event demonstrations is particularly rigorous, burdensome, and resource intensive. We suggest that the EPA develop a simplified and streamlined approach that state and local agencies can utilize as part of the "but for" test in cases relating to potential wildfire impacts on ozone concentrations. A simplified analysis could include the combination of trajectory analyses, satellite imagery and local observations, photographs and news reports. These straightforward and readily available tools should provide adequate evidence regarding the influence of wildfire smoke on ozone concentrations. This more straightforward approach would enable the development of exceptional event demonstrations that are much less onerous than what is suggested by the EPA (modeling, regression analyses, chemical speciation, etc.) and that would expedite the preparation and review of exceptional event demonstrations related to wildfire impacts.
Specific reference to guidance text: Q&A document #6 (page 8)
Submitter: Brian Shafritz, Santa Barbara County Air Pollution Control District, ShafritzB@sbcapcd.org
Date: 6/23/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The example evidence identified in this comment may satisfy one criterion of the EER, for example the Clear Causal Relationship criterion, in an exceptional events demonstration. This same evidence, however, may not be sufficient to satisfy another criterion and demonstrate the No Exceedance But For criteria. The "but for" criteria requires an analysis showing that the measured concentration would have been below the applicable NAAQS in the absence of the event. Providing an analysis of event and non-event contributions is needed to demonstrate the "but for" prong.

The EPA has not specified, and does not intend to specify, a particular analysis or approach for any of the required exceptional event demonstration criteria. The draft guidance documents and the demonstration submittals posted on the Exceptional Events website contain example analyses prepared to illustrate specific points that may not apply to all exceptional events. The EPA encourages submitting agencies to use the review and prioritization process identified in the draft guidance documents and to communicate with the reviewing EPA regional office to determine the appropriate level of rigor needed for a complete demonstration package. As part of an upcoming public comment process, the EPA will solicit feedback on a series of questions, some of which will seek specific, broadly applicable, streamlining mechanisms.

3.1.3. **Comment:** The draft guidance document states that the EPA is developing an Interim Fire Policy and Fire Guidance document; the District requests the opportunity to actively participate in the development of this guidance. Ideally, this engagement would occur early in the drafting stages so the District can assist the EPA given our extensive experience in forest fire issues in the San Joaquin Valley Air Basin.
Specific reference to guidance text:

Submitter: Samir Sheikh (Director of Strategies and Incentives), San Joaquin Valley Air Pollution Control District
Date: 6/29/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA intends to develop a draft wildfire / ozone exceptional events guidance document and expects using an open process for its development and the development of the document to replace the *Interim Air Quality Policy on Wildland and Prescribed Fires*.

3.1.4. **Comment:** "We would also like to add a word about another issue of great importance to NACAA members, also related to exceptional events – that of fires. We anxiously await the opportunity to review and comment on draft guidance on exceptional events affected by fires and the fire policy itself, which is long overdue, and look forward to having the opportunity to work collaboratively with EPA on this very important issue. In addition, once the fire policy is issued, we request a chance to review again the draft Exceptional Events Rule Frequently Asked Questions relative to fire issues."
Specific reference to guidance text:
Submitter: Tad Aburn (Co-Chair), NACAA Criteria Pollutants Committee
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA expects using open processes for policy and guidance development. See response to comment 3.1.3. for additional detail.

3.1.5. **Comment:** Georgia requests the opportunity to review the ozone/wildfire guidance document once released.
Specific reference to guidance text:
Submitter: Jac Capp (Chief, Air Protection Branch), Georgia Environmental Protection Division
Date: 7/1/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA expects using open processes for policy and guidance development. See response to comment 3.1.3. for additional detail.

3.1.6. **Comment:** Washington Department of Ecology requests the opportunity to review the ozone/wildfire guidance doc once released.
Specific reference to guidance text:
Submitter: Stuart Clark (Air Quality Program Manager), Washington Department of Ecology
Date: 7/5/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA expects using open processes for policy and guidance development. See response to comment 3.1.3. for additional detail.

3.2. Fire Policy

3.2.1. **Comment:** Georgia asks to be involved in the development of the Fire Policy
Specific reference to guidance text:
Submitter: Jac Capp (Chief, Air Protection Branch), Georgia Environmental Protection Division
Date: 7/1/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA expects using open processes for policy and guidance development. See response to comment 3.1.3. for additional detail.

3.2.2. **Comment:** Washington Department of Ecology requests the opportunity to review the Fire Policy once released.
Specific reference to guidance text:
Submitter: Stuart Clark (Air Quality Program Manager), Washington Department of Ecology

Date: 7/5/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA expects using open processes for policy and guidance development. See response to comment 3.1.3. for additional detail.

3.3. General

3.3.1. **Comment:** Please clarify the relationship between wildfires and "areas burned by anthropogenic fires." ADEQ recommends that the EPA recognize that emissions from large scale wildfires are beyond the 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.
Specific reference to guidance text: see also comment at 7.5.19
Submitter: Eric Massey (Director), Arizona Air Quality Division
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Propose Response: The EPA has revised the language in the revised draft High Winds Guidance document that refers to "areas burned by anthropogenic fires." The EPA further recognizes that emissions from wildfires are generally not reasonable to control or prevent. See also the response to comment 1.1.9, which further discusses the EPA's expectations regarding the "not reasonably controllable or preventable" criterion for wildfires.

3.3.2. **Comment:** In the response to Question 24 of the Q&A document, please strike "ignited by natural sources" from the sentence that reads, "Similarly, emissions from wildfires ignited by natural sources are also generally not reasonable to control." Wildfires are, by definition, ignited by natural sources, making the addition of this language redundant and confusing.
Specific reference to guidance text: Q&A#24
Submitter: Pete Lahm (Smoke Manager), USDA Forest Service
Date: 7/14/2011 via phone conversation with Beth Palma
Response: The EPA has rewritten the Q&A, which primarily relates to emissions from natural deserts.

4. General AQS Procedures

4.1. Data flagging schedules

4.1.1. **Comment:** The guidance is unclear regarding data processing requirements, which appear to conflict with data certification requirements due May 1. "The placement of flags and the submittal of an initial event description should be done concurrently with the submission of data to the AQS database (within 90 days of the end of the quarterly reporting period) but must be done not later than July 1st of the calendar year following the year in which the flagged measurement occurred." Please provide clarification on how an agency should handle data certification.
Specific reference to guidance text: High Winds Guidance document, page 7.
Submitter: Samir Sheikh (Director of Strategies and Incentives), San Joaquin Valley Air Pollution Control District
Date: 6/29/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: Unless the EPA establishes a new schedule for flagging certain data (e.g., as part of a rule), air agencies must submit data flags and an initial event description to AQS no later than July 1st of the calendar year following the year in which the flagged data occurred. While the EPA encourages flagging prior the May 1st deadline, flagging is not linked to the AQS data certification schedules. The EPA's *Final Rule on the Treatment of Data Influenced by Exceptional Events; Correction* (72 FR 28612) amended 40 CFR 50.14 (c)(2)(i) to make this clarification. The EPA has also revised the text of the

referenced bullet in the "Process Requirements per EER" section of the revised draft High Winds Guidance document to reflect this amendment.

4.2. Use of flags

4.2.1. **Comment:** *Wildland Fire Use Fire - US (IU) flag.* The draft guidance requires the use of the Wildland Fire Use Fire flag in AQS. The term 'Wildland Fire Use' is no longer used or accepted by Land Management Agencies and does not apply to their current practices. There are only two types of fire: Wildfires and Prescribed fires. The only difference between the two is how the fire is started: planned verses unplanned. Both types of fire are managed identically. The EPA should consider identifying an adequate flag to be used to characterize a fire in AQS.
Specific reference to guidance text:
Submitter: Samir Sheikh (Director of Strategies and Incentives), San Joaquin Valley Air Pollution Control District
Date: 6/29/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The NWCG (National Wildfire Coordinating Group) considers fires as either planned ignitions (prescribed fire) or unplanned ignitions (wildfire). However, NWCG recognizes that objectives may change regarding the fire's management throughout the duration of either type of fire. A comprehensive demonstration would explain the details of the fire's management, as well as its ignition, to address criteria "not reasonably controllable or preventable" and "clear causal relationship."

To respond to the commenter and to be consistent with land management agencies, the EPA will eliminate from AQS the Wildland Fire Use Fire – US ("IU") and ("RU") flags and the Forest Fire ("E") flag. The EPA will continue to use the following flags to describe fires:

- IF – Fire – Canadian (Informational Only)
- IG – Fire – Mexico/Central America (Informational Only)
- IM – Prescribed Fire (Informational Only)
- IP – Structural Fire (Informational Only)
- IT – Wildfire – US (Informational Only)
- RF – Fire – Canadian (Request Exclusion)
- RG – Fire – Mexico/Central America (Request Exclusion)
- RM – Prescribed Fire (Request Exclusion)
- RP – Structural Fire (Request Exclusion)
- RT – Wildfire – US (Request Exclusion)

The EPA believes it is appropriate to retain the Fire – Canadian ("IF/RF") and Fire – Mexico/Central America ("IG/RG") flags because these flags indicate the jurisdictional origin of the fire (i.e., outside of the submitting state/outside of the US) rather than the ignition source. The EPA has added a related question on this topic to the revised draft Q&A document.

4.2.2. **Comment:** The EPA often uses the term "flag." The EPA should make it clear that when they are using the term "flag" they are talking about adding "R" data validation codes to the data. The NCDAQ believes the guidance would be more helpful if it clearly stated earlier in the document than Question 10 that AQS has two types of data validation codes for exceptional events - "I" data validation codes and "R" data validation codes and then describe how each code should be used. The EPA should also state that when they use the term "flag" throughout this document they are referring to "R" data validation codes unless other types of data validation codes are explicitly mentioned. Alternatively, Question 10 could be moved to be before Question 8 and the entire section moved to the

beginning of the document. The EPA should also indicate when it is appropriate to turn an "I" data validation code into an "R" data validation code, and this also harkens back to the last comment which requests more guidance for the schedule for excluding exceptional event influenced data that result in violations of three-year design values.

Contrary to what the EPA says in Question 8, the NCDAQ believes that states should flag any data influenced by an exceptional event with an "I" data validation code whether or not the state plans to request the data be excluded. Information about whether or not data are influenced by an exceptional event is necessary for doing the atypical analysis. If data have been influenced by an exceptional event and these influences have not been tracked and documented in some way, it may hinder the ability to get data excluded as being influenced by an exceptional event in the future because it will bias the data used for the historical fluctuations analysis.

In Question 9 the EPA should make it clear that states can use a reference to a website as the initial description when the "R" data validation code is added to AQS. It would also be good if the EPA clarified that initial descriptions are not required for "I" data validation codes. The answer to Question 9 also begs the question of why the states should have to make the extra effort to submit a letter of intent to the EPA when the answer to Question 9 indicates that the initial description in AQS serves as the notice to the EPA of an intent by the state to submit a data exclusion package.

Specific reference to guidance text: Q&A Q#8, 9, 10
Submitter: Sheila Holman (Director), NC Division of Air Quality
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA does not require initial descriptions for “I” series data flags, although AQS allows initial descriptions to be included with “I” series flags. Air agencies may initially flag data they believe to be influenced by an exceptional event with an “I” series flag with no associated initial description. Later, the air agency may change the flag to an “R” series flag and add the initial description, but the air agency must do so before July 1st of the year following the year the data occurred.

An initial description provides a preliminary explanation of why the air agency believes the accompanying flagged data may be considered as affected by an exceptional event. The initial description is a required part of the data flagging process, and it is recorded in AQS with the flags and the data. A letter of intent, on the other hand, is optional and is not part of the AQS record. The air agency may choose to submit a letter of intent to ascertain the EPA’s timetable for reviewing any associated demonstration; this information may be valuable to the air agency in allocating resources.

A reference to a website does satisfy the requirements of an initial description when an “R” series data flag is used.

The EPA has clarified these points in the revised draft guidance documents.

4.2.3. **Comment:** The responses to Q#10 and Q#12 in the Q&A document seem to conflict. In Q#12, the EPA says that a state does not have access rights to apply flags to data from monitors operated by the National Park Service or other federal agencies, but that states must work with the agency or seek assistance from the EPA regional office. The response to Q#10 says that states should flag data by July 1. “How are states to ensure that the data is flagged by July 1 or by other [applicable deadlines] if they are not allowed to flag the data themselves?” The EPA should allow States to flag the data for the monitors in their state for which they must prepare the demonstration pack and develop a SIP.

Specific reference to guidance text: Q&A #10 and 12
Submitter: Karen St. John (Sr. Director, Regulatory Affairs), BP America, Inc.
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: To maintain data integrity, AQS is generally designed so that only the agency operating a monitoring site may enter or alter data for that site. Under normal circumstances, an air agency will not have access rights to apply event flags to data from monitors operated by other entities, such as the National Park Service or other state, local, or tribal agencies. When an air agency believes that an exceptional event affected the concentration recorded by monitors operated by other agencies, the air agency should contact the agency operating the monitor and request that the operating agency flag the identified data range for exclusion. The affected air agency should also develop and forward to the operating agency an initial event description that the operating agency can enter in AQS. If an air agency is unsuccessful in requesting that another agency apply exceptional event flags to that agency's data, the air agency should contact the EPA regional office. If the EPA regional office is aware of the request, and if the request was prior to July 1st of the year following the datum year, the EPA will generally still consider the affected air agency's request. However, this may not always be the case. Air agencies should notify the EPA regional office of such an instance as soon as possible. (Note that the EPA has reordered some of the questions in the revised draft Q&A document in response to commenter suggestions. As a result, Question 10 is now Question 8.)

4.3. Exclusion of data that do not meet "but for"

4.3.1. **Comment:** The NCDAQ also requests that the guidance be clearer on how states and local programs should handle data impacted by exceptional events that were exceedances but would have also been exceedances without the exceptional event. For example, the exceptional event caused a value to be 45 but without the exceptional event it would have been 37. Even though this value cannot be excluded for the purposes of determining design values unless it can be shown that it causes the design value to exceed the standard, there should be some way for the states and local programs to be able to exclude these types of data from calculations of statistics made from data sets containing typical data required to demonstrate that the data inf1uenced by the exceptional event are atypical.

Obviously, it should be no problem excluding data influenced by exceptional events where the state has requested the data to be excluded and the EPA concurred. However, there may be some days when the data are influenced by an exceptional event but the criteria to have the data excluded are not met because the hourly or daily value is not high enough to cause an exceedance or violation of the standard or the "But For" test is not met. The NCDAQ believes these data where values are clearly impacted but do not qualify to be excluded should be excluded from the historical database used in calculating typical fluctuations used to demonstrate the data meeting the exclusion criteria are atypical. What evidence does the state need to provide to demonstrate to the EPA that the above stated data are *not* typical data and *should not* be considered as typical in the historical fluctuations analysis?
Specific reference to guidance text:
Submitter: Sheila Holman (Director), NC Division of Air Quality
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: An air agency may apply "informational" flags to a concentration it believes is influenced by exceptional events even if the air agency knows the concentration is not eligible for exclusion.

The historical fluctuations analysis is relevant to the "but for" criterion since comparisons to non-event affected days can be a type of evidence for that criterion. Each situation may

be different, so the EPA cannot provide simple universal rules for how an air agency can show whether data were influenced by an event or not, and by how much. However, the types of evidence and techniques used to assess "clear causal relationship" and "but for" generally should be applicable to showing that an ineligible data point was affected and should not be taken to represent normal air quality.

Since the EPA does not evaluate the historical fluctuations analysis against a threshold, including previously excluded data in the historical database is unlikely to have a negative effect. The preamble to the Exceptional Events Rule states, "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." 72 FR 13569 (emphasis added).

While air agencies should "use" all historical data points in their analyses, they can present the data as a concentration time series, relative to annual data, or relative to seasonal data (see additional discussion of historical fluctuation analyses in the draft Q&A document). The Exceptional Events web page www.epa.gov/ttn/analysis/exevents.htm contains examples of historical fluctuations analyses that included all measured data. In these examples, the submitting agencies identified and explained high concentration values that associated with other events as part of their analyses:
Summer 2007 Wildfires:
Plumas Demonstration (6/17/09), Fig. 10
EPA Technical Support Document (3/11/10), Table 3, Fig. 6.
July 2007 Wildfire:
Lindon Demonstration (12/24/07), pp. 16-17

5. Exceptional Event Data Flagging for Air Quality Concentrations that Could Contribute to an Exceedance or Violation of the National Ambient Air Quality Standards
   5.1. **Comment:** In footnote 6 on page 22 of Attachment 1, the EPA states that 5-minute sulfur dioxide data should not be flagged for exclusion because they are not used to compare against a standard. However, states should be allowed to flag 5-minute sulfur dioxide data with informational ("I") data validation codes if they choose to do so. States probably would not choose to do so because it would be too labor intensive, however, that option should exist and it should be clear that states have that option.

For several pollutant situations in Table Q30-2, the EPA states, "it is possible for a specific hourly concentration that was not originally concurred to be concurred as part of the new 8-hour maximum period." How can this be? If the 1-hour concentration was in the original 8-hour block that met the criteria for exclusion, the 1-hour concentration would have been excluded if it too met the criteria for being excluded. If it did not meet the criteria to be excluded initially and it finds itself in the second 8-hour block being evaluated, even if the second 8-hour block meets the criteria exclusion, the 1-hour value still will not meet the criteria for 1-hour values if it did not meet the criteria initially. It seems what the EPA may really mean is that it is possible for additional hourly concentrations that were not included in the original 8-hour block to be excluded as part of a second 8-hour block. It might be helpful if the EPA actually provided an example of how this type of calculation is performed.
Specific reference to guidance text: Q&A footnote 6, Table Q30-2
Submitter: Sheila Holman (Director), NC Division of Air Quality
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov

Response: The EPA agrees with the commenter and has added clarifying language in the revised draft Q&A document to Table Q30-2 and footnote 15 (i.e., footnote 6 in the May 2, 2011 draft Q&A document).

6. General Exceptional Events Rule Applicability and Implementation Issues
   6.1. Guidance versus rule
      6.1.1. **Comment:** "To be clear, we agree on the necessity for clarity and streamlining efforts to ensure that the Exceptional Events Rule is applied consistently. These efforts also enhance the planning agencies' understanding of the requirements in a submittal package for EPA concurrence. The Exceptional Events Rule is a useful and needed tool for air agencies in our planning efforts. We also feel that, while guidance can be helpful, the appropriate mechanism to address the shortcomings of the rule is to work through the formal rule revision process. We believe the rule revision path more effectively and efficiently establishes clear regulatory language so that actions taken based on the rule will face fewer challenges."
      Specific reference to guidance text: none
      Submitter: Ken Koyama (Exec Director) for Thomas J. Christofk (President), California Air Pollution Control Officers Association, kenk@capcoa.org
      Date: 6/14/2011 via e-mail to Gina McCarthy
      Response: The EPA developed the revised draft exceptional events guidance documents to help air agencies comply with the Exceptional Events Rule by clarifying the rule requirements. Guidance documents do not change, increase, or decrease rule requirements; they assist by providing information and illustrations for better understanding of and compliance with the rule. The EPA is deferring a decision on whether to revise exceptional events regulatory text.

      6.1.2. **Comment:** "…the current draft guidance falls short of providing the necessary definitiveness, clarity, and streamlining that was at the crux of this review and subsequent guidance and/or rule revision. …While guidance can be helpful, the Imperial County APCD feels the appropriate mechanism to address the issues surrounding the rule is to work through the formal rule revision process. We believe the rule revision path is more effective in establishing clear regulatory language."
      Specific reference to guidance text: none
      Submitter: Brad Poiriez, Imperial County Air Pollution Control District, bradpoiriez@co.imerial.ca.us
      Date: 6/14/2011 via e-mail to Gina McCarthy
      Response: See response to comment 6.1.1.

      6.1.3. **Comment:** "NACAA is concerned that under the draft guidance, if specific actions are not taken or criteria are not met by states and localities, the request that data be excluded may be denied. Such mandatory requirements appear to cross the line between guidance and regulation. Where requirements are to be established, rulemaking and not guidance is the appropriate administrative process."
      Specific reference to guidance text:
      Submitter: Tad Aburn (Co-Chair), NACAA Criteria Pollutants Committee
      Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
      Response: See response to comment 6.1.1. The EPA's draft guidance documents and the exceptional events website (http://www.epa.gov/ttn/analysis/exevents.htm) present examples to illustrate specific points rather than requirements that all submitters must follow in all demonstrations.

      6.1.4. **Comment:** "Guidance that has the effect of requiring specific actions or establishes criteria that, if not met, results in denial of a State's request for data exclusion is not

guidance but is regulation through guidance. WESTAR reiterates its view that the appropriate mechanism to address several of the implementation issues addressed in the draft guidance is to revise the regulation."
Specific reference to guidance text: none
Submitter: David Collier (President), WESTAR
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: See response to comment 6.1.1. The EPA's draft guidance documents and the exceptional events website (http://www.epa.gov/ttn/analysis/exevents.htm) present examples to illustrate specific points rather than requirements that all submitters must follow in all demonstrations.

6.1.5. **Comment:** "The San Luis Obispo County Air Pollution Control District (SLOAPCD) believes the rule revision path would more effectively provide regulatory language so that EPA actions, based on the rule, will face fewer challenges." SLOAPCD expresses specific concern that the guidance adds new requirements (e.g., comprehensive control analysis with back trajectory, slide 29 of R9 6/9/11 presentation that "requires" a quantitative "but for" demonstration that the event emissions caused the concentration to exceed the standard).
Specific reference to guidance text: none
Submitter: Larry Allen (Air Pollution Control Officer), San Luis Obispo Air Pollution Control District
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: See response to comment 6.1.1. The EPA's draft guidance documents and the exceptional events website (http://www.epa.gov/ttn/analysis/exevents.htm) present examples to illustrate specific points rather than requirements that all submitters must follow in all demonstrations. The EPA believes that a qualitative demonstration of "but for" may be appropriate for some demonstrations but also believes that available quantitative approaches provide more assurance regarding concurrence.

6.1.6. **Comment:** Georgia states that the EPA should use the regulatory process which includes public notice and comment versus guidance as the regulatory approach provides the "most open and transparent process for developing new requirements and allowing input from co-regulators, regulated sources, and the public."
Specific reference to guidance text:
Submitter: Jac Capp (Chief, Air Protection Branch), Georgia Environmental Protection Division
Date: 7/1/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA is not introducing new requirements with the draft exceptional event guidance documents. Rather, the EPA's draft guidance documents and the exceptional events website (http://www.epa.gov/ttn/analysis/exevents.htm) present examples to illustrate specific points. The level of rigor for demonstrations may vary from those in the example analyses depending on various factors such as the type of event, its location, and other factors. As we finalize the exceptional event guidance documents, the EPA intends to pursue a public notice and comment period to allow input from co-regulators, regulated sources, and the public.

6.1.7. **Comment:** While the draft guidance represents much needed progress, it is ultimately limited in its usefulness, as guidance cannot carry the weight of rule. The process described in the guidance is useful for ensuring consistency amongst the EPA regional offices, but it provides little relief for States should the EPA miss a deadline or otherwise fail to follow the process outlined in the guidance. In addition, several of the approaches in the 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.
Specific reference to guidance text:
Submitter: Eric Massey (Director), Arizona Air Quality Division
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA is not introducing new requirements with the draft exceptional event guidance documents. Rather, the EPA's draft guidance documents and the exceptional events website (http://www.epa.gov/ttn/analysis/exevents.htm) present examples to illustrate specific points and are intended to help air agencies comply with the Exceptional Events Rule. The EPA will consider each request to exclude data on its own merits.

6.1.8. **Comment:** Pursue rule changes to see full extent of needed changes. Guidance is limited in usefulness. "The current regulatory framework for dealing with exceptional events is not sufficient to deal with the anticipated very large increase in the number of events that will need to be analyzed as a result of revising the ozone NAAQS into the range of or lower than background levels…. [if] EPA plans to use the EER to handle background caused ozone exceedances under a new NAAQS, the rule must be revised to include a provision which allows the exclusion of background."
Specific reference to guidance text: none
Submitter: Karen St. John (Sr. Director, Regulatory Affairs), BP America, Inc.
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: See response to comment 6.1.1.

6.2. Public availability of demonstrations and associated EPA decisions

6.2.1. **Comment:** Section 5.3 (page 29) of the High Wind document provides for the possibility of public comment. How will the EPA determine if public comment is required? Great Basin believes that all efforts to excuse monitored exceedances of National Ambient Air Quality Standards should include an opportunity for the public to comment. Excluding real health-threatening air pollution from the record, regardless of reason, is not an action that should be handled solely by bureaucrats behind closed doors.
Specific reference to guidance text: page 29 of High Winds Guidance document
Submitter: Ted Schade, Great Basin Unified Air Pollution Control District, tschade@gbuapcd.org
Date: 6/15/2011 via e-mail to EEGuidanceComments@epa.gov
Response: As indicated in the "Public Comments" section of the draft High Winds Guidance document, an air agency may need to provide an additional opportunity for public comment if the EPA requests and/or if the air agency provides supplemental information not included in the original documentation made available for public comment. The EPA will make a case-by-case decision regarding supplemental opportunities for public comment during the demonstration preparation, submittal, and review process. As part of this decision, the EPA may consider potential impact and/or expressed public interest in the claimed event, data uncertainty, historical application of demonstration approach, etc. Additionally, certain regulatory actions that may rely on exceptional event data exclusions (e.g., proposed designation or redesignation classifications and attainment determinations) require the EPA to provide an opportunity for public comment prior to the EPA's taking final agency action. The EPA added Question 14a to the revised draft Q&A document to clarify the issue of public comment.

6.2.2. **Comment:** "The guidance documents do not indicate how agencies can challenge a determination by EPA on the non-concurrence of an Exceptional Event submittal. While we prefer to work through the submittal process with EPA to address any issue that may arise before submittal, both the air districts and the California Air Resources Board have

submitted what we thought was the required documentation to show an Exceptional Event only to see that EPA failed to agree. Currently, if EPA makes a finding of non-concurrence on a submittal, the only recourse left to the planning agency is to wait until that finding affects a formal action taken by EPA on a rule or State Implementation Plan at which time the agency can proceed with a legal action. In an effort to avoid spending precious resources and time on costly litigation processes, we recommend that the guidance document include a mechanism to seek resolution of disagreement regarding non-concurrence on submittal packages for exclusions of data due to Exceptional Events."
Specific reference to guidance text: none
Submitter: Ken Koyama (Exec Director) for Thomas J. Christofk (President), California Air Pollution Control Officers Association, kenk@capcoa.org
Date: 6/14/2011 via e-mail to Gina McCarthy
Response: Several mechanisms currently exist that air agencies can use at various points in the exceptional events process:

- Engage in early dialogue with the appropriate EPA regional office as issues arise.
- Submit requests for reconsideration to the official who made the determination if a request identifies a clear error or if information submitted by the agency was overlooked.
- Elevate the concern within the EPA's chain of command.
- Participate in the public notice and comment process (see response to comment 6.2.1 and Question 14a in the draft Q&A document).
- Challenge in an appropriate court the regulatory decision subsequently made that is based on the EPA's exceptional event determination.

In addition, for complex exceptional events claims or those with significant regulatory or other impacts (e.g., those claims that directly influence proposed designation or redesignation, classifications, and attainment determinations), EPA regional office staff will generally seek input from other EPA regional offices and/or the EPA headquarters staff. The EPA has also added Question 28a in the revised draft Q&A document to address this dispute resolution comment.

6.2.3. **Comment:** An appeals process for disagreement on nonconcurrence decisions would be beneficial.
Specific reference to guidance text: High Winds Guidance Document
Submitter: Barry Wallerstein, South Coast Air Quality Management District
Date: 6/28/2011 via e-mail to Matt Lakin and EEGuidanceComments@epa.gov
Response: See response to comment 6.2.2.

6.2.4. **Comment:** The Exceptional Events Rule and the guidance documents do not have a mechanism to challenge an EPA non-concurrence determination on an agency submittal. The only recourse available when the EPA makes a finding of nonconcurrence is to wait until the finding impacts a formal action taken by the EPA on a rule or State Implementation Plan. At that time, legal action may be the only recourse available. The District recommends that the EPA provide a mechanism that allows for the appeal and additional review for determinations of nonconcurrence.
Specific reference to guidance text:
Submitter: Samir Sheikh (Director of Strategies and Incentives), San Joaquin Valley Air Pollution Control District
Date: 6/29/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: See response to comment 6.2.2.

6.2.5. **Comment:** "Currently in the draft guidance there is no mechanism by which agencies can challenge a determination by EPA on the non-concurrence of an Exceptional Event

submittal. Imperial County APCD would prefer to work through the submittal process with EPA to address any issues that may arise before submittal, however there are times when both the air district and CARB believe they have fully established the required documentation required to show an Exceptional Event and EPA ultimately fails to agree. As it stands now, if EPA makes a finding of non-concurrence on a submittal, the only recourse left to the air districts is to wait until that finding impacts a formal action taken by EPA on a rule or State Implementation Plan (SIP), at which time the district can proceed with a legal action; this is exactly the position that Imperial County APCD finds itself in right now. In an effort to avoid spending precious resources and time on costly litigation processes, it would be more beneficial to EPA and the air districts and state air agencies if there were a mechanism by which to seek resolution of disagreement regarding non-concurrence on submittal packages for exclusions of data due to Exceptional Events."
Specific reference to guidance text:
Submitter: Brad Poiriez, Imperial County Air Pollution Control District, bradpoiriez@co.imperial.ca.us
Date: 6/29/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: See response to comment 6.2.2.

6.2.6. **Comment: "**WESTAR believes that the guidance should include a section on dispute resolution. While we acknowledge the importance of having EPA regional office personnel with an understanding of local conditions evaluate exceptional event requests, we remain concerned about inconsistencies between regions in their respective evaluations of substantially similar events. We believe state and local regulatory agencies should have the opportunity to challenge non-concurrence rather than waiting for EPA regulatory action based on event-caused high values. A decision of non-concurrence and a subsequent regulatory action, such as non-attainment designation could be separated by several years, resulting in significant duplicative resource expenditure challenging the non-attainment designation while developing a non-attainment SIP to meet the submittal timing requirements."
Specific reference to guidance text: High Winds Guidance document
Submitter: David Collier (President), WESTAR
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: See response to comment 6.2.2.

6.2.7. **Comment:** "Recourse for inaction or denial of an exceptional event request - We suggest the guidance incorporate a conflict resolution process to address circumstances where there is no regulatory action associated with EPA's decision, where EPA has not taken action on a request, and to ensure consistency among EPA regional offices."
Specific reference to guidance text:
Submitter: Larry Greene (Executive Director), Sacramento Metropolitan Air Quality Management District
Date: 6/30/2011 letter via e-mail to Matt Lakin and EEGuidanceComments@epa.gov
Response: See response to comment 6.2.2.

6.2.8. **Comment:** "We are concerned that there is no avenue available to states and localities that wish to challenge an EPA denial of an exceptional events request or a failure by EPA to respond to a request (which equates to a denial of a request for an exclusion in that, absent a decision by EPA, the data will remain in the data set). While we appreciate and value EPA regional office staff knowledge and understanding of local conditions, we are keenly aware of the potential for inconsistency between regions in how they evaluate and act upon similar events and circumstances. Therefore, we recommend that EPA establish

a process for dispute resolution and would welcome the opportunity to work with you to design such a process."
Specific reference to guidance text:
Submitter: Tad Aburn (Co-Chair), NACAA Criteria Pollutants Committee
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: See response to comment 6.2.2.

6.2.9. **Comment:** San Luis Obispo County APCD recommends the Rule Revision include a structured mechanism to seek resolution of any disagreement regarding non-concurrence on submittal packages.
Specific reference to guidance text:
Submitter: Larry Allen (Air Pollution Control Officer), San Luis Obispo Air Pollution Control District
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: See response to comment 6.2.2.

6.2.10. **Comment:** ADEQ recommends the Rule Revision include a structured mechanism to seek resolution of any disagreement regarding non-concurrence on submittal packages.
Specific reference to guidance text:
Submitter: Eric Massey (Director), Arizona Air Quality Division
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: See response to comment 6.2.2.

6.3. Mitigation requirements of 40 CFR 51.930

6.3.1. **Comment:** In the response to Question 22, the EPA encourages the submittal of a mitigation plan with the demonstration package. What does the EPA expect to see in this mitigation plan? The NCDAQ believes submitting a mitigation plan is not a reasonable requirement for an event that is not expected to reoccur.
Specific reference to guidance text: Q&A #22
Submitter: Sheila Holman (Director), NC Division of Air Quality
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: Although the language at 40 CFR § 51.930 requires air agencies to take mitigation steps, the rule does not contain a requirement to submit a mitigation plan for any type of event. The EPA is not creating a submittal requirement with this guidance. We do, however, encourage agencies to submit a mitigation plan for those events expected to recur. If submitted, the EPA will consider the mitigation plan independent of the demonstration package. The EPA will not use the mitigation plan to determine concurrence or nonconcurrence for the submitted demonstration package. In every event demonstration package, an air agency must demonstrate that the event was not reasonably controllable or preventable. The EPA has clarified this point in Question 22 of the revised draft Q&A document.

6.4. Reasonable controls for sources outside of state/local/tribal jurisdiction

6.4.1. **Comment:** The draft guidance does not discuss how events that involve in-state transport from sources outside of one county or nonattainment area that cause exceedances at monitors within another should be handled. ADEQ is concerned that there is currently no EPA methodology or mechanism to deal with these situations and recommends that the EPA include specific guidance on how intra-state, interstate, and international transport of air pollution should be addressed.
Specific reference to guidance text:
Submitter: Eric Massey (Director), Arizona Air Quality Division
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov

Response: Under the Clean Air Act, the EPA generally considers a state (not including areas of Indian country) to be a single responsible actor. Accordingly, neither the EPA nor the Exceptional Events Rule provides special considerations for intrastate scenarios when an event in one county affects air quality in another county in the same state, assuming that the event occurs on land subject to state authority (versus tribal government authority). For cases involving intrastate transport, the state or local air agency must evaluate whether emissions from neighboring (or contributing) counties are not reasonably controllable or preventable. As discussed in greater detail in the draft guidance documents, the assessment of "not reasonably controllable or preventable" is based on existing level of required control, and, for high wind dust events, wind speed and other factors. States and tribes should consult with their EPA regional office early in the development of an exceptional event demonstration package if they believe that emissions from sources on federally-owned and managed land (e.g., national parks within the state) have been affected by an event in a way that raises issues of reasonable control.

Interstate and international transport events are different than intrastate events. As indicated in the response to Question 23 in the draft Q&A document, the EPA believes it is not reasonable to expect the downwind state (i.e., the state submitting the demonstration) to have convinced the upwind country or state to have implemented controls on sources sufficient to limit event-related air concentrations in the downwind state. As with any demonstration submittal, the submitting (downwind) state should sufficiently identify all natural and anthropogenic contributing sources of emissions (both in-state and out-of-state) to show the causal connection between an event and the affected air concentration values. A submitting state may provide a less detailed characterization of sources in the upwind state or country than of sources within its jurisdiction. After completing the source characterization, the submitting state should assess whether emissions from sources within its jurisdiction (i.e., in-state sources) were not reasonably controllable or preventable. Although the submitting state should also provide available information on the status of control measures for emissions from out-of-state sources, the submitting state may determine based on available information that the implemented controls on out-of state sources constitute reasonable controls and that the "not reasonably controllable or preventable" criterion is satisfied. When assessing emissions transported from other states or countries, the submitting state can say that it characterized the out of state sources, determined that these sources contributed to the noted exceedance or violation, and determined, based on jurisdictional boundaries and other available information, that contributing emissions from the upwind state or country were not reasonably controllable or preventable. Submitting states are further required to submit evidence/statements supporting the other exceptional event criteria (i.e., clear causal relationship, but for, human activity unlikely to recur or a natural event, affects air quality, and historical fluctuations).

The EPA recommends a similar approach to significant out-of-state anthropogenic sources in the case of a mixed natural/anthropogenic event that the submitting state wishes to consider a natural event of the grounds that all significant anthropogenic sources were reasonably controlled.

As with all exceptional event demonstrations, the EPA will evaluate the information on a case-by-case basis based on the facts of a particular exceptional event including any information and arguments presented in public comments received by the state in its public comment process or by the EPA in a notice-and-comment regulatory action that depends on the data exclusion. This response is not intended to discourage states from working cooperatively to plan and apply controls on both sides of a state boundary for their mutual benefit.

In addition to the provisions in the EER, the Clean Air Act provides mechanisms in sections 110(a)(2)(D) and 126 to address interstate transport issues and mechanisms in section 179(b) to address international transport issues.

6.5. Other

6.5.1. **Comment:** *A Concentration Effect on Design Value but not NAAQS* - There are times when a District cannot meet the "but for" test for an event because the District would have exceeded an applicable NAAQS anyway. The EPA gives two examples that impact classification and attainment demonstration in the answer to Question 13 in the Q&A document. The EPA states that on a case-by case basis, the EPA may choose to exclude the data from determining design values or attainment classification. The District supports this position since including that event would artificially increase the design values, potentially requiring excess emission reductions or assigning an inappropriate classification. The District requests the EPA to develop a method that will exclude these days from standardized and official reports produced by AQS or other parts of the EPA.
Specific reference to guidance text: Q#13 in the Q&A document
Submitter: Samir Sheikh (Director of Strategies and Incentives), San Joaquin Valley Air Pollution Control District
Date: 6/29/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The Exceptional Events data flagging, demonstration submittal, and review process provides a retrospective determination of whether emissions from an event contributed to a violation of a NAAQS. Under the Exceptional Events Rule, concurred upon event-affected data are excluded in their entirety from regulatory decisions. The Exceptional Events Rule does not address data handling associated with events that are not considered "exceptional" under the EER. The EPA suggests that air agencies use "informational only" ("I") flags to identify event-related data not meeting the definition of an exceptional event. Air agencies can extract "I" flagged data in AQS reports.

The EPA addresses this issue in Question 13 in the draft Q&A document and intends to further address this topic in the proposed 2008 ozone NAAQS implementation rule. Air agencies should consult with their EPA regional office if they face this situation.

6.5.2. **Comment:** Need for clear definitions: "CAPCOA believes that the Exceptional Events Rule must have clear definitions throughout the document and any future guidance documents. For example, the guidance document uses the important term 'reasonable' without defining what is 'reasonable.' Much of the guidance seems general in nature leaving the assessment and implementation up to interpretation by EPA. The document needs to strike the balance of providing specific guidance to the agencies, while retaining the goal of providing EPA with the ability to evaluate each unique case. At this point, the guidance document fails to meet this goal."
Specific reference to guidance text: none
Submitter: Ken Koyama (Exec Director) for Thomas J. Christofk (President), California Air Pollution Control Officers Association, kenk@capcoa.org
Date: 6/14/2011 via e-mail to Gina McCarthy
Response: The EPA agrees that assessing "reasonable" is not amenable to a prior generally applicable definition. The EPA believes, however, that as the EPA decides more exceptional events demonstrations, air agencies will be able to anticipate what the EPA considers to be "reasonable." Because "reasonable" varies by location / attainment status, pollutant, contributing sources, and event type, the EPA encourages air agencies to consider developing a High Wind Action Plan or a prospective controls analysis for high wind dust events to reach mutual agreement on "reasonable" in advance of an event.

6.5.3. **Comment:** "Imperial County APCD is adamant that there needs to be clear definitions throughout the rule and any potential guidance. Case in point, the heavily relied upon term of "reasonable" is used throughout the guidance document but it is not defined which is counter-productive to providing clarity. Much of the guidance seems open ended in nature leaving the assessment and implementation up to interpretation by EPA."
Specific reference to guidance text: none
Submitter: Brad Poiriez, Imperial County Air Pollution Control District, bradpoiriez@co.imerial.ca.us
Date: 6/14/2011 via e-mail to Gina McCarthy
Response: Where appropriate, the EPA has developed or incorporated definitions into the revised draft guidance documents. In some cases, generally applicable definitions are not appropriate (see the response to comment 6.5.2.).

6.5.4. **Comment:** "The revised Exceptional Events Rule must have clear definitions. For example, the revised rule and guidance documents should not use the important term "reasonable" without defining what is "reasonable."."
Specific reference to guidance text:
Submitter: Larry Allen (Air Pollution Control Officer), San Luis Obispo Air Pollution Control District
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: Where appropriate, the EPA has developed or incorporated definitions into the revised draft guidance documents. In some cases, generally applicable definitions are not appropriate (see the response to comment 6.5.2.).

6.5.5. **Comment:** "The draft guidance includes significant new documentation requirements that appear to be unreasonable and unnecessary and should be reconsidered. For example, EPA's request that exceptional event documentation include a comprehensive control analysis that includes a back trajectory indicating specific sources in the upwind area, an inventory of the contribution for the significant sources, and detailed descriptions of controls and their implementation and enforcement effectiveness is an excessive requirement that will require extensive staff effort to not only prepare, but to ultimately review by EPA. Many of these new requirements exceed the Exceptional Events Rule, and add layers of supplemental, unnecessary work to precedent already established through prior EPA approvals of well-documented exceptional events."
Specific reference to guidance text: none
Submitter: Ken Koyama (Exec Director) for Thomas J. Christofk (President), California Air Pollution Control Officers Association, kenk@capcoa.org
Date: 6/14/2011 via e-mail to Gina McCarthy
Response: The EPA's draft guidance documents and the exceptional events website (http://www.epa.gov/ttn/analysis/exevents.htm) present examples to illustrate specific points. The example analyses and level of rigor are not necessarily required for all demonstrations. The draft High Winds Guidance document provides examples (e.g., comprehensive control analysis with back trajectory, significant source contribution inventory, and detailed control descriptions with evidence of implementation and enforcement) of effective evidence that air agencies can use to demonstrate "not reasonably controllable or preventable." Air agencies can provide, and the EPA will consider, types of evidence other than those provided as examples in the draft High Winds Guidance document. The EPA encourages submitting agencies to use the review and prioritization process identified in the draft guidance documents and to communicate with the reviewing EPA regional office to determine the appropriate level of rigor needed for a complete demonstration package.

6.5.6. **Comment:** "In the Conclusion section of the Overview of the Draft Guidance Documents, EPA states 'EPA expects to adhere to the draft guidance provided in this overview document and its attachments during the review and document finalization process….' With so many areas of the guidance still causing concerns due to such things as lack of definitiveness and clarity, EPA should not move forward on implementing guidance until it has been fully reviewed, commented on, or even formally approved. For an air quality issue that is very technical and has the potential to have great consequences on both EPA staff and local and state air planning agencies, this does not seem to be the appropriate pathway to move forward in determining adequacy and eventual concurrence, or not, of the submittal."
Specific reference to guidance text: conclusion of Overview document
Submitter: Ken Koyama (Exec Director) for Thomas J. Christofk (President), California Air Pollution Control Officers Association, kenk@capcoa.org
Date: 6/14/2011 via e-mail to Gina McCarthy
Response: The EPA believes that the revised draft guidance documents are consistent with the Exceptional Events Rule and the guidance already provided in the preamble to the rule. The EPA intends to follow the revised draft guidance as the EPA developed these documents to assist air agencies in submitting complete and effective demonstration packages.

6.5.7. **Comment:** From the Overview of Draft Guidance Documents Conclusion section, "EPA expects to adhere to the draft guidance provided in this overview document and its attachments during the review and document finalization process ... " The current draft guidance contains a number of deficiencies and issues as discussed in this comment letter that need to be addressed prior to being considered operational and ready for implementation.
Specific reference to guidance text:
Submitter: Samir Sheikh (Director of Strategies and Incentives), San Joaquin Valley Air Pollution Control District
Date: 6/29/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: See response to comment 6.5.6.

6.5.8. **Comment:** We greatly appreciate the hard work being done by the U.S. EPA and, in particular, the recognition that certain impacted values could be removed in determining design values in cases where an exceptional event increased the level of an exceedance. This will allow states to assemble more realistic tools to attain and maintain the National Ambient Air Quality Standards.
Specific reference to guidance text: none
Submitter: Lynn Terry (Deputy Executive Officer) for James Goldstene (Executive Officer), California Air Resources Board, ksnyder@arb.ca.gov
Date: 6/24/2011 letter to Gina via e-mail to EEGuidanceComments@epa.gov
Response: The EPA acknowledges commenter's support and refers to the response provided in 6.5.1. and Question 13 of the draft Q&A document.

6.5.9. **Comment:** "In assessing whether violations of the ambient standards for particulate matter deserve regulatory forbearance based on designations as a wind-related 'exceptional event,' the EPA should give full consideration to the practical impacts of those events on public health and the public welfare. At least in areas where history shows acute, deadly and recurring threats to transportation and public health resulting from wind-blown dust events, the EPA should condition 'exceptional event' approval upon obligatory implementation of a program that provides meaningful highway-oriented mitigation of activities and surface conditions that would otherwise compound those threats."

Specific reference to guidance text:
Submitter: Don Gabrielson (Director), Pinal County Air Quality Control District
Date: 7/1/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA agrees with the commenter that the "reasonableness" of control measures depends on the nature and frequency of local events and the air quality problems, which they cause or to which they contribute. The EPA believes that the revised draft guidance documents express this concept.

6.5.10. **Comment:** ADEQ recommends that the EPA's concurrence be based upon a "preponderance of the evidence" rather than "weight of the evidence" as WOE does not go far enough to protect the interests of the states and it is unclear as to what evidence holds "weight" with the EPA.
Specific reference to guidance text:
Submitter: Eric Massey (Director), Arizona Air Quality Division
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA believes we should consider all relevant evidence and qualitatively "weigh" this evidence based on its relevance to the EER criterion being addressed, the degree of certainty, its persuasiveness, and other considerations appropriate to the individual pollutant and the nature and type of event. The EPA has clarified this position by adding Question 19a to the revised draft Q&A document.

6.5.11. **Comment:** BP recommends that the EPA conduct a public meeting as part of the EER guidance document comment process to discuss implementation issues specifically regarding the ozone NAAQS implementation and EER guidance. Concern is that "but for" and "historical fluctuations" provisions of rule would specifically disallow the exclusion of some ozone EEs because policy relevant background is nearing or at the anticipated level of the new/reconsidered ozone NAAQS.
Specific reference to guidance text: none
Submitter: Karen St. John (Sr. Director, Regulatory Affairs), BP America, Inc.
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA believes that a first-round written comment process, supplemented by clarifying phone calls (and one meeting in Region 9) with commenters as needed, was the most useful approach for obtaining public comment on the draft guidance materials. The EPA invites BP to clarify its comments during the second-round comment period.

Regarding the commenters' concern about "policy relevant background" ozone concentrations and exceptional events, the EPA notes that these concepts are related and partially overlap. The 2007 Staff Paper[3] defines policy relevant background ozone "as the distribution of [ozone] concentrations that would be observed in the U.S. in the absence of anthropogenic (man-made) emissions of precursor emissions (e.g., VOC, NO_x, and CO) in the U.S., Canada, and Mexico." An exceptional event is a natural event (excluding stagnations, inversions, high temperatures, or precipitation) or an anthropogenic event that is unlikely to recur in the same location. Both exceptional events and policy relevant background include emissions from natural events like forest wildfires or stratospheric ozone intrusions. However, exceedances due to natural emissions that occur every day and contribute to policy relevant background, such as biogenic emissions, do not meet the definition of an exceptional event and are thus not eligible for exclusion under the EER. Routine anthropogenic emissions outside of the

[3] Environmental Protection Agency (2007a) Review of the national ambient air quality standards for ozone: assessment of scientific and technical information. OAQPS staff paper. (Updated Final) July 2007. Research Triangle Park, NC: Office of Air Quality Planning and Standards; EPA report no. EPA-452/R-07-007. Available online at: http://epa.gov/ttn/naaqs/standards/ozone/s_o3_cr_sp.html.

U.S. contribute to policy relevant background, but are not exceptional events. State/local/tribal preparation of a demonstration package and the EPA's subsequent review of the demonstration package is case-by-case based on a weight-of-evidence approach and does not explicitly consider whether the event type might contribute to policy relevant background. However, if a natural event that contributes to policy relevant background causes an observed concentration that meets the statutory definition of an exceptional event and fulfills all of the exceptional event criteria, the EPA would consider the event to be an exceptional event.

The EPA has added Question 16a to the revised draft Q&A document to address this issue.

7. Guidance Specific to High Wind Dust Events

7.1. Definition of "event" for high wind dust events

7.1.1. **Comment:** ADEQ agrees that definitions of natural and anthropogenic windblown emissions developed in the WRAP handbook are appropriate. ADEQ further supports the analysis and recommendations provided by MAG on aerodynamic entrainment.
Specific reference to guidance text:
Submitter: Eric Massey (Director), Arizona Air Quality Division
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA acknowledges commenter's support.

7.2. Conceptual model

7.2.1. **Comment:** Requirement for a Conceptual Model - The guidance requires exceptional events packages to contain a "conceptual model" (High Wind document, Section 6.2.1, page 32). All exceptional events packages should provide a narrative description of the event. However, characterizing the "story" as a model is not appropriate. Great Basin believes the packages should contain real models of the event using wind speeds, wind directions, monitor locations, and monitor values. "Stories" should not be substituted for science and science should be used to the extent possible to verify exceptional event claims.
Specific reference to guidance text: page 32 of High Winds Guidance document
Submitter: Ted Schade, Great Basin Unified Air Pollution Control District, tschade@gbuapcd.org
Date: 6/15/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA uses the term "conceptual model" to mean the "story" or "executive summary" of the event. The conceptual model should provide an overview of the technical information in the demonstration package and help identify relevant quantitative information critical in satisfying the EER criteria.

7.2.2. **Comment:** Page 48, bullet #3 – Description of weather conditions that created high winds (as part of Clear Causal Relationship). Isn't this duplicating the effort in the conceptual model section?
Specific reference to guidance text:
Submitter: Scott DiBiase, Pinal County Air Quality, scott.dibiase@pinalcountyaz.gov
Date: 6/23/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The conceptual model summarizes the "story" presented in the demonstration package and, as such, is likely to repeat some information appearing in more detail in other sections of the demonstration. The "conceptual model" approach is similar to abstract or executive summary repeating information contained in the body of a document. As the EPA receives demonstration packages that contain conceptual models, the EPA will post them on the exceptional events website.

7.2.3. **Comment:** "A conceptual model is not a required component of an exceptional event demonstration package, but we think a comprehensive narrative lays the groundwork for the technical demonstrations and assists with weight-of-evidence showings. As such, it can be a positive addition to the demonstration package. This would be particularly helpful in reducing the need for detailed explanations later in each package."
Specific reference to guidance text: High Winds Guidance document
Submitter: David Collier (President), WESTAR
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA acknowledges commenter's support.

7.2.4. **Comment:** 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.
Specific reference to guidance text:
Submitter: Eric Massey (Director), Arizona Air Quality Division
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA acknowledges commenter's support.

7.3. High wind threshold

7.3.1. **Comment:** We request that the EPA clarify the definition of a High Wind Dust Event and in Section 3.1.4 Consideration of Recurrence. Questions: 1. Is it a high wind dust event only when the standard is exceeded? 2. Is it a high wind dust event when the winds exceed 25 MPH sustained and shows only elevated particulate (but does not exceed the standard)?
Specific reference to guidance text: threshold
Submitter: Dan Gates, City of Albuquerque EHD-AQD, dgates@cabq.gov
Date: 6/2/2011 via e-mail to Jim Afghani in EPA Region 6
Response: The commenter asks whether a high wind dust event must exceed the NAAQS to be considered an exceptional event. In general, a PM concentration below the level of the NAAQS would not be an exceedance and would not affect compliance with the NAAQS. Therefore, the EPA will generally not exclude a concentration below the level of the PM NAAQS created by a high wind dust event. The EPA's guidance does, however, note in Questions 19, 29, and 30 of the revised draft Q&A document, a few limited situations in which an air quality concentration for particulate matter and other pollutants could contribute to an exceedance or violation and be below the level of a given NAAQS (and, as a result, be considered an exceptional event).

The commenter further asks whether a high wind dust event must exceed the high wind threshold of 25 mph and exceed the standard to be exceptional. The EPA has modified the high wind threshold concept and refers the commenter to the response to comment 7.3.2. regarding high wind thresholds. As the EPA states in this document and in the revised draft High Winds Guidance document, the high wind threshold is intended to help inform the rigor with which the EPA will review the "not reasonably controllable or preventable" criterion rather than a level above which the EPA would automatically consider an event to be exceptional. The EPA expects that only in very rare cases would an event be both below the NAAQS and below a given high wind threshold and be "exceptional." As with all exceptional event demonstrations, the EPA will review each case on its own merits.

7.3.2. **Comment:** *25 Miles per Hour Default Threshold Wind Speed* "By far, Great Basin's greatest issue of concern is the proposed use of 25 miles per hour (MPH) as the assumed minimum threshold wind speed necessary to entrain particles from stable (natural and controlled anthropogenic) surfaces. Any default wind speed, especially a low one like 25

mph, provides an excuse for not controlling serious PM sources and may encourage facilities to refrain from implementing dust controls where and when they are needed most. It is very important that 25 mph not be set as the hard, bright line as to what constitutes high wind events for all arid areas. Depending on the many variable local circumstances and conditions, the actual wind speed required to produce emissions from undisturbed and reasonably controlled surfaces will vary greatly from the 25 mph set forth in the draft guidance. In addition, the District contends such a default threshold is not allowed by the EER. The proposed guidance refers to 'empirical evidence' and 'numerous studies' (High Winds Guidance document, pages 3 and 14) as justification for using 25 mph. It is unfortunate that EPA used only three limited studies to derive a proposed threshold number. None of the studies were designed to be used to set national air pollution guidance. In fact, based on Great Basin's decades of studying this issue, we contend that there are virtually no undisturbed natural surfaces in the arid west with PM_{10} emission thresholds as low as 25 mph. PM_{10} emissions that occur at 25 mph almost certainly come from disturbed uncontrolled or poorly controlled surfaces. Please refer to the attached information discussing the proposed 25 mph threshold wind speed in more technical detail. Another concern regarding the concept of a default threshold wind speed is that it does not appear to be allowed by the EER. On page 14 of the proposed High Winds Guidance document it states, "In the absence of local studies, EPA intends to use 25 mph as the minimum sustained wind speed." In contrast, Section VII.B.2. of the rule states: "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 that demonstrates why a particular event should be considered exceptional for the affected area. The EPA will review the documentation submitted by States 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." This makes is clear that EPA cannot set a threshold wind speed, but must require the states to submit appropriate documentation to exclude data that may be influenced by exceptionally high winds that would overwhelm BACM and reasonable dust control measures. As required by the rule, it is important that a case-by-case analysis by done for each area since BACM regulations and compliance needs are different in all states and areas. EPA should follow the rule and require every area to submit an exceptional events analysis based on real, area specific evidence. A presumed default threshold wind speed applicable to all areas under all circumstances is in conflict with the EER and is not the appropriately conservative approach that protection of public health requires. Finally, a concerning consequence of setting a low default wind speed threshold will be the pressure on local agencies from air polluters to flag the PM_{10} data that occur any day the winds exceed 25 mph. It is certainly simpler (and less expensive) to claim an exceptional event than it is to deploy effective controls.

Specific reference to guidance text: High Winds Guidance document, reasonable controls

Submitter: Ted Schade, Great Basin Unified Air Pollution Control District, tschade@gbuapcd.org

Date: 6/15/2011 via e-mail to EEGuidanceComments@epa.gov

Response: In identifying a high wind threshold, the EPA does NOT intend to set a bright line as to what speed constitutes a high wind dust event or to categorically concur with all events with sustained winds above a given threshold. Both the nullified preamble language and current EPA interpretation require appropriate event-specific information that the EPA will review on a case-by-case basis. The high wind threshold is the minimum threshold wind speed capable of overwhelming reasonable controls on anthropogenic sources (i.e. significant emissions from controlled sources) or causing emissions from natural undisturbed areas. This threshold is intended to help inform the

rigor with which the EPA will review the "not reasonably controllable or preventable" criterion. Above this threshold wind speed, a lesser amount of information and data could show that the event was not reasonably controllable or preventable. Conversely, more information might be required when demonstrating the not reasonably controllable or preventable criterion when sustained winds are below the threshold speed. The EPA further agrees with the commenter that wind speed, area-specific regulations, and compliance needs determine "reasonableness." The EPA expects all agencies submitting high wind dust event demonstrations to address not only wind speed but also required controls, regulations and compliance, and public health needs.

In its guidance documents, the EPA identifies that air agencies may establish a different threshold based on local studies. Given numerous commenter concerns regarding the EPA's use of a default threshold, the EPA has modified its revised draft guidance. The EPA now suggests that agencies develop a high wind threshold for each area experiencing high wind dust events. Appropriate area-specific thresholds would consider local conditions and the variation in control strategies and specify a speed above which these controls would be overwhelmed. This approach is consistent with the Natural Events Policy where the EPA required the air agencies to define the conditions in which BACM level controls were overwhelmed. If an agency is unable to develop an area-specific wind threshold, the EPA will accept a threshold of 25 mph for areas in the West provided the agencies provide evidence of this as the level at which they expect stable surfaces (i.e., controlled anthropogenic and undisturbed natural surfaces) to be overwhelmed. And, provided the agencies are able to show that conditions in that area are similar to conditions in Clark County, NV where studies show that 25 mph winds overwhelmed reasonable controls.[4] The EPA provides additional rationale for the development and use of high wind thresholds in the revised draft High Winds Guidance document.

Air agencies wishing to prepare and submit a high wind threshold analysis can do so at any of the following times:
1. In advance of agency submittal and the EPA review of any specific demonstration submittal
2. With a letter of intent
3. With a demonstration package
4. As a component in a prospective controls analysis or High Wind Action Plan. The response to comment 7.4.1. presents additional information on prospective controls analyses.

As described in later responses to comments and in the revised draft High Winds Guidance document, the EPA has also revised the intended lifespan of High Wind Action Plans. Once the EPA has approved these plans and they have gone through the notice and comment process, they will be effective for a minimum of 3 years with some possibility to be reopened and reviewed. (See response to comment 7.4.1.)

7.3.3. **Comment:** *Sustained Wind* –"In addition to contending that 25 mph is too low for a default threshold wind speed (and is, in fact, prohibited by the EER), the use of one-minute averages to determine an exceptional event is inappropriate and, for most monitoring agencies, impractical. The PM_{10} standard is a 24-hour standard. How can one minute of 25 mph wind in a 24-hour period be considered exceptional? If control

[4] EPA intends to evaluate whether an event was not reasonably controllable or preventable at the time of the event by taking into account the wind speed and the reasonable controls in place, which is dependent on an area's attainment status, the frequency and severity of exceedances, benefits of the controls, and other factors.

measures are in place, it is extraordinarily unlikely that a one to five minutes high wind could have a meaningful impact on the 24-hour PM_{10} standard. Many arid areas of the west experience episodic wind events. At Owens and Mono Lakes, it is not uncommon to experience high winds, with attendant elevated PM_{10} levels, for short periods (1 to 2 hours) within the monitoring day, while the remaining hours of the day have much lower winds and PM_{10} levels. The few high wind/high PM_{10} hours are cancelled out by the numerous low wind/low PM_{10} hours and there is no exceedance. These frequent occurrences should not be grounds for excluding air quality data. We would argue that the truly exceptional events are the rare events with sustained high winds occurring over many hours or extreme winds (much higher than 25 mph) with extreme PM_{10} levels that occur for brief periods of time. An exceptional event is certainly not any day with one minute of 25 mph winds. It is our understanding that, although many agencies collect one-minute (or more frequent) wind speeds, the archived frequency is typically one hour. Great Basin normally samples at two-second intervals (to determine highest hourly gusts), but logs only hourly averages and the highest 2-second gust for every hour. The EPA's "Quality Assurance Handbook for Air Pollution Measurement Systems (Volume 4: Meteorological Measurements Version 2.0)" [EPA-454/B-08-002, March 2008] requires non-Ncore stations to collect at least 1 minute raw data, but the minimum sample frequency is hourly (Table 0-5). It would be appropriate to match exceptional event data requirements with the EPA's own meteorological monitoring requirements. Exceptional winds should be at least one-hour average winds."

Great Basin also provided supplemental information re the use of a 25 mph wind speed threshold (see Submitted Comments\Great Basin APCD comments on draft EER guidance.pdf)
Specific reference to guidance text: High Winds Guidance document, reasonable controls
Submitter: Ted Schade, Great Basin Unified Air Pollution Control District, tschade@gbuapcd.org
Date: 6/15/2011 via e-mail to EEGuidanceComments@epa.gov
Response: Commenters providing feedback regarding high wind threshold averaging times have generally made two points: (1) an area is unlikely to see PM emissions that are significant enough to cause violations of the NAAQS during a 1 to 5 minute period and (2) the availability of 5 minute data is limited and requiring this type of information adds a burden to the air agencies. Further, agencies who have conducted wind tunnel studies in areas of the Southwest have historically extrapolated the minute-level wind tunnel data to hourly high wind thresholds. On these bases, the EPA has revised the draft guidance to focus on hourly wind data for the high wind threshold and; therefore, define "sustained wind" as an hourly average (i.e., the default wind threshold of 25 mph will be based on an hourly average).

The EPA notes that the National Climate Center has started archiving the 2-minute winds for every 2-minute period of each hour for all ASOS stations in the country. Almost all sites have data since March 2005, with most archiving data since 2000. The EPA has further developed a preprocessor to AERMOD, called AERMINUTE, that takes minute observations and calculates an hourly average wind that can be fed into AERMET, the AERMOD meteorological processor. The AERMINUTE output is user friendly. AERMET can also accept, process, and calculate hourly average wind speeds from sub-hourly data with a resolution equal or greater than 5-minutes from sources other than AERMINUTE.

The EPA will consider shorter-term "snapshots" of wind data such as National Weather Service hourly summaries as part of the weight-of-evidence demonstration. The EPA

intends to allow air agencies to use wind data from a multitude of sources and with different averaging times, including model outputs (e.g., MM5, WRF) in the development of high wind thresholds. The EPA further intends to solicit feedback on the available sources of wind data and their use in the second round of comments on the revised draft guidance documents.

7.3.4. **Comment:** "CAPCOA understands the rationale behind establishing a default high-wind threshold to assist EPA in determining the required level of review and documentation necessary to make exceptional event determinations. However, it is very important that 25 miles per hour not be set as the hard, bright line for what constitutes high wind events for all arid areas. Depending on local circumstances and conditions, the actual wind speed required to cause emissions from undisturbed and reasonably controlled surfaces will vary greatly from the 25 miles per hour set forth in the draft guidance. Some areas of the arid west may be able to demonstrate that a lower threshold is justified for their area while others could prove that the threshold should be higher. Examples of existing data for some areas of California indicate the threshold could be as low as 16 miles per hour in the San Joaquin Valley to 45 miles per hour or more in the Owens Valley. EPA selected the 25 mile per hour default threshold after reviewing a limited number of studies not intended for such a determination. EPA has acknowledged that alternative thresholds could be considered for individual areas with appropriate justification, but the guidance fails to set forth exactly what and how much documentation would be required for EPA to approve an alternative threshold."
Specific reference to guidance text: High Winds Guidance document
Submitter: Ken Koyama (Exec Director) for Thomas J. Christofk (President), California Air Pollution Control Officers Association, kenk@capcoa.org
Date: 6/14/2011 via e-mail to Gina McCarthy
Response: As indicated in the response to comment 7.3.2., the high wind threshold is not intended to be a "bright line." The EPA's guidance indicates that the wind speed will help inform the rigor needed to satisfy the not reasonably controllable or preventable requirement of the EER. The EPA will review wind speed, along with the submitter's analysis of implemented reasonable controls, using a weight-of-evidence approach. Therefore, events with wind speeds below the high wind threshold may qualify as high wind exceptional events. Though these events may qualify as "exceptional," the EPA expects submitters to develop more rigorous and convincing supporting documentation to demonstrate that the events in question were, in fact, not reasonably controllable or preventable.

Also, as indicated in the response to comment 7.3.2., local high wind thresholds should define the local conditions capable overwhelming reasonable controls or causing emissions from natural undisturbed areas and should be supported and justified by local research. If local research or studies are not available, agencies may use a threshold of 25 mph or consider appropriate, relevant information from other areas that share similar characteristics including similar soil types, land uses, and meteorological conditions.

Please see the revisions to the revised draft High Winds Guidance document for additional information regarding development of high wind thresholds.

7.3.5. **Comment:** Why did the EPA not include wind gust/max. in its guidance? Wind gusts/max play a vital role in the formation of haboobs/dust storms ("The Impact of Exceptional Events 'Unusual Winds' on PM_{10} Concentrations in Arizona," Arizona Department of Environmental Quality (ADEQ), 10/15/09, online at http://www.azdeq.gov/environ/air/plan/download/assessments_white/091015%20The%2

0Impact%20of%20Exceptional%20Events%20'Unusual%20Winds'%20on%20PM10%20Concentrations%20in%20Arizona.pdf
Specific reference to guidance text: High Winds Guidance document
Submitter: Scott DiBiase, Pinal County Air Quality, scott.dibiase@pinalcountyaz.gov
Date: 6/23/2011 via e-mail to EEGuidanceComments@epa.gov
Response: While this information may be useful in the overall weight-of-evidence, information concerning maximum wind gusts should not serve as the primary basis for determining whether the wind speeds associated with the event in question are capable of overwhelming reasonable controls or causing emissions from natural undisturbed areas. Maximum wind speeds or wind gusts are often measured on an instantaneous basis, ranging from less than one second to multiple seconds. It is unlikely that one second of high wind would be sufficient to entrain dust from stable surfaces or cause an exceedance of the 24-hour PM_{10} or $PM_{2.5}$ NAAQS and; therefore, the EPA is using "sustained" wind speeds as the appropriate measure for exceptional event purposes. The EPA supports inclusion of available gust information as additional information.

7.3.6. **Comment:** Would it be possible for the EPA to put together a summary table and/or bibliography of specific studies related to choosing an alternative high wind threshold? It makes more sense to have a list prior to submitting a package to the EPA rather than the EPA waiting until a package is submitted before providing the information to a state/local agency.
Specific reference to guidance text: Page 14, section 3.1.3, bottom of paragraph 2, High Winds Guidance document
Submitter: Scott DiBiase, Pinal County Air Quality, scott.dibiase@pinalcountyaz.gov
Date: 6/23/2011 via e-mail to EEGuidanceComments@epa.gov
Response: Yes, the EPA will provide a list of available relevant literature on this subject in an Appendix to the revised draft High Winds Guidance document.

7.3.7. **Comment:** AQMD staff applauds the effort to develop a tiered approach where the stronger wind events (25 mph sustained threshold used in the guidance) may need less analysis and documentation than those that are not clear cut. The most obvious, extremely high wind events should require even less analysis and event documentation. Hopefully, this will also result in quicker concurrence with the obvious events. For the most obvious high wind cases, a checklist approach with key supporting data should be adequate. We hope to continue to work with you to streamline the process and the documentation.
Specific reference to guidance text: High Winds Guidance document
Submitter: Barry Wallerstein, South Coast Air Quality Management District
Date: 6/28/2011 via e-mail to Matt Lakin and EEGuidanceComments@epa.gov
Response: The EPA acknowledges commenter's support.

7.3.8. **Comment:** First, the level of complexity of the demonstration decreases significantly if the event was caused by sustained winds exceeding 25 mph. The 25 mph threshold is met by most of the exceedance measured on the Community for which exceptional event status might be sought. Nevertheless, long experience shows that significant levels of dust can be entrained by winds at levels well below 25 mph. The guidance suggests that the EPA may find that the lower wind speeds may pass muster as being sufficient to cause exceptional events, but there is no description in the guidance as to how a demonstration can be made to have the lower wind levels accepted. Moreover, it is unclear whether, once a demonstration is made that wind conditions, topography, the aerodynamic characteristics of the soil, and other Community-specific conditions are such that a lower wind velocity threshold can be substituted for the 25 mph presumptive threshold that the demonstration will be required each time an exceptional events

demonstration is made. In addition, if the quantum of information necessary to lower the presumptive threshold will have to match that presented by Clark County (e.g., wind tunnel testing) to establish the 25 mph threshold in the first place, the Community's task will always be cost prohibitive.
Specific reference to guidance text: High Winds Guidance document
Submitter: Leroy Williams (Environmental Engineer) for William Rhodes (Governor), Gila River Indian Community, williams@gilanet.net
Date: 6/23/2011 via letter to Gina with cc e-mail to EEGuidanceComments@epa.gov
Response: As indicated in the response to comment 7.3.2., agencies can develop local high wind thresholds that define the local conditions capable of overwhelming reasonable controls or causing emissions from natural undisturbed areas. These thresholds should be supported and justified by local research. If local research or studies are not available, agencies may consider appropriate, relevant information from other areas that share similar characteristics including similar soil types, land uses, and meteorological conditions or identify 25 mph as the level at which they expect stable surfaces (i.e., controlled anthropogenic and natural undisturbed areas) to be overwhelmed.

7.3.9. **Comment:** The usage of 25 mph as a default high wind speed threshold is inappropriate for the San Joaquin Valley and many other regions as it was derived from studies conducted in the desert, arid environments of Nevada and Arizona. The desert soil types are not representative of soil types found in other regions. For example, in the San Joaquin Valley, soil types are heavily composed of clay, and the District has scientifically documented a wind entrainment threshold of 17.9 mph that has been included and approved in prior exceptional event submittals to the EPA. The draft guidance is unclear regarding what information would be needed to demonstrate an alternative wind speed entrainment threshold. Given the prior approval of exceptional events by the EPA, the District requests that EPA approve 17.9 mph as the wind speed entrainment threshold for the San Joaquin Valley Air Basin in the draft guidance or provide clear direction to obtain approval for the lower high wind speed threshold.
Specific reference to guidance text: High Winds Guidance document
Submitter: Samir Sheikh (Director of Strategies and Incentives), San Joaquin Valley Air Pollution Control District
Date: 6/29/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: See responses to comments 7.3.2. and 7.3.8.

7.3.10. **Comment:** The guidance document states "sustained wind speed data are typically available from sources such as local air monitoring stations and National Weather Service stations." Most high wind events in the San Joaquin Valley air basin occur in remote areas where wind speed information is generally unavailable. The installation of wind speed equipment is extremely labor intensive and cost ineffective in trying to fulfill EPA's wind data requirements. On page 34, sustained wind speeds are determined by averaging times of one to five minutes. The NWS data is a snap shot (2-minute average) of the data toward the end of the hour, and there is no way to capture wind speed information during other parts of the hour. The data available from NWS are unlikely to capture the event. Wind speed measurements of this resolution are not readily available. The District recommends using MM5 or any other model output (for example CANSAC or NAM) to provide wind speed information. The guidance document should allow for alternative sources of wind speed measurements.
Specific reference to guidance text: High Winds Guidance document
Submitter: Samir Sheikh (Director of Strategies and Incentives), San Joaquin Valley Air Pollution Control District
Date: 6/29/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov

Response: In response to comments and as described in 7.3.3., the EPA has modified our approach to high wind threshold averaging times to allow extrapolating minute level data to hourly high wind thresholds. Even with this modified approach, the EPA understands that dense meteorological networks are not always available. A high wind exceptional event demonstration should include all relevant meteorological data from any available source. Generally, the EPA recommends using NWS data or the National Climate Center. Where meteorological data are not available for a particular area and such data are critical for the demonstration, agencies may substitute modeled wind speed surface measurements for actual measured data. Models that agencies can use to develop estimates for actual measured wind speed surface measurements include MM5, WRF, and, possibly, NAM.

7.3.11. **Comment:** "Imperial County APCD understands the rationale behind establishing a default 25 M.P.H. high wind threshold for determining the level of review and documentation necessary to make an exceptional event determination. However, it is very important that the 25 M.P.H not be the "bright" line as to what constitutes high wind events for all areas. Imperial County appreciates EPA's acknowledgement that alternative thresholds could be considered for individual areas with appropriate justification but the guidance does not establish what type and how much documentation would be required for EPA to approve an alternative threshold. Agreeing that this should be a case-by-case evaluation, appropriate guidance on how and what is required to establish a different threshold would save all agencies involved valuable time and resources if they understood what needed to be provided to EPA."
Specific reference to guidance text: none
Submitter: Brad Poiriez, Imperial County Air Pollution Control District, bradpoiriez@co.imerial.ca.us
Date: 6/14/2011 via e-mail to Gina McCarthy
Response: See response to comment 7.3.2.

7.3.12. **Comment:** "EPA should not specify a minimum wind speed for definition of an exceptional event ("EE") or create a regulatory presumption as to minimum wind speed."
Specific reference to guidance text: varies (additional documentation to support recommendation is provided in comment attachment at Submitted Comments\Need OCR\MAG_063011-ocr.pdf)
Submitter: Thomas Schoaf (Mayor, City of Litchfield Park and MAG Chair), Maricopa Association of Governments
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: See response to comment 7.3.2.

7.3.13. **Comment:** "EPA should consider additional technical information with regard to wind speed and aerodynamic entrainment (such as that provided in the attached detailed comments) and correct errors in its analysis of these matters."
Specific reference to guidance text: varies (additional documentation re aerodynamic entrainment and soil disturbance provided in comment attachment at Submitted Comments\Need OCR\MAG_063011-ocr.pdf)
Submitter: Thomas Schoaf (Mayor, City of Litchfield Park and MAG Chair), Maricopa Association of Governments
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The Maricopa Association of Governments (MAG) asserts that a 25 mph high wind threshold is not supportable and discusses a number of factors that may affect the level of wind speed associated with high wind dust events, which include surface roughness, soil disturbance, and aerodynamic entrainment. The EPA based the 25 mph threshold on extensive windblown dust emissions research performed by the University

of Nevada, Las Vegas (UNLV). During UNLV's studies, researchers used a wind tunnel to quantify emissions from undisturbed areas meeting the stabilization requirements of Clark County's (Nevada) BACM level fugitive dust regulations and mechanically disturbed open areas. The research performed by UNLV is one of the few field studies that clearly relates BACM level control of windblown dust from open areas and PM_{10} emissions. The EPA believes that for Clark County and areas similar to it, the study results clearly differentiate emissions from these two types of conditions and provide a reasonable baseline for establishing a high wind threshold for exceptional events purposes.

While the information presented in MAG's detailed comments provides useful information on the mechanics of windblown dust in some areas, the high wind threshold is intended to represent the conditions that are capable of overwhelming reasonable controls on anthropogenic sources (i.e., significant emissions from controlled sources) or causing emissions from natural undisturbed areas, not the wind speed at which *any* level of emissions could occur from *any* source. This approach is also consistent with the Natural Events Policy where the EPA required air agencies to define the conditions in which BACM level controls were overwhelmed.

In its guidance documents, the EPA notes that air agencies may establish a different threshold based on local studies. Given numerous commenter concerns regarding the EPA's use of a default threshold, the EPA has revised the draft guidance. The EPA now suggests that agencies develop a high wind threshold for each area experiencing high wind dust events. As indicated in the response to comment 7.3.2., local high wind thresholds should define the local conditions capable overwhelming reasonable controls on anthropogenic sources (i.e., significant emissions from controlled sources) or causing emissions from natural undisturbed areas and should be supported and justified by local research.

7.3.14. **Comment:** Clarify the timing for a state to submit a recommended alternative wind speed based on local studies. "A state may conduct a study after a high wind event occurs and submit that as part of the demonstration package." Sacramento Metropolitan Air Quality Management District requests that the guidance allow all studies to be included in a demonstration package.
Specific reference to guidance text: High Winds Guidance document
Submitter: Larry Greene (Executive Director), Sacramento Metropolitan Air Quality Management District
Date: 6/30/2011 letter via e-mail to Matt Lakin and EEGuidanceComments@epa.gov
Response: The EPA agrees that agencies can submit high wind threshold analyses as part of a demonstration package. Agencies may also submit these analyses as part of other submittals as identified in the response to comment 7.3.2.

7.3.15. **Comment:** Wyoming Air Quality Division supports a high wind threshold and believes that 25 mph is appropriate based on their experience. Wyoming Air Quality Division is, however, concerned that the EPA has "already determined that exceedances which occur or recur when winds are regularly greater than 25 mph will require a more detailed control analysis and enhanced controls. The purpose of the Guidance is to deal with high wind events defined as greater than 25 mph. To further caveat and categorize high winds greater than 25 mph is unwarranted given the level of documentation already being requested."
Specific reference to guidance text: High Winds Guidance document, Section 3.1.4
Submitter: Steven Dietrich (Administrator), Wyoming Air Quality Division
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov

Response: Both this document (in the response to comment 7.3.2.) and the revised draft High Winds Guidance document now contain language to clarify the development and application of high wind thresholds.

7.3.16. **Comment:** ADEQ requests that the EPA identify in the guidance, the literature, methods, and analytical process that the 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 high wind thresholds more appropriate for specific areas. ADEQ recommends that the 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 rather the status of the event as being exceptional.
Specific reference to guidance text: High Winds Guidance document
Submitter: Eric Massey (Director), Arizona Air Quality Division
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: Appendix A of the revised draft High Winds Guidance document contains the rationale for the 25 mph threshold. As discussed in response to comment 7.3.13, the EPA based the 25 mph threshold on extensive windblown dust emissions research performed by the University of Nevada, Las Vegas (UNLV). During UNLV's studies, researchers used a wind tunnel to quantify emissions from undisturbed areas meeting the stabilization requirements of Clark County's (Nevada) BACM level fugitive dust regulations and mechanically disturbed open areas. The EPA believes that for areas similar to Clark County the study results clearly differentiate emissions from these two types of sources and provide a reasonable baseline for establishing a high wind threshold for exceptional events purposes.

As previously noted in this document, the EPA is modifying its approach to high wind thresholds as discussed in the response to comment 7.3.2. and will no longer specify 25 mph as a broadly applicable default threshold. The EPA maintains, however, that UNLV's approach and results are sufficient to support a 25 mph high wind threshold for the Clark County, Nevada area and other areas that share similar characteristics including similar soil types, land uses, and meteorological conditions.

7.3.17. **Comment:** 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. Should the EPA use 1-5 minute averages as a measure of sustained winds, ADEQ recommends that the EPA provide a conversion calculation from hourly average to the selected averaging time interval. Otherwise, ADEQ recommends the use of a comparable hourly average high wind threshold.
Specific reference to guidance text: High Winds Guidance document
Submitter: Eric Massey (Director), Arizona Air Quality Division
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: See response to comment 7.3.3.

7.3.18. **Comment:** "…soils in the Columbia Plateau of eastern Washington are powdery and easily raised by high winds. Research indicates that a much lower wind speed is a more suitable default for the Columbia Plateau. This research is discussed in Ecology's *Natural Events Action Plan for the Columbia Plateau*."
Specific reference to guidance text: High Winds Guidance document

Submitter: Stuart Clark (Air Quality Program Manager), Washington Department of Ecology
Date: 7/5/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: See responses to comments 7.3.2. and 7.3.8.

7.4. Recurrence

7.4.1. **Comment:** Clarification is requested in the definition of a High Wind Dust Event and in Section 3.1.4 Consideration of Recurrence. Questions: 3. Is recurrence based only on the high wind dust event definition? 4. Is recurrence based on the particulate standard being exceeded? 5. Is recurrence based only on the data that has been flagged over the three years? 6. What role does wind direction play in the definition and the recurrence evaluation?

Example 1:
The agency has implemented RACM on industry. Due to this most events, where the winds exceed 25 MPH, are controlled and only show elevated particulate (dust). Are these controlled events considered part of the recurrence evaluation or are only those events that result in an exceedance of the standard considered for the recurrence evaluation?

Example 2:
In those events where the standard is exceeded wind direction plays an important role in determining where the dust originated. There can be situations where the high wind threshold has been exceeded but the wind direction is from an area that may not entrain sufficient dust (or is sufficiently controlled) to exceed a standard, or the wind speed and directions were from an unusual direction and is not a common seasonal occurrence. It would seem appropriate to consider wind direction as an important aspect in the recurrence evaluation.

Specific reference to guidance text: High Winds Guidance document definition of recurrence
Submitter: Dan Gates, City of Albuquerque EHD-AQD, dgates@cabq.gov
Date: 6/2/2011 via e-mail to Jim Afghani in R6
Response: The draft guidance said that in assessing whether an event was not reasonably controllable, the EPA would take into account whether the high wind event type was recurring such that more effective, but costly, controls would be reasonable compared to the situation in which a high wind event had been a unique occurrence. In response to this and other comments, the EPA has reconsidered this approach and is de-emphasizing recurrence. Although rare exceptions may exist, the EPA does not expect to receive or review demonstrations for non-recurring high wind dust events because these non-recurring events will generally not violate the NAAQS. As an example, everyday sampling allows for one exceedance of the standard per year without causing a violation of the 24 hour PM_{10} NAAQS, unless sampling completeness is inadequate.

In response to comments received, in an effort to streamline the demonstration process, and based on the recurrence premise stated above, the EPA has modified the recurrence discussion in the revised draft High Winds Guidance document in the following ways:

- De-emphasized recurrence frequency when assessing “not reasonably controllable or preventable” analysis
- Made basic controls analysis slightly more robust (more like recurring above 25 mph case) to reflect vast majority of cases that are recurring.

- Added a Prospective Controls Analysis. Described in greater detail in section 3.7.1 of the revised draft High Winds Guidance document, a prospective controls analysis is a generic[5] review of an area's current windblown dust controls and high wind threshold. In the prospective controls analysis, the air agency would provide information on attainment status, identify natural and anthropogenic windblown dust sources and emissions, provide the status of SIP submittals (if applicable), and identify the high wind threshold up to which the collective windblown dust controls are expected to be effective. Once the EPA approves the prospective controls analysis, an air agency's subsequent high wind exceptional event packages could reference the approved set of controls in the prospective controls analysis and show that the wind speed for the event in question is at or above the high wind threshold established in the prospective controls analysis. Air agencies would also include in their demonstration some positive showing that control requirements were being met on the day in question. An EPA-approved prospective controls analysis would generally be effective for a minimum of three years.
- Described the High Wind Action Plan (HWAP) more thoroughly in Section 3.7.2 of the High Wind Guidance document.
    - Air agencies can develop HWAPs to document their plans to implement needed controls on newly-identified sources that could emit dust during subsequent high wind events (similar to the process used in a Natural Events Action Plan).
    - The HWAP is an optional mechanism to implement necessary controls more expeditiously than with the normal regulatory planning process.
    - Preparation of a HWAP and its approval by the EPA could promote a common understanding between the air agency and the EPA about whether subsequent high wind dust events are not reasonably controllable or preventable.
    - The HWAP could document current windblown dust controls and current and/or planned mitigation measures as part of §51.930.
- The EPA review and approval of controls and an appropriate high wind threshold is typically effective for a minimum of three years
    - The EPA does not expect to reconsider the determination of reasonable controls and high wind threshold for at least three years. After the three-year time period, the EPA will notify the agency if the EPA intends to re-review the controls and high wind threshold. In some limited cases, the EPA may re-review the controls and high wind threshold within the three-year timeframe, such as if information on sources, enforcement, etc. suggests that controls may be inadequate or not implemented/enforced. The EPA may also re-evaluate the controls when an area that does not typically have recurring high wind dust events experiences unexpected recurrent events.
    - If an agency submits a package for an event with a wind speed below a previously EPA-approved high wind threshold, the submitting agency should also submit a new prospective controls analysis documenting the appropriateness of the lower threshold.
    - If the EPA has approved a SIP containing wind-blown dust controls within the past three years, then the submitting agency has the option of using the SIP-approved controls in place of the prospective controls analysis. The submitting agency would, however, need to specify a high wind threshold to which the controls are expected to be effective.

[5] "Generic" means a general review rather than a review specific to an identified event.

Together, the SIP-approved controls and the high wind threshold would constitute the set of controls that would have been reasonable to implement.

If the EPA's review reveals inadequacies in currently implemented agency controls, then the EPA may pursue subsequent action, such as a SIP call, to secure controls as quickly and effectively as possible. In many cases, submitting agencies should pursue regulatory planning, but in some cases an area can make significant progress quickly by addressing the high wind dust issues using the HWAP. Once adopted by the state/local jurisdiction, these mechanisms would be mandatory. As part of the exceptional event process, the EPA intends to promote both the regulatory planning mechanism and the HWAP approach for attainment areas.

7.4.2. **Comment:** *Frequency of Exceptional Events* - The Overview document states (page 6 of 8): "A natural event would not have to be infrequent to qualify as an exceptional event under the EER." How can a frequent event be exceptional? If the event is frequent, then reasonable controls should be developed for that event. For example, winds over 25 mph are frequent in the Owens Valley. During the 26-year period between March 1985 and May 2011, there were 3,408 days with hourly average (as opposed to 1-minute average) wind speeds greater than 25 mph. **This is an average of 130 days per year**. Even if the threshold was raised to a 45 mph (hourly) average, the Owens Valley experienced almost 5 days per year (4.8) that exceeded this increased threshold during the 26-year period. High wind days are not infrequent or exceptional in the Owens Valley and the arid west—we expect the deployment of measures that control anthropogenic emissions on these days. Protecting public health requires as much.
Specific reference to guidance text: Overview document, page 6
Submitter: Ted Schade, Great Basin Unified Air Pollution Control District, tschade@gbuapcd.org
Date: 6/15/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The statutory definition of an exceptional event at Clean Air Act section 319 recognizes that natural events can be both recurring and exceptional. However, the EPA also agrees with the commenter that "frequent" and "exceptional" are area and event specific and must consider public health. As stated previously in this document, exceeding a specific wind speed does not, on its own, make an event "exceptional." Rather the high wind threshold informs the rigor of the documentation required to support an exceptional events claim and also the rigor with which the EPA will review the "not reasonably controllable or preventable" criterion. The EPA agrees with the commenter that agencies should deploy reasonable controls to control emissions. The EPA's intention is that individual areas identify a high wind threshold that defines the local conditions capable overwhelming reasonable controls on anthropogenic sources (i.e., significant emissions from controlled sources) or causing emissions from natural undisturbed areas. The Owens Valley situation is unique or nearly unique, and requires careful application of these general concepts. The high wind threshold addresses one of the exceptional event criterion. A demonstration package would need to address all the other exceptional event criteria.

7.4.3. **Comment:** Is recurrence frequency calculated for all flagged high wind events or by site?
Specific reference to guidance text: High Winds Guidance document
Submitter: Scott DiBiase, Pinal County Air Quality, scott.dibiase@pinalcountyaz.gov
Date: 6/23/2011 via e-mail to EEGuidanceComments@epa.gov
Response: See response to comment 7.4.1

7.4.4. **Comment:** It should be made clear that reasonable controls are not required to be in place for the first high wind dust exceptional event in a PM_{10} attainment area. This is important since PM_{10} attainment areas will likely not have any SIP approved or local dust control rules in place for sources like agricultural operations, and thus it would be impossible to make the control findings. (Note: Santa Barbara County has historically been in attainment of the federal $PM_{2.5}$ and PM_{10} standards, and has no PM dust control rules in place for agricultural sources. The northern half of the County has large stretches of contiguous agricultural lands that at times get wind whipped, producing visible emissions and above normal PM_{10} concentrations).
Specific reference to guidance text: High Winds Guidance Document, Section 3.1.2
Submitter: Brian Shafritz, Santa Barbara County Air Pollution Control District, ShafritzB@sbcapcd.org
Date: 6/23/2011 via e-mail to EEGuidanceComments@epa.gov
Response: As directed by the comment, this response is specific to attainment areas. The EPA agrees that controls are not expected for the *first* high wind dust exceptional event in a PM_{10} attainment area. However, the EPA is unlikely to consider a *first* high wind dust event, because the first event is unlikely to result in a violation of the NAAQS. In response to comment, the EPA has added language to the revised draft High Winds Guidance document stating that the EPA does not expect PM controls in areas with no "history" of high wind dust exceedances. If an area is violating the standard because of more than one high wind dust event in a three-year period, then the EPA will consider the area to "have a history" of high wind dust events. If wind speeds exceed a predetermined wind threshold, then the EPA may not consider the implementation of controls at the time of the event to be a condition for a determination that the event was not reasonably controllable. The EPA will determine this during the review process. The EPA does not expect to simply concur on events where sources that were *not controlled* caused a violation just because the area was previously in attainment. The EPA expects to look closely exceedances that occurred with wind speeds below the wind threshold to overwhelm reasonable controls or cause emissions from natural undisturbed areas. If an attainment area has violations below the high wind threshold and the EPA determines that the concentrations are attributable to sources that could be reasonably controlled going forward, the EPA will do one of the following:

1. Request that the submitting agency develop and implement an adequate HWAP and concur upon approval of the HWAP going forward if all other EER criteria have been met.

2. Nonconcur. If the nonconcurrence results in an area's designation as non-attainment, then this nonconcurrence would also trigger preparation of a SIP incorporating appropriate PM controls.

7.4.5. **Comment:** We are also concerned that the U.S. EPA's proposal implies that if a high wind event occurs more than once, new control measures would be more feasible and cost effective. The frequency of unpreventable high wind events should not change the assessment of what constitutes reasonable controls for windblown dust.

To address the U.S. EPA concerns that we believe underlie this proposal, ARB plans to develop a technical document which discusses the nature of sources for key regions, a conceptual model of the types of conditions under which high wind events occur, and an analysis of reasonable controls for that region. Subsequent requests for approval of specific events would then focus on documenting the technical aspects of that individual event rather than a re-analysis of reasonable controls each time. This provides for region specific considerations. For example, California State law provides unique authority for

the Great Basin Unified Air Pollution Control to establish mitigation requirements for the Owens dry lakebed, which does not apply elsewhere in the State.
Specific reference to guidance text: none
Submitter: Lynn Terry (Deputy Executive Officer) for James Goldstene (Executive Officer), California Air Resources Board, ksnyder@arb.ca.gov
Date: 6/24/2011 letter to Gina via e-mail to EEGuidanceComments@epa.gov
Response: Based on CARB's and other's comments, the EPA has modified its approach to high wind thresholds and High Wind Action Plans and has added a prospective controls analysis, with elements similar to those proposed by CARB (see responses to comments 7.3.2. and 7.4.1.). The EPA still maintains that the reasonableness of controls can depend on the number of days per year on which they will have an air quality benefit.

7.4.6. **Comment:** The methodology used to determine recurrence frequency applies to high wind events. Will this also be applied to other event types?
Specific reference to guidance text: High Winds Guidance document, Section 6.2.2.3
Submitter: Unnamed commenter
Date: 6/29/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The draft High Winds Guidance document raised the concept of recurrence as it pertains to the reasonableness of controls with the belief that a natural event that recurs merits more effort at control than a one-time or very infrequent type of event. The EPA still adheres to this general concept for high wind dust events. The EPA does not expect the recurrence/reasonable control issue to arise for other types of natural events, either because the event is expected to be highly infrequent (e.g., 2008 California wildfires) or because controls are unlikely to be applied and/or effective (e.g., volcanic eruptions). If the EPA discovers that the recurrence concept described above applies to other event types, the EPA would apply the principles in the revised draft High Winds Guidance document and note this added application in further guidance.

7.4.7. **Comment:** The guidance does not provide much streamlining for ADEQ as most of their submittals would require the "most comprehensive evaluations" as described in the EPA's sliding scales. ADEQ has provided alternative approaches to handling High Wind Action Plans and believes that these approaches would provide some resource relief as well as regulatory certainty.
Specific reference to guidance text: High Winds Guidance document
Submitter: Eric Massey (Director), Arizona Air Quality Division
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA has incorporated some of the commenters' approaches into our revised draft guidance documents. Since receiving this comment, staff in the EPA Region 9 office have been working with staff at Arizona Department of Environmental Quality, Maricopa County, and Maricopa Association of Governments (MAG) to develop a consolidated exceptional events demonstration package that addresses 29 exceedances of the PM_{10} standard in 2011 that can serve as a model for future events. The collaborative effort is nearing completion with slightly more effort than it has historically taken to address a single high wind exceptional event. Much of the information included in the current demonstration package could be transferable to the remaining exceedances that are flagged as exceptional events, which will further aid the streamlining process. See also our response to comment 7.4.1.

7.4.8. **Comment:** The draft guidance is unclear regarding the determination of recurrence for exceptional events. For example, establishing recurrence appears to rely heavily on commonly occurring "informational" flags, as opposed to more appropriate "request to exclude" flags. Additionally, consecutive day high wind events are not clearly addressed by the draft guidance, and should be considered as a single event, and not multiple

events. Furthermore, the draft guidance includes additional documentation requirements for events determined to be recurrent that can otherwise clearly be demonstrated to be exceptional, including natural events. The District recommends that the EPA closely re-evaluate its consideration of recurrent events to ensure that documentation beyond that needed to demonstrate compliance with the EER are not added through the draft guidance.
Specific reference to guidance text: High Winds Guidance document
Submitter: Samir Sheikh (Director of Strategies and Incentives), San Joaquin Valley Air Pollution Control District
Date: 6/29/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA has modified its approach with respect to recurrence. See response to comment 7.4.1.

7.4.9. **Comment:** "EPA should not link the 'recurrence' criteria in the statutory EE definition to requirements for additional controls or to otherwise establish a "more than once a year" definition of recurrence."
Specific reference to guidance text: varies (additional documentation to support recommendation is provided in comment attachment at Submitted Comments\Need OCR\MAG_063011-ocr.pdf)
Submitter: Thomas Schoaf (Mayor, City of Litchfield Park and MAG Chair), Maricopa Association of Governments
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: See response to comment 7.4.1.

7.4.10. **Comment:** ADEQ questions the value of the EPA's requiring additional analysis of air pollution controls for events that occur more than 1 time per year. Agencies typically review (and flag) events when they occur. The EPA has indicated that they likely will not review information until there is a related regulatory decision. If there are fewer than 3 exceedances, then there will not be a regulatory decision, so the EPA's approach really does not streamline the process. ADEQ recommends that the 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.
Specific reference to guidance text: High Winds Guidance document
Submitter: Eric Massey (Director), Arizona Air Quality Division
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: See response to comment 7.4.1.

7.4.11. **Comment:** WA ECY does not believe that it is appropriate to treat recurring high wind events differently than "one-time" events, particularly for agricultural areas where the amount of dust raised by high winds at one time and not another does not reflect better and worse levels of control but the cycle of agricultural practices. "While the draft guidance specifies a 3-year period to determine recurrence, we suggest basing 'recurrence' on a longer period of record such as 10-to-20 years or even more."
Specific reference to guidance text: High Winds Guidance document
Submitter: Stuart Clark (Air Quality Program Manager), Washington Department of Ecology
Date: 7/5/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: See response to comment 7.4.1.

7.5. Reasonable controls

7.5.1. **Comment:** It is noted within the guidance that "HWD EE packages must address whether reasonable controls were in place for anthropogenic sources contributing to the event." In the subject of agricultural operations within rule 403, most of these operations

are exempt from stringent dust controls and are obligated under "best management practices" (BMP) compliance, which in most cases are voluntary. It seems a contradiction to demonstrate or demand that reasonable controls may or may not have been in place during the EE, when BMP, at the very best, are voluntary. Again, agricultural operations are basically exempt in the area of the Coachella Valley, California, from stringent dust control compliance.
Specific reference to guidance text: High Winds Guidance document, reasonable controls
Submitter: Jonathan Chapman, Torres Martinez Desert Cahuilla Indians, 760-397-0300 ext 1224, jchapman@torresmartinez.org
Date: 6/13/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The fact that a particular "best management practice" is not mandatory for a specific source in a given area does not mean that it would not have been reasonable for air agencies to make it mandatory. Similarly, in light of the historical frequency and nature of high wind events in the area, it may have been reasonable for air agencies to encourage agricultural sources to implement the voluntary BMP more broadly or effectively. The EPA will assess scenarios on a case-by-case basis.

7.5.2. **Comment:** *Use of USDA Best Management Practices*
The guidance suggests that U.S. Department of Agriculture best management practices (BMPs) could be a source of reasonable controls for exceptional events (High Wind document, pages 3 and 12). USDA BMPs are developed to prevent soil loss—they are not intended to protect public health. BMPs are not BACM and it is certainly not appropriate to use such measures as a surrogate for public health protection.
Specific reference to guidance text: High Winds Guidance document, pages 3 and 12
Submitter: Ted Schade, Great Basin Unified Air Pollution Control District, tschade@gbuapcd.org
Date: 6/15/2011 via e-mail to EEGuidanceComments@epa.gov
Response: While many of the U.S. Department of Agriculture's best management practices focus on soil loss/erosion prevention approaches, other BMPs are designed to effectively reduce fugitive dust emissions and prevent loss of soil during high winds. (See http://www.nrcs.usda.gov/wps/portal/nrcs/main/) The EPA has clarified in the revised draft guidance documents that implemented BMPs that reduce **air** and dust emissions **may be** part of the menu of controls that the EPA would consider to be reasonable.

7.5.3. **Comment:** *Definition of "Reasonable"*- The terms "reasonable," "reasonably controllable" and "reasonably controlled" are used throughout the documents and are crucial in deciding whether monitored emissions are exceptional or are the result of inadequate (or nonexistent) controls. For serious nonattainment areas, like the Southern Owens Valley (Owens Lake) and Mono Basin (Mono Lake), Best Available Control Measures (BACM) must be required to be in place and fully operational on all anthropogenic sources that cause or contribute to PM standard exceedances. Reasonably Available Controls (RACM) or other lesser levels of control are not sufficient for serious nonattainment areas. It appears that this may be required by the current draft guidance; however, the requirement is a footnote (#16) on page 13 of the High Winds document. This requirement should be made very clear. Effective BACM developed specifically for the source areas to be controlled should be effective in controlling emissions in all but the very highest winds—this is, after all, the whole point of a Best Available Control Measure. In addition, agencies must prove that actual controls were in place and operational—not just that controls are required by rule or regulation and are presumed to be in place. Our guiding principle of protecting public health requires us to do our very best to control anthropogenic sources on high wind days, especially if the winds cause PM emissions from undisturbed areas. These are just the conditions that cause the

greatest threat to public health and are the conditions under which we should be making our best efforts at public protection.
Specific reference to guidance text: High Winds Guidance document, reasonable controls
Submitter: Ted Schade, Great Basin Unified Air Pollution Control District, tschade@gbuapcd.org
Date: 6/15/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA agrees with the commenter and has clarified the revised draft High Winds Guidance document by moving the referenced footnote into the body of the document.

7.5.4. **Comment:** Page 14 of the High Winds Guidance document says "*In areas where events continue to recur, EPA may consider BACM, or greater levels of control, as the appropriate starting point, regardless of attainment status.*" Where does the EPA attain the legal right to consider BACM or greater levels of control as the appropriate starting point regardless of attainment status for areas where events continue to recur? There is nowhere in the Clean Air Act that give the EPA that authority. General RACM is required for nonattainment plans (CAA Section 172(c)(1), CAA Section 182(a)(2)(A) – RACT for Marginal ozone nonattainment areas, CAA Section 182(b)(2) – RACT for Moderate ozone nonattainment areas, CAA Section 189(a)(1)(C) – RACT for moderate PM_{10} NAA, Section 190 – RACM and BACM guidance. Further, page 2 of the High Winds Guidance document "….states are expected to consider and implement further controls as events continue to recur." How are areas that are designated attainment for PM_{10} (and $PM_{2.5}$) at the time of the exceptional events supposed to implement further controls (i.e. more stringent controls) on sources that will not even voluntarily commit to emissions reductions controls? There is no legal requirement for them to do so. Most sources that contribute to PM_{10} exceedances will not commit to control measures until forced to (i.e. nonattainment designation/threat of loss of highway funds).
Specific reference to guidance text: High Winds Guidance document, pages 2 and 14
Submitter: Scott DiBiase, Pinal County Air Quality, scott.dibiase@pinalcountyaz.gov
Date: 6/23/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The NAAQS are established for pollutants considered harmful to public health and the environment. When the EPA concurs on an air agency's request to exclude data attributed to an exceptional event, the EPA must ensure that the concurred upon events are, in fact, exceptional and meet both statutory and regulatory requirements. The Exceptional Events Rule allows air agencies to request the EPA to disregard certain exceedances which meet the requirements of the Clean Air Act and the EER, including the requirement to implement reasonable controls. Air agencies are not required to flag data, petition the EPA, or meet the requirements of the EER; these actions are voluntary. Air agencies not petitioning the EPA to exclude certain exceedances might be designated to nonattainment, with BACM requirements following. Before submitting an exceptional events request to the EPA, air agencies may have voluntarily chosen to pursue controls, including RACM, BACM, or other controls, to avert an eventual nonattainment designation. These measures should be viewed as voluntary proactive control strategies, not as EPA required actions, as the exceptional event identification, demonstration, and review process is voluntary for state, local and tribal agencies.

By starting point, the EPA means that the final analysis of reasonable controls could include either fewer or more controls than identified in the reference list of RACM or BACM measures depending on the specifics of the case as they existed at the time of the event. The EPA has modified the language in the revised draft High Winds guidance document. The EPA also notes that while RACM or BACM may be appropriate to implement under the specific sections of the CAA identified by the commenter, the

exceptional event requirements under section 319 of the CAA are separate and distinct. To qualify as an exceptional event under section 319 of the CAA and the associated promulgated regulations, submitting agencies must meet the underlying requirements including identifying what constituted reasonable controls for a particular event. The lack of a formal area designation does not, in itself, mean that no controls would have been reasonable to have been in place. Rather, the physical facts related to the event determine what constitutes "reasonable controls." See also the response to comment 7.4.4.

7.5.5. **Comment:** It should be made clear that reasonable controls are not required to be in place for the first high wind dust exceptional event in a PM_{10} attainment area. This is important since PM_{10} attainment areas will likely not have any SIP approved or local dust control rules in place for sources like agricultural operations, and thus it would be impossible to make the control findings. (Note: Santa Barbara County has historically been in attainment of the federal $PM_{2.5}$ and PM_{10} standards, and has no PM dust control rules in place for agricultural sources. The northern half of the County has large stretches of contiguous agricultural lands that at times get wind whipped, producing visible emissions and above normal PM_{10} concentrations).
Specific reference to guidance text: High Winds Guidance Document, Section 3.1.2
Submitter: Brian Shafritz, Santa Barbara County Air Pollution Control District, ShafritzB@sbcapcd.org
Date: 6/23/2011 via e-mail to EEGuidanceComments@epa.gov
Response: See response to comment 7.4.4. and 7.5.4.

7.5.6. **Comment:** The U.S. EPA's first principle in developing the Draft Guidance states, "States should not be held accountable for exceedances due to events that were beyond their control at the time of the event." High wind events will recur in the naturally dry arid regions of the West. Although reasonable measures to help mitigate the impact of these events should be implemented, such exceedances are fundamentally not preventable. We are especially concerned that the Draft Guidance suggests that despite a state's documentation that an uncontrollable wind event occurred, the U.S. EPA could still disapprove the exceptional event based on the U.S. EPA's staff's concerns regarding the adequacy of PM_{10} control measures. The determination as to whether a state has reasonable control measures in place should be an independent analysis taking into account technical feasibility and cost-effectiveness.

If the U.S. EPA were to implement the guidance as proposed, states could be required to develop an attainment demonstration based on a value that is the result of an uncontrollable wind event. Such a State Implementation Plan would not be approvable, since there is no attainment strategy that can prevent exceedances caused by high Wind events. This is precisely the situation the U.S. EPA's first principal is designed to prevent.
Specific reference to guidance text: none
Submitter: Lynn Terry (Deputy Executive Officer) for James Goldstene (Executive Officer), California Air Resources Board, ksnyder@arb.ca.gov
Date: 6/24/2011 letter to Gina via e-mail to EEGuidanceComments@epa.gov
Response: As previously discussed, local high wind thresholds should define the conditions capable overwhelming reasonable controls on anthropogenic sources (i.e., significant emissions from controlled sources) or causing emissions from natural undisturbed areas. The EPA supports the approach of *a priori* determining whether controls are adequate for exceptional events purposes as long as an analysis of an applicable high wind threshold is included (or referenced). For example, we could prospectively agree that a reasonable set of high wind dust controls are effective only up to sustained winds of 25 mph. Subsequently, events with wind speeds at or above 25 mph where such controls are in place generally would be considered to be not reasonably

controllable or preventable. In this case, any exceedances resulting from events with wind speeds less than 25 mph wind would either not be submitted to the EPA for data exclusion approval or would need additional justification. See response to comment 7.4.1.

In response to the commenter's second point regarding the development of an attainment demonstration based on a value that is the result of an uncontrollable wind event, the EPA refers to the commenter to response to comment 6.5.1. and Question 13 in the revised draft Q&A document. The EPA has also added language addressing this point in the revised draft High Winds Guidance document.

7.5.7. **Comment:** Contrary to the U.S. EPA's interpretation, the Clean Air Act does not authorize the U.S. EPA to require that anthropogenic sources of emissions be "reasonably controlled" in order to exclude a high wind event. Section 319(b)(1)(A) of the Clean Air Act defines the term "exceptional event" and includes the requirement that the event "is not reasonably controllable or preventable." Under the statute, the relevant criterion is whether the event itself is reasonably controllable, not whether the effects of the event could have been limited or controlled. There are two types of exceptional events: those caused by human activity that is unlikely to recur, and those cause by "natural events." While the degree of control on anthropogenic sources may be relevant to an exceptional event caused by human activity (e.g. a chemical spill), by the plain language of the statute it is not relevant to whether a natural event "is not reasonably controllable or preventable." In short, an agency cannot do anything to "control or prevent" the wind. The U.S. EPA has attempted to address this concern by redefining the term "event" to include both the high wind and the resulting dust emissions. This definition is illogical and convoluted. There is a clear difference between an event (high winds) and the results of the event (dust emissions). With respect to "natural events," the relevant consideration under the statute is whether the event itself is controllable or preventable. The Clean Air Act may allow consideration of controls on anthropogenic sources in deciding whether an exceptional event due to human activity is controllable, but the wind event itself is not controllable.

Whether reasonable controls are applied to anthropogenic sources may be relevant to a separate provision of the Clean Air Act, but under that provision, the U.S. EPA's Exceptional Events Rule has already expressly decided that a demonstration of the degree of control will not be required. Therefore, to the extent the proposed Guidance would require a state to demonstrate that it has applied "reasonable controls" before excluding an exceptional event it violates the Exceptional Events Rule. The U.S. EPA's Exceptional Events regulation is authorized to consider several principles, including "the principle that each state must take necessary measures to safeguard public health, regardless of the source of the pollution." CAA section 319(b)(3)(iv). Under this principle, the U.S. EPA has already decided that it will not require states to control anthropogenic sources. In implementing this principle, the Exceptional Events Rule says that mitigation measures a state may take "may or may not include the implementation of control measures on contributing anthropogenic sources related to an event." 72 Fed. Reg. 13560, 13576. (March 22, 2007). Thus, control of anthropogenic sources is not automatically required. Further, the U.S. EPA said that "the implementation of RACM or BACM is not required ... " (id.) Finally, the U.S. EPA expressly ruled that it "will not be requiring States to submit documentation concerning the actions that it (sic) took to mitigate the impact of exceptional events, in order for U.S. EPA to exclude data from regulatory consideration." The U.S. EPA's Proposed Guidance thus violates its own Exceptional Events Rule as well as the express terms of the Clean Air Act. This issue is currently being litigated in

Imperial County Air Pollution Control District v. U.S. EPA, Ninth Circuit Court of Appeals No.10-72709.

The term "reasonable" is used in terms of controls in relation to the "not reasonably controllable or preventable" discussion. As discussed above, the U.S. EPA's use of this phrase to require that the effects of the event, rather than the event itself, be reasonably controllable or preventable, is not authorized by the Clean Air Act or the U.S. EPA's Exceptional Events Rule. While we agree that effective controls should be in place to protect public health, which is our most important consideration, the cost versus benefit of controls plays role in determining what control measures are reasonable in a given area or situation. Additional clarification in the guidance and the language of the Exceptional Events Rule itself may help state and local agencies identify the wind-driven anthropogenic sources in the area and to assess what controls could be applied.

If the U.S. EPA continues to take the position that anthropogenic sources must be reasonably controlled in order to exclude data, it must at least recognize that in some cases, even reasonable controls would not have prevented the exceedance. States must have the ability to make the case to the U.S. EPA that those sources were reasonably controlled at the time of the exceedance and that the exceedance occurred despite the implementation of those controls, or that if the controls were not in place, they would not have prevented the exceedance in any case. The discussion of reasonable controls (Section 3.1.2) seems to indicate that agencies may only know the U.S. EPA's assessment of our control strategy for future events based on notice from the U.S. EPA that the U.S. EPA "considers controls on particular uncontrolled sources to be reasonable (e.g., as part of a previous exceptional event review)." Table 2 of the guidance provides some good insight into the thought process that the U.S. EPA will use for determining the reasonableness of controls. The difficulty is in how to best assess the adequacy of controls for events without that history of the U.S. EPA concurrence. Furthermore, additional clarification is needed on how source contributions that cross jurisdictional boundaries should be treated. One such example is particulates entrained from thunderstorms outflows over the deserts of northern Mexico or Arizona that affect measurements in California where the winds remain low. It is not completely clear what level of analysis is needed for such a transport case and whether a controls analysis is needed when anthropogenic sources are out of the air agency's jurisdiction.

While AQMD has one of the most comprehensive and highly effective control programs in the country, there is concern that a minor source that is not considered fully controlled in the U.S. EPA assessment could stall this process. Do all known anthropogenic sources in an area need to be controlled to the full extent possible for BACM to be considered to be in place? Additional discussion in the guidance will help submitting agencies determine if their controls should be adequate and will help provide consistency within the U.S. EPA among the reviewers of exceptional event documents. To illustrate this concern, the example of reasonable agricultural controls is used. Can agricultural sources be adequately controlled with existing soil management practices (such as those from the U.S. Department of Agriculture's Natural Resources Conservation Service) or could stabilization of plowed or otherwise disturbed farmland be required, similar to what is often required of construction sites? Many would argue that such agricultural controls would be neither appropriate nor reasonable, for both economic and ecological reasons. Would air agency rulemaking to require best soil management practices on agricultural lands be needed in order to be able to consider agricultural source contributions to be reasonably controlled, or is soil management guidance adequate? Therefore, if the U.S. EPA elects to incorporate "reasonable control" in spite of our comments, any use of the term "reasonable control" must be clearly defined.

Specific reference to guidance text: High Winds Guidance document
Submitter: Barry Wallerstein, South Coast Air Quality Management District
Date: 6/28/2011 via e-mail to Matt Lakin and EEGuidanceComments@epa.gov
Response: The EPA agrees with the commenter that in some cases, there are no feasible and reasonable cost controls that would have prevented the exceedance. This is the concept behind the development of the prospective controls analysis (described in additional detail in the response to comment 7.4.1.). In a prospective controls analysis, air agencies should first identify an appropriate high wind threshold for an area and identify and implement "reasonable" controls that are expected to be effective up to that threshold speed. Once the EPA agrees with the identified controls and high wind threshold for that area, then, events with wind speeds above the high wind threshold would generally be assumed to be not reasonably controllable or preventable since implemented controls would be overwhelmed above the high wind threshold. Further, the EPA would generally assume that PM emissions below the wind threshold have been reasonably controlled. See responses to comments 6.5.2. and 7.3.2. In addition, as noted in the response to comment 7.4.1., the prospective controls analysis can be prepared and submitted to the EPA in advance of any event as CARB suggests, with a letter of intent, or as a component of a demonstration package. The EPA encourages submitters to use prospective analyses as a means of communicating and reaching a common understanding in advance of an event.

The EPA further agrees with the commenter that the mitigation requirements discussed at 72 FR 13576 allow air agencies to make determinations regarding reasonable mitigation measures and that these reasonable measures "may or may not include the implementation of control measures on contributing anthropogenic sources related to an event..." The EPA notes, however, that mitigation plans address measures that an air agency takes after an event. These measures may or may not be "reasonable" when addressing the "not reasonably controllable or preventable" criterion within an event demonstration package.

The EPA does not intend to determine the adequacy of any individual control measures or practices in this response to comments document or in the revised draft guidance documents. Rather, we will assess reasonable controls as part of a demonstration submittal or as part of a prospective controls analysis. The EPA is not taking any position in this document on what controls may or may not be reasonable for plowed or otherwise disturbed farmland.

The commenter also requests clarification regarding cross-jurisdictional boundary issues. The EPA addresses both interstate and international transport in the response to comment 6.4.1. and in Question 23 in the revised draft Q&A document. The EPA refers the commenter to these responses.

7.5.8. **Comment:** The "reasonableness of existing controls" and the required controls analysis assumes a regulatory structure that does not exist on the Community. GRIC has two adopted RACT level regulations for the significant PM-10 point source categories. Ordinances also are in place for area sources such as earth moving, material handling unpaved parking lots, disturbed surface areas, etc. However, agriculture does not have a regulatory program, other than for the control of pesticide application, specifically applicable to it. Thus, if the phrase "control measures in place" means controls necessary to satisfy a regulatory requirement, GRIC does not meet the requirement. The reason is primarily cultural and traditional properties of the Community that are protected by both tribal and federal regulation. The central cultural concern for the Gila River Community is agriculture. The Akimel O'odham people are culturally and traditionally

"agriculturalists" as opposed to "hunters and gatherers." The Community's very existence is founded upon agriculture and farming activities with a relationship and respect for the land and water. Any attempt to regulate how farming is conducted will be immediately opposed by the Community's decision makers. Of course, regulation of activities that directly relate to the safety of workers or Community members is as stringent as elsewhere, but regulation of the methods of tillage or the nature of how crops are grown is an anathema to the Community. This being said, the Community appreciates the need to control and mitigate dust from farming activities and has led the local farming jurisdictions in their ability to respond to the mitigation of dust issues. While the Community has developed and voluntarily implemented significant Best Management Practices, they have not been imposed as regulations but rather are adopted as Community farming methods. It is important to note that this is a voluntary, not a regulatory program, and the controls analysis contemplated by this guidance appears to be based entirely on the effectiveness of regulation, not the effectiveness of the voluntary control measures being implemented. It would be unreasonable to assume that cultural and traditional practices would be regulated under this guidance and such regulation would be unnecessary.

"…there is a requirement that if dust from undisturbed natural desert is cited as a contributing cause of an exceedance, which causal connection must have "appropriate supporting documentation." The Community is entirely rural in character with large tracts of land that are undisturbed desert. However, it is unclear what documentation EPA expects to verify this condition or the fact that dust can be entrained from these tracts of land."
Specific reference to guidance text: High Winds Guidance document
Submitter: Leroy Williams (Environmental Engineer) for William Rhodes (Governor), Gila River Indian Community, williams@gilanet.net
Date: 6/23/2011 via letter to Gina with cc e-mail to EEGuidanceComments@epa.gov
Response: The EPA commends the Community for recognizing the need to control and mitigate dust from farming activities and for leading the local farming jurisdiction in their ability to respond to mitigation of dust issues. The commenter notes that the Community has developed and voluntarily implemented significant Best Management Practices. They have not been imposed as regulations but rather are adopted as Community farming methods. The EPA will consider currently implemented controls at the time the event occurred, including voluntarily developed and implemented Best Management Practices in reviewing the "not reasonably controllable or preventable" element when reviewing tribal exceptional event demonstration submittals. The EPA may consider such implemented controls to be "reasonable" depending on the event. Conversely, it may be unreasonable not to have had certain controls in place when the event occurred. Thus, the EPA's controls analysis is not restricted "entirely on the effectiveness of regulation, [but could also consider] the effectiveness of the voluntary control measures being implemented."

Additionally, the commenter makes a second point regarding the need for "appropriate supporting material" where dust from undisturbed natural desert is cited as a contributing cause of an exceedance. While the EPA's position is generally that impacts from wind-blown dust from undisturbed natural deserts are inherently not reasonable to control, the tribe (or state) would need to assert this and provide appropriate supporting documentation in its demonstration package. The supporting documentation should include descriptions of the geographic area (with maps or available visuals) and a discussion of the historical land use, including prior disturbances, water diversions and other historical practices which may have occurred on the land, even if the land seems or is considered to be "undisturbed" at present. Submitting agencies should also identify all

sources contributing to an event and identify appropriate control strategies for each anthropogenic source.

7.5.9. **Comment:** "EPA's requests to provide a comprehensive controls analysis that has back trajectories indicating specific sources in the upwind area, an inventory of the contribution for the significant sources, and detailed descriptions of controls and their effective implementation and enforcement is an excessive and unreasonable requirement. EPA needs to be realistic in establishing requirements for determining that reasonable controls were in place for the exceptional event documentation process. As in past approvals, EPA should recognize and streamline the approval process for areas that have implemented comprehensive BACM controls, such as the San Joaquin Valley. Similarly, the draft guidance includes a requirement that analyses be performed to determine whether natural sources were reasonably controlled during exceptional events. In an example included in the draft guidance, EPA cites performing an analysis of whether windbreaks and other potential controls are feasible as part of establishing whether reasonable controls were in place. Given the large potential geographic areas that contribute to exceptional events, and the implementation of comprehensive BACM controls, this requirement seems onerous and unreasonable."
Specific reference to guidance text: High Winds Guidance document
Submitter: Samir Sheikh (Director of Strategies and Incentives), San Joaquin Valley Air Pollution Control District
Date: 6/29/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: In response to comments received, the EPA has developed the concept of a prospective controls analysis that includes information on attainment status, identification of natural and anthropogenic windblown dust sources and emissions, the status of SIP submittals (if applicable), and identification of the high wind threshold up to which the collective windblown dust controls are expected to be effective. (The EPA describes this concept in additional detail in the revised draft High Winds Guidance document and in the response to comment 7.4.1.) In addition, as indicated in the response to comment 7.4.1., the submitting agency can use SIP-approved controls in place of the prospective controls analysis if the following conditions are met:

- The EPA has approved the SIP within the past three years[6]
- The SIP contains controls specifically for high wind dust events. The EPA will only consider as relevant, BACM or RACM for high wind dust for serious or moderate non-attainment areas, respectively (i.e., the EPA would consider BACM for harvesting operations irrelevant).
- The submitting agency has specified a high wind threshold up to which the controls are expected to be effective.

Once the EPA determines that the currently implemented controls are reasonable and the high wind threshold is appropriate, then the submitting agency can reference the prospective controls analysis in the "not reasonably controllable or preventable" portion of submitted packages for events exceeding the high wind threshold rather than preparing new controls analyses and "not reasonably controllable or preventable" demonstrations. The EPA has clarified this position in the revised draft High Winds Guidance document.

[6] EPA has identified 3 years as the "approvable" timeframe for SIPs. EPA believes that 3 years is reasonable because it corresponds to the minimum time used to represent recurrence and historical fluctuations. EPA further believes that BACM measures in a SIP older than 3 years may not constitute all "reasonable" measures because physical conditions in the SIP area may have changed, new monitoring sites may show air quality impacts not previously realized, control technology may have advanced, and the resources available in the community to apply controls may have increased.

7.5.10. **Comment:** The draft policy requires that a determination be made that controls were properly enforced during an exceptional event, and suggests that the number of inspections and notices of violations in upwind areas be considered as evidence that all reasonable controls were implemented and functioning appropriately. This requirement is unreasonable and inappropriate for areas that have successfully implemented comprehensive BACM controls through mature permitting and enforcement programs, such as in the San Joaquin Valley. Additionally, Exceptional Events can occur during off hours with limited staffing or in remote areas and the requirement to enforce controls appears unreasonable in these situations.
Specific reference to guidance text: High Winds Guidance document
Submitter: Samir Sheikh (Director of Strategies and Incentives), San Joaquin Valley Air Pollution Control District
Date: 6/29/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA has revised the draft High Winds Guidance document to state that agencies should submit **available** inspection reports and/or notices of violations (NOVs) in upwind areas as evidence regarding whether all reasonable controls were implemented and functioning properly at the time of the event. The EPA recognizes that agencies have varied methods of permitting and enforcement and does not expect all agencies to have these records for all events. The EPA does, however, expect agencies to make a general showing that controls are being enforced to a reasonable degree (not necessarily on the particular day of the event). The EPA does not expect detailed records for events with wind speeds above the high wind threshold.

7.5.11. **Comment:** "Imperial County APCD is extremely concerned with EPA's direction, which is at variance with the state's planning process for high wind events. Air Districts and states have to plan years ahead and setup their strategies to protect the public during a high wind episode. The air districts and states have to develop, adopt, and approve RACM/BACM rules in efforts to meet state and national air quality standards and also do this in anticipation of high wind events. If EPA has concerns with RACM/BACM rules adopted and approved by the local air district board and which are further approved by the states, EPA should use the process of development of the rules to submit their potential deficiency comments to these rules. The manner in which EPA proposes to evaluate RACM/BACM for high wind episodes in this draft guidance is not appropriate, nor productive. In this proposed draft guidance, EPA is evaluating rules in retrospect during which time it is highly unlikely that the local agencies and states would be able to resolve the issue by rule making. Instead, Imperial County APCD feels that EPA should not use the process of high wind episodes to contest RACM/BACM rules and concentrate only on the actual enforceability of these rules during the time of the event. If EPA finds deficiencies with the rules and determines that those rules need to be updated, EPA should work with the air districts and states by mutually agreeing on process and revision context of the rules to prevent any potential future impacts to the public. Imperial County APCD strongly opposes EPA's proposed language that basically conditions approvability and concurrence, or not, of high wind or other exceptional events on EPA-perceived deficiencies with the RACM/BACM rules due, in part, to lack of EPA's timely action on reviewing and approving said rules."

Imperial County APCD also provided information re their review of the High Winds Guidance doc (see Submitted Comments\Need OCR\ICAPCD_Poiriez_062911-OCR.pdf)

Specific reference to guidance text: High Winds Guidance document

Submitter: Brad Poiriez, Imperial County Air Pollution Control District, bradpoiriez@co.imperial.ca.us
Date: 6/29/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA does and will continue to use the rule process to comment on RACM/BACM. The EPA further proposes to address the commenter's concerns by implementing a prospective review of controls/threshold – see also response to comment 7.4.1. and 7.5.9.

7.5.12. **Comment:** "As a condition for approval of an exceptional event request, the draft guidance requires a State to demonstrate, to the satisfaction of the EPA regional office, that any control measures that could "reasonably" have been in place at the time of the event must have been in place, including escalating control measures in areas subject to recurring dust events. WESTAR reiterates its view that if a specific set of controls is required that is not currently in the State Implementation Plan, it is EPA's responsibility to notify the State of the SIP deficiency or to clearly articulate in the regulation what emission controls are required as a condition of an exceptional events approval."
Specific reference to guidance text: none
Submitter: David Collier (President), WESTAR
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA proposes to address this by de-emphasizing recurrence and by providing an opportunity for developing and implementing a prospective review of controls/threshold – see response to comment 7.4.1. and 7.5.9

7.5.13. **Comment:** "The Clean Air Act § 110 provides a clear process that EPA must follow when requiring an increase in stringency of controls on significant sources of air pollution, including the requirement that EPA issue a SIP call, give public notice, provide the public an opportunity to comment, and respond to public comments. EPA's intent to circumvent §110 of the Act under cover of the draft guidance is set forth in § 3.1.2 in footnote 16 on Page 13: Legally, EPA believes the event-relevant measures that have already been included in the approved SIP as RACM or BACM to be an essential part of the set of controls that need to be in place for an event to be considered "not reasonably controllable or preventable," *but they may not be sufficient by themselves particularly if the SIP has not been recently reviewed or revised.* (emphasis added) Clark County believes that control measures in an approved SIP should always meet the "…reasonable and appropriate measures (72 Fed. Reg. 13560, 13566 (Mar. 22, 2007))" criteria of the EER. Clark County believes that any action by EPA to require revisions to a state's SIP control measures without following the Clean Air Act § 110 processes exceeds EPA's authority under the Act and falls outside the purview of the EER. Clark County therefore encourages EPA to revise the draft guidance to indicate that where states are not under the provisions of an attainment/maintenance SIP, RACM level controls on affected anthropogenic sources will comply with the reasonable and appropriate measures requirements of the EER. Where the state falls under the provisions of an attainment or maintenance SIP, the approved control measures in the SIP will meet the reasonable and appropriate measures requirements of the EER."
Specific reference to guidance text: High Winds Guidance document
Submitter: Tina Gingras (Assistant Director), Clark County DAQEM
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EER does not impose new control requirements on sources or areas; rather, it defines the conditions under which certain exceedances and violations of the NAAQS are excluded when determining attainment. Per Section 319 of the Clean Air Act, reasonable measures to control wind-blown dust are a precondition for the EPA concurrence. This does not, however, impose mandatory requirements on agencies or districts. Requesting exclusion of data under the EER is optional and voluntary.

To make the exceptional events process more efficient for those who choose to pursue it, the EPA proposes to make the determination of the adequacy of controls for exceptional events purposes in advance of reviewing a complete exceptional event demonstration package by implementing a prospective review of controls including a high wind threshold. We have revised the draft High Winds Guidance document to indicate that implementing windblown dust BACM that has been recently approved or reviewed (within the past three years) generally should be adequate to satisfy the "not reasonably controllable" element provided the high wind threshold is exceeded. Further, we have revised the BACM/RACM language in the revised draft High Winds Guidance document to clarify that we will only consider windblown dust BACM as relevant BACM measures to reasonably control windblown dust during high wind events. See also the response to comment 7.4.1. and 7.5.9.

7.5.14. **Comment:** The second guiding principle of the draft guidance states that it is desirable to implement *reasonable controls* to protect public health (draft guidance, p 1, emphasis added) which suggests RACM for attainment, unclassifiable, or moderate nonattainment areas and BACM or Most Stringent Measures for serious nonattainment areas. "Section 3.1 et. seq. of the draft guidance, which establishes criteria for when an event is not reasonably controllable or preventable, sets forth de facto requirements which significantly exceed those set forth in the EER and which supersede the § 110 planning provisions of the Clean Air Act. In § 3.1.2 of the draft guidance the EPA states: If a set of control measures could reasonably have been in place for contributing sources at the time of the event, then they must have been in place for the event to qualify as an exceptional event under the EER. (p 12) This is one of several provisions in the guidance which exceed the scope of the EER and effectively turns the draft guidance document into a regulation. In § 3.1.2 on Page 14 of the draft guidance, the EPA states ". . . it could be reasonable to require controls more stringent than BACM or RACM, particularly in areas with recurring exceedances." The EPA's expectation that states would need controls "more stringent than BACM" to establish that an event was "not reasonably controllable or preventable" is illogical and is not supported by the language in the regulation. This expectation would also place extreme financial burdens on both air regulatory agencies and stakeholders that likely cannot be supported in the current economy."
Specific reference to guidance text: High Winds Guidance document
Submitter: Tina Gingras (Assistant Director), Clark County DAQEM
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: Developing a prospective review of controls allows resolution in the planning/rules context before the exceptional event demonstration review process. We have revised the draft High Winds Guidance document to indicate that implementing windblown dust BACM that has been recently approved or reviewed (within the past three years) generally should be adequate to satisfy the "not reasonably controllable" element provided the high wind threshold is exceeded. Further, we have revised the BACM/RACM language in the revised draft High Winds Guidance document to clarify that we will only consider windblown dust BACM as relevant BACM measures to reasonably control windblown dust during high wind events.

7.5.15. **Comment:** "EPA should provide that implementation of Reasonably Available Control Measures ("RACM") and Best Available Control Measures ("BACM") will be considered to meet EER requirements related to "reasonably controllable or preventable."
Specific reference to guidance text: varies (additional documentation to support recommendation is provided in comment attachment at Submitted Comments\Need OCR\MAG_063011-ocr.pdf)

Submitter: Thomas Schoaf (Mayor, City of Litchfield Park and MAG Chair), Maricopa Association of Governments
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: See responses to comments 7.4.1., 7.5.9., and 7.5.14.

7.5.16. **Comment:** Not reasonably controllable or preventable – "The guidance incorrectly treats reasonable controls as a pre-requisite for concurring with an exceptional event demonstration, regardless of whether the reasonable controls would have prevented the exceedance."

EPA considers a *source that is "reasonably controlled" to be one whose emissions were not reasonably controllable or preventable"; therefore, these terms are used interchangeably throughout this document for anthropogenic controls.*
Comment: We suggest deleting this sentence (High Winds Guidance document, Section 3.1, page 13)

EPA also generally considers that wind-generated dust from previously disturbed land ... is also not reasonably controllable or preventable, provided that there are no reasonable active measures that could be taken to control dust during the transition back to natural conditions.
Comment - This incorrectly omits consideration of whether the "reasonable active measures" would have prevented the exceedance. We suggest adding the following to the end of this sentence, "unless the reasonable active measures would not have prevented the exceedance." (High Winds Guidance document, Section 3.1.1, paragraph 2)

"If reasonable controls on wind-driven anthropogenic sources were not in place, then the event would not be considered "not reasonably controllable or preventable" and would not satisfy the nRCP element of *the definition* of *an exceptional event. That is, to meet the EER the state should identify wind-driven contributing anthropogenic sources and show that reasonable controls were in place."*
Comment - This incorrectly eliminates "preventable." We believe that concurrence with a demonstration in areas where "reasonable controls" were not in· place is required if the area can show that that winds were so high that even reasonable controls could not have prevented the exceedance. We suggest adding the following sentence; "However, in areas where reasonable controls were not in place, the NRCP element could be satisfied if the area can show that those "reasonable controls" would not have prevented the exceedance." (High Winds Guidance document, Section 3.1.1, paragraph 3)

"Under the EER the event must be "not reasonably controllable or preventable" [emphasis added]; therefore, controls need not prevent the exceedance altogether to be reasonable."
Comment - We agree that whether the controls prevent the exceedance has nothing to do with the reasonableness of the control. We also agree that it is appropriate to emphasize the word "or." We believe the error occurs in next sentence of that paragraph. *"If* a *set* of *control measures could reasonably have been in place for contributing sources at the time* of *the event, then they must have been in place for the event to qualify as an exceptional event under the EER."* That sentence either ignores "preventable" or effectively replaces "or" with "and" by requiring that both conditions "reasonable controls" AND "preventable" to be satisfied. We suggest that the following clause be added to the third sentence in the paragraph, "unless the state/local can show that the reasonable controls would not have prevented the exceedance." (High Winds Guidance document, Section 3.1.2, paragraph 1)

Specific reference to guidance text: varies – see notes
Submitter: Larry Greene (Executive Director), Sacramento Metropolitan Air Quality Management District
Date: 6/30/2011 letter via e-mail to Matt Lakin and EEGuidanceComments@epa.gov
Response: The EPA generally agrees with the commenter on these issues and believes that the revised draft guidance reflects the spirit of the above comment. The EPA's revised draft guidance includes a prospective controls analysis (discussed in more detail in the response to comment 7.4.1.). The prospective controls analysis should identify the set of reasonable controls and the wind speed up to which the rules are expected to be effective. The EPA expects that when winds are above the established high wind threshold, the set of pre-approved reasonable controls for the identified sources could be overwhelmed, resulting in the event being not reasonably controllable or preventable. In determining whether the event is not reasonably controllable or preventable, the EPA will consider whether the **collection** of anthropogenic sources has been reasonably controlled. For the EPA to consider the event to have been not reasonably controllable or preventable requires, among other considerations, that reasonable controls were in place on contributing anthropogenic sources. Since each source contributes incrementally, it is unlikely that controls on any one source would prevent an exceedance. Therefore, the EPA's approach is to consider the collection of controls in its assessment of whether the event was not reasonably controllable or preventable. See response to comment 7.4.4. for areas that are attaining the standard.

7.5.17. **Comment:** "What constitutes 'reasonable control' - We suggest that the guidance rely on or more closely follow the process used when states conduct control measure analysis procedures used in plan preparation (e.g. RACT demonstrations) and not expect more stringent controls than required by the areas nonattainment designation and classification status without adequate notice by EPA to the state/local." Sacramento Metropolitan Air Quality Management District supports Table 2 in Section 3.1.2 but suggests revisions that more closely follow the state (RACT/RACM) analyses process."

Comment – "We suggest revising Table 2 to first identify 'reasonable controls,' and *IF* a reasonable control is identified that was *NOT* in place, the state/local then conducts an analysis to show whether the reasonable control would have prevented the exceedance. Only if 'reasonable controls' are identified that are not in place would you evaluate whether the exceedance is preventable. If multiple 'missing' reasonable controls are identified, then, similar to EPA's RACM guidance, the state must show that the collective benefit of all missing reasonable controls would not have prevented the exceedance. If they would not have prevented the exceedance, then we believe EPA should not object to the exceptional event request."

Comment – "We suggest reordering the discussions in Table 2. Items numbered 1, 2, 4, 5, and 6 relate to identifying what are the 'reasonable controls' and should be grouped together as the first part of the analysis. Items 3 and 8 would go next. Item number 3 relates to whether the 'preventable' analysis is required. Item 8 appears to reflect consideration of whether 'de minimis' controls would have prevented the exceedance and are not required. Item 7 relates to whether the collection of all reasonable controls would have prevented the exceedance. We suggest that item 8 be a component of the analysis to determine whether control(s) would have 'prevented' the exceedance. We suggest that item 7 be the last step in the analysis and add the following sentence. 'Reasonable controls are not a required condition for an exceptional event determination, if the collective benefits of all reasonable controls would not have prevented the exceedance.'"

Comment –"If a state/local has recently submitted a plan containing a RACM or BACM analysis (as required for the area), that analysis should suffice to identify what is a 'reasonable control' and the appropriate implementation timeframe for controls. If the state has implemented those RACM/BACM controls, then we believe the state/local has satisfied the 'not reasonably controllable or preventable' requirement unless EPA previously objected to the state's plan RACM/BACM analysis. If the state/local has not implemented a control, but is on schedule to implement the reasonable controls, then we believe the state/local has also satisfied the 'not reasonably controllable or preventable' requirement, absent a prior EPA objection to the schedule. We acknowledge the guidance suggests that the state could include justification for why the controls are not in place, but believe that EPA discretion should be more explicitly limited in these circumstances. We suggest that EPA's concurrence on the initial event should be accompanied by a notification to the state (e.g. SIP call) of the additional required control and to give reasonable opportunity for the state to avoid effects of a future nonconcurrence."

Specific reference to guidance text: High Winds Guidance document, Table 2 in Section 3.1.2
Submitter: Larry Greene (Executive Director), Sacramento Metropolitan Air Quality Management District
Date: 6/30/2011 letter via e-mail to Matt Lakin and EEGuidanceComments@epa.gov
Response: See also responses to comments 7.4.1., 7.4.4., and 7.5.9. If an area is implementing its EPA-approved SIP which includes dust control measures and has been approved within 3 years, has met any other applicable regulatory requirements, and has high wind dust events only when the wind speeds are above the established local high wind threshold, then the EPA would generally consider these events to be not reasonably controllable or preventable. The EPA does not expect additional controls to be put in place if the exceedances only occur when the wind speed is above the high wind threshold under conditions when sources have been reasonably controlled. The EPA encourages agencies to address this issue in the prospective controls analysis.

7.5.18. **Comment:** "The WAQD has serious concerns regarding elements that are required for the comprehensive controls analysis. The tools that EPA has proposed will result in highly inaccurate results. In particular, an emissions inventory of a short-term fugitive dust event is unreasonable. Emission factors currently available for fugitive dust add a degree of uncertainty to emission estimates when taking into account the short-term nature and exacerbation of high wind on the source. To use an inventory with little or no confidence in the emission rates in source apportionment modeling is ineffective. Additionally, the tools that EPA has specified to perform a back-trajectory will require localized wind fields to be developed. This is not always possible in areas where networks are sparse with large distances (50-100 miles) between meteorological monitoring locations."
Specific reference to guidance text: High Winds Guidance document
Submitter: Steven Dietrich (Administrator), Wyoming Air Quality Division
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA's approval of an agency's prospective controls analysis (see response to comment 7.4.1.) should help agencies know if currently implemented controls are reasonable. Demonstration packages with wind speeds below the approved high wind threshold will require more rigorous analyses. The rigor of the analyses will depend on how much below the threshold the wind was and the weight-of-evidence from other analyses. The EPA intends to take comment on technical analyses that can be used to demonstrate that the wind exceeded the high wind threshold and that the exceedance was caused by emissions that were not reasonably controllable. The EPA cannot concur

on cases where no information on wind speed and reasonable controls is available or provided, regardless of the technical difficulties that this might impose.

7.5.19. **Comment:** Are wildfires included when we say "areas burned by anthropogenic fires"? Reference is to windblown dust from surfaces that have been significantly disturbed or altered by humans and thus should be categorized as anthropogenic emissions.
Specific reference to guidance text: High Winds Guidance document, page 11, Section 3.1.1
Submitter: Ann Hobbs (Air Quality Specialist), Placer County Air Pollution Control District
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA has modified the language in the revised draft High Winds Guidance document that refers to "areas burned by anthropogenic fires."

7.5.20. **Comment:** "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." The SIP approval process is the appropriate process for determining the reasonableness of control measures based on the classification of the planning 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 11 0(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."
Specific reference to guidance text: High Winds Guidance document
Submitter: Eric Massey (Director), Arizona Air Quality Division
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA proposes to address this by providing air agencies an opportunity to engage in implementing a prospective review of controls including a high wind threshold. See response to comments 7.4.1., 7.5.9. and 7.5.13.

7.5.21. **Comment:** Monitoring sites in rural areas may not collect as much data as those in urban areas. Has the 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? ADEQ recommends that the 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.
Specific reference to guidance text: High Winds Guidance document
Submitter: Eric Massey (Director), Arizona Air Quality Division
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: At this time, the EPA does not have an example of an approvable exceptional event demonstration package for an area with no local meteorology and a single filter-

based monitor. As demonstrations for unique situations, such as the one identified by the commenter, become available, the EPA will update the Exceptional Events website to include such examples. The EPA has, however, modified the language in the revised draft High Winds Guidance document to address the availability of inspection/enforcement records and local meteorology. The EPA refers the commenter to this document and to the responses to comments 7.5.10. and 7.3.10. In addition, during the public review of the revised draft guidance documents, the EPA intends to take comment on technical analyses that can be used to demonstrate that the wind exceeded the high wind threshold and also that the exceedance was caused by emissions that were not reasonably controllable. The EPA cannot concur on cases where no information on wind speed and reasonable controls is available or provided, regardless of the technical difficulties that this might impose.

7.5.22. **Comment:** "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."
Specific reference to guidance text: High Winds Guidance document
Submitter: Eric Massey (Director), Arizona Air Quality Division
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The statutory definition of an exceptional event, including a natural event, requires that the event be one that is not reasonably controllable and preventable. For a high wind event implicating only natural, undisturbed and non-anthropogenic sources, not having controls on these sources may be reasonable and therefore considered to meet the not reasonably controllable or preventable requirement. Agencies can indicate this point in demonstration submittals with a few sentences.

7.5.23. **Comment:** Washington Department of Ecology believes that the guidance docs describe an escalating series of controls that is outside of the statutory framework established by the Clean Air Act. "Should EPA wish to require controls that go beyond a state's SIP and voluntary commitments under a Natural Events Action Plan or High Wind Action Plan, EPA should not be establishing requirements through guidance. Instead EPA should establish control requirements through notice-and-comment rulemaking."
Specific reference to guidance text: High Winds Guidance document
Submitter: Stuart Clark (Air Quality Program Manager), Washington Department of Ecology
Date: 7/5/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA's draft guidance documents and the exceptional events website (http://www.epa.gov/ttn/analysis/exevents.htm) present examples to illustrate specific points and are not necessarily required for all demonstrations. See also the response to comment 7.5.13.

7.5.24. **Comment:** "*Regional v. Local events.* There is another aspect to the requirement in the guidance that controls were implemented "at the time of an event." This seems to be a reasonable requirement for an event that involves local sources. However, many events in Washington's Columbia Plateau are regional in scope and involve distant sources and can extend for as much as a couple hundred miles."
Specific reference to guidance text: High Winds Guidance document
Submitter: Stuart Clark (Air Quality Program Manager), Washington Department of Ecology

Date: 7/5/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA addresses intrastate, interstate, and international transport in the response to comment 6.4.1. and in Question 23 in the revised draft Q&A document. The EPA refers the commenter to these responses.

7.5.25. **Comment:** "*Relation to agriculture*. Attendees at EPA Region 9's June 9, 2011, workshop on the draft guidance were informed that the EPA had decided not to consider agriculture in developing the guidance. Yet, the draft guidance brings both a state and the EPA face-to-face with agricultural practices and controls… One set of recommended Best Management Practices to deal with "farming with the wind" is various crop rotations. These involve recurring cycles of greater and less vulnerability to wind erosion dust generation depending upon such factors such as the specific crops or fallow periods in the rotation, agricultural activity such as tilling and harvest, and the state of crop development and the protection that affords against wind erosion."
Specific reference to guidance text: High Winds Guidance document
Submitter: Stuart Clark (Air Quality Program Manager), Washington Department of Ecology
Date: 7/5/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: At the EPA Region 9 workshop on June 9, 2011, the EPA staff stated that we do not intend to address agriculture as a separate and distinct category with unique high winds exceptional events issues. Rather, we will treat agriculture as we treat all other sources of dust.

7.5.26. **Comment:** The language in the first (partial) paragraph on page 11 needs to be clarified and made consistent with the Fire Policy/Forest Service language. The commenter recommends that the phrase "areas burned by anthropogenic fires" be removed from the text as emissions from surfaces disturbed by large-scale fires, whether or not the initiating event was natural or human caused, are beyond "reasonable" control and should not be considered as anthropogenic. In the last sentence in paragraph 1 on page 11, the EPA identifies "naturally-ignited fires" as a natural source. Change this to "wildfires" to be consistent with Fire Policy/Forest Service language.
Specific reference to guidance text: High Winds Guidance document, page 11
Submitter: Pete Lahm (Smoke Manager), USDA Forest Service
Date: 7/14/2011 via phone conversation with Beth Palma
Response: The EPA has modified the language in the revised draft High Winds Guidance document that refers to "areas burned by anthropogenic fires."

7.6. Historical fluctuations

7.6.1. **Comment:** How can an agency address the wind parameters and historical exceptional events if their temporal wind data is collected differently than what is in the draft guidance? Will the EPA accept the agency's current wind data in different format (i.e. different data collection and handling than the EPA's defined in the draft guidance: maximum sustained 1-5 minute average)? Also, what if an agency's current equipment is incapable of collecting and/or storing wind data in those intervals? Does that preclude the agency from any future exceptional events submittals?
Specific reference to guidance text: High Winds Guidance document
Submitter: Scott DiBiase, Pinal County Air Quality, scott.dibiase@pinalcountyaz.gov
Date: 6/23/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The "in excess of historical fluctuations" requirement in the EER only applies to the exceedace of the standard, not to the level of wind speed associated with an event. Furthermore, based on comments, the EPA has revised the draft guidance to rely primarily on hourly average wind data since air monitoring stations now typically collect data in this form or in a form that allows this to be calculated. The EPA also refers the

commenter to responses to comments 7.3.3. and 7.3.10. for additional information regarding wind speed data availability and averaging times.

7.6.2. **Comment:** "Clark County does not believe that an analysis of historical fluctuations adds value to exceptional event documentation and in fact may be misleading to reviewers and the public…Clark County recommends that EPA revise the draft guidance to reduce the time period and number of data points for which the analysis must cover. The standard period used to calculate the design value for an attainment SIP is three years, and Clark County believes that this is also the appropriate time period for an historical analysis."
Specific reference to guidance text: High Winds Guidance document
Submitter: Tina Gingras (Assistant Director), Clark County DAQEM
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA agrees that generally three years is an appropriate period for the historical fluctuations analysis. The revised guidance will rely on three years but allow a longer timeframe if an agency chooses to provide it; for example, a longer timeframe may be useful to support the "but-for" criterion.

7.7. High Wind Action Plan

7.7.1. **Comment:** Please clarify how a High Wind Action Plan becomes enforceable without formal rulemaking. In addition, since it would take time to develop and implement a High Wind Action Plan, other high wind dust exceptional events that might occur subsequent to the first event but prior to implementation of the Plan should also be excused from the requirement to have reasonable controls in place. This is even more critical in light of the potential for the EPA to adopt more stringent PM_{10} ambient standards. Attainment areas with windy conditions but no historical exceedances of the current PM_{10} standard could now suddenly experience an uptick in high wind dust events that drive PM_{10} concentrations over a reduced standard without any lead time to get controls in place. EPA needs to make exceptions for the control demonstration under this circumstance, as the rulemaking process to get controls in place may take considerable time.
Specific reference to guidance text: High Winds Guidance document, Section 3.1.6
Submitter: Brian Shafritz, Santa Barbara County Air Pollution Control District, ShafritzB@sbcapcd.org
Date: 6/23/2011 via e-mail to EEGuidanceComments@epa.gov
Response: Air agency or source implementation of measures in a High Wind Action Plan (HWAP) that are not in an approved SIP is not federally enforceable but the measures within it may still be enforceable (e.g., agencies may incorporate measures in the HWAP into state or local law). While the HWAP is not in itself federally enforceable, the EPA's concurrences on exceptional events rely upon it so that if it is not implemented effectively then exceptional events may not be concurrable. An agency will have six months to submit an adequate HWAP and the EPA's concurrence on the specific event(s) in question and those going forward are contingent upon the EPA's approval of the HWAP (i.e., the newly-identified sources would not be considered to meet the nRCP criterion if the HWAP is violated). If the agency meets this timeframe, then the EPA will consider high wind exceptional events that occur within that timeframe to be not reasonable controllable or preventable, assuming any "on-the-books" controls were enforced.

7.7.2. **Comment:** The idea of a High Wind Action Plan, that could identify a mutually agreeable set of reasonable controls for an area with recurring events, has merit. This would also help streamline the documentation for recurring events, since it could be used as a reference for background information. Unfortunately, this may not apply to initial or infrequent events or when new monitoring or unforeseen conditions change the types of

sources that could impact a monitor. AQMD staff will continue to work with the U.S. EPA to explore this option.
Specific reference to guidance text: High Winds Guidance document
Submitter: Barry Wallerstein, South Coast Air Quality Management District
Date: 6/28/2011 via e-mail to Matt Lakin and EEGuidanceComments@epa.gov
Response: The EPA agrees that the HWAP will be most useful to areas that have frequent high wind dust events. Areas with infrequent/non-recurring events are unlikely to violate the PM standards due to high wind events and, therefore, the EPA would not likely review demonstration packages associated with these events because they would not be associated with near-term regulatory decisions. The EPA encourages agencies to submit a letter of intent, the review of which may prevent agencies from preparing documents (e.g., HWAP) for events with no regulatory bearing that the EPA may give low priority.

7.7.3. **Comment:** If potential sources are not identified to EPA's satisfaction through the submittal of an "optional" HWAP, EPA may potentially find that reasonable controls were not in place during subsequent events, even in areas such as the San Joaquin Valley that implement comprehensive, approved Best Available Control Measures (BACM). For recurring events, the EPA will need to re-approve the High Wind Action Plan regardless of whether it is revised or remains as-is. For recurring natural events above the wind entrainment threshold, this additional documentation and review by the EPA does not seem appropriate or necessary. Additionally, the District has a Natural Event Action Plan (NEAP) that has been approved by the EPA. Can the District use the NEAP in place of the High Wind Action Plan (HWAP)? If not, how much more information is necessary to make the NEAP approvable? The draft guidance does not address what new information is needed when a NEAP is already in place.
Specific reference to guidance text: High Winds Guidance document
Submitter: Samir Sheikh (Director of Strategies and Incentives), San Joaquin Valley Air Pollution Control District
Date: 6/29/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA is de-emphasizing consideration of recurrence and altering the HWAP concept to be more similar to a NEAP in some respects (see section 3.7.2.4 of the revised draft High Winds Guidance document). A NEAP provides a good framework for the HWAP and an existing NEAP may be acceptable as a HWAP in some cases. The EPA has also revised the draft guidance documents to include a prospective controls analysis that would prevent the issue raised by the commenter. See response to comment 7.4.1.

7.7.4. **Comment:** “We are very uncomfortable with EPA’s expectation that States implement successive High Wind Action Plans with escalating emission control programs, outside of the statutory framework of the Clean Air Act, as a precondition of concurrence of recurring exceptional events. We are very uncomfortable with BACM, or greater levels of control, as the appropriate starting point for consideration of reasonable control measures in attainment, maintenance, and moderate areas.”
Specific reference to guidance text: High Winds Guidance document
Submitter: David Collier (President), WESTAR
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The development of a HWAP is voluntary (see comment 7.4.4). Agencies also have two options: pursuing the regulatory process and accepting a non-concurrence or preparing and submitting demonstrations showing that reasonable controls are in place for each flagged exceedance. The regulatory process would follow the normal path of the SIP process to implement reasonable controls.

In response to the commenter's next point regarding the EPA's reference to "starting point," the EPA uses the term "starting point" to mean a point of reference at which to begin the evaluation. "Starting point" is not intended to indicate the lowest level for consideration. We have clarified this point in the revised draft guidance documents.

7.7.5. **Comment:** "In § 3.1.6, EPA suggests that states dealing with recurring high-wind events develop a high-wind action plan that would "…identify mutually agreed upon reasonable controls that a state could implement for subsequent high wind events." Although not expressly stated, the implication of this section is that states having recurring high-wind events that do not submit and obtain approval of high-wind action plans would not receive EPA concurrence for exclusion of future high-wind events. As set forth on page 19 of the draft guidance, EPA will evaluate the long-term adequacy of the high-wind action plan and the 'reasonableness' of the plan's control measures as follows: 'Once the state has begun implementation of the measures approved by EPA and EPA has formally recognized implementation of the High Wind Action Plan, EPA would consider the *controls to be reasonable as long as events do not recur*. (emphasis added).' This criterion is apparently based on the flawed assumption that if states and regulated entities will invest enough financial resources and effort on controls, then uncontrollable high-wind driven events can be controlled. EPA has not provided any documentation to support the concept of high-wind driven events controllability and it is the experience of Clark County that such events are not controllable with any measures that could be implemented."
Specific reference to guidance text: High Winds Guidance document
Submitter: Tina Gingras (Assistant Director), Clark County DAQEM
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA is de-emphasizing consideration of recurrence and adding a prospective controls analysis, which should address these concerns. See also responses to comment 7.4.1. and 7.5.9.

7.7.6. **Comment:** "If EPA decides to allow for voluntary High Wind Action Plans, the Agency should not require continual revision and updating of the plans (e.g., upon recurrence of EEs)." MAG states that linking the High Wind Action Plan to recurrence provides no incentive for a state to develop a plan because there is little benefit to develop a publicly reviewed, "SIP-like" plan for one event per year. MAG suggests that an incentive for completing a plan should be that the state would have "some assurance ahead of time that EPA finds their existing controls and implementation measures adequate."
Specific reference to guidance text: varies (additional documentation to support recommendation is provided in comment attachment at Submitted Comments\Need OCR\MAG_063011-ocr.pdf)
Submitter: Thomas Schoaf (Mayor, City of Litchfield Park and MAG Chair), Maricopa Association of Governments
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA is de-emphasizing consideration of recurrence and adding a prospective controls analysis, which should address these concerns. See response to comment 7.4.1. and 7.5.9.

7.7.7. **Comment:** Wyoming Air Quality Division asks that EPA develop a process to include Natural Events Action Plans (NEAP) into High Wind Action Plans as many places in the West continue to rely on these agreements between EPA, States, industry and the public and the plans include many of the elements identified to be part of HWAPs.
Specific reference to guidance text: High Winds Guidance document
Submitter: Steven Dietrich (Administrator), Wyoming Air Quality Division
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov

Response: An existing NEAP can be the basis of a HWAP. The EPA has revised the draft High Winds Guidance document to clarify the relationship between a NEAP and the HWAP (see section 3.7.2.4 of the revised draft High Winds Guidance document).

7.7.8. **Comment:** Washington Department of Ecology asks that EPA address using or incorporating previously developed and currently used Natural Events Action Plans in the High Wind Action Plan as NEAPs proved the "core" components of a HWAP as envisioned by the draft guidance.
Specific reference to guidance text: High Winds Guidance document
Submitter: Stuart Clark (Air Quality Program Manager), Washington Department of Ecology
Date: 7/5/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: An existing NEAP can be the basis of a HWAP. The EPA has revised the draft High Winds Guidance document to clarify the relationship between a NEAP and the HWAP (see section 3.7.2.4 of the revised draft High Winds Guidance document).

7.8. Checklist for demonstration submission

7.8.1. **Comment:** The draft guidance appears to require the submittal of a fully completed checklist and associated documentation requirements found in Appendix B of the draft guidance. The requirement that all of these items be included in all exceptional event submittals to the EPA goes against the spirit of the EER that allows for a weight-of-evidence approach to demonstrating the occurrence of exceptional events. The District recommends that flexibility be allowed to provide the relevant documentation necessary to demonstrate exceptional events and not be prescriptive in completing the checklist.
Specific reference to guidance text: High Winds Guidance document checklist
Submitter: Samir Sheikh (Director of Strategies and Incentives), San Joaquin Valley Air Pollution Control District
Date: 6/29/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA has revised the checklist. The EPA has also clarified which elements are relevant, factoring in the potential for a prospective controls analysis and HWAP. The EPA believes that the tools provided in the draft guidance materials support the weight-of-evidence approach intended by the Exceptional Events Rule (see also response to comment 6.5.10. for a discussion of "weight-of-evidence").

7.8.2. **Comment:** Clark County states that the caveat on the checklist stating, "…This checklist represents the minimum information that must be included in a package and serves to identify packages that are incomplete rather than show that a package is complete…" suggests that if "all of the items in the checklist are not included in the demonstration package, EPA will not review the package, leading to an automatic non-concurrence. Clark County requests refinement of the checklist and revision of the prefacing statement to clarify that where elements on the checklist are not required due to very high winds or other factors, EPA will review the demonstration documentation."
Specific reference to guidance text: High Winds Guidance document, page 60
Submitter: Tina Gingras (Assistant Director), Clark County DAQEM
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA has modified the Completeness Checklist for High Wind Dust Exceptional Events. See also the response to comment 7.8.1.

7.9. Recommended framework for high wind dust exceptional event demonstration package

7.9.1. **Comment:** "We are very supportive of the process timeframes and action steps outlined in the proposed guidance. They represent steps forward to resolve a number of long-standing issues of uncertainty about timing of communications and reducing unnecessary delays in processing exceptional events requests. We are also supportive of the optional

process steps to prioritize actions in recognition of the very limited resources we all have. The guidance should encourage continuing communication and negotiation of issues between states and EPA to make the process work…. We also are supportive of the overall recommended methods of preparing each of the technical elements and recommended order of analyses to facilitate using the technical work developed in support of one showing to support more than one element."
Specific reference to guidance text: High Winds Guidance document
Submitter: David Collier (President), WESTAR
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA acknowledges commenter's support.

7.10. General

7.10.1. **Comment:** The figures on page 50 (measurements from monitoring stations) are unreadable.
Specific reference to guidance text: High Winds Guidance document, page 50
Submitter: Scott DiBiase, Pinal County Air Quality, scott.dibiase@pinalcountyaz.gov
Date: 6/23/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA appreciates the feedback and incorporated figures with improved resolution.

7.10.2. **Comment:** The EPA guidance documents provide for the use of chemical speciation as supporting evidence to assist in establishing a Clear Causal Relationship. Because of the size of the air basin, the District, in a strategic effort to streamline staff time spent changing filters, is shifting PM collection from filter-based to real time with TEOMS monitors. However, this action will cause the District to potentially not have filters for a mandatory chemical speciation analysis. The draft guidance should be not requiring the use of chemical speciation to establish a Clear Causal Relationship, but leave as optional criteria in a weight-of-evidence approach.
Specific reference to guidance text: none
Submitter: Samir Sheikh (Director of Strategies and Incentives), San Joaquin Valley Air Pollution Control District
Date: 6/29/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: In the draft High Winds Guidance document, the EPA identified several types of analyses that agencies can use to show a "clear causal relationship." These analyses, including the use of chemical speciation, are "possible" analyses versus "required" analyses. Agencies may need some, all, or other analyses to demonstrate the clear causal relationship criterion. The EPA will evaluate the clear causal relationship criterion on a weight-of-evidence approach based on available information for each case. The EPA encourages areas with recurring high wind dust events to consider what information will be useful in a high wind dust exceptional events demonstration package when designing their monitoring networks. The EPA also recognizes that, due to limited resources and the unpredictability of high wind dust events, agencies may not have all the information listed in the "clear causal relationship" table for every event.

7.10.3. **Comment:** The District has experienced and is expected to continue experiencing high wind $PM_{2.5}$ exceptional events. The guidance document does not address documentation requirements for $PM_{2.5}$ exceptional events. Towards that end, the District recommends that PM_{10} and $PM_{2.5}$ documentation be handled within the same submittal to the extent possible, and that the EPA develop a test method for analyzing Beta Attenuation Monitor tape to assist in preparing the support documentation.
Specific reference to guidance text: none
Submitter: Samir Sheikh (Director of Strategies and Incentives), San Joaquin Valley Air Pollution Control District

Date: 6/29/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The revised draft High Winds Guidance document states in the opening paragraph that the document applies to both PM_{10} and $PM_{2.5}$ high wind dust events. Many of the examples contained in the document, however, are for PM_{10} because PM_{10} exceptional events (and associated demonstration submittals) are more prevalent than $PM_{2.5}$ high wind dust events.

At this point, the EPA does not believe that there is a need to develop a test method for chemically analyzing the PM spot on the Beta Attenuation Monitor (BAM) tape. Agencies can obtain chemical speciation data by using the filter media from the existing filter based sampling technologies. While this approach may be limited in its ability to provide short-term event characterization, agencies can still use it to support an event demonstration package. Additionally, emerging commercially available technologies have the potential to support higher time resolution of chemical speciation. The PM Integrated Science Assessment at http://www.epa.gov/ncea/isa/pm.htm details such technologies as does the following presentation made at the 2011 National Air Quality Conference: Evaluation of Simultaneous PM_{10}, $PM_{2.5}$, and $PM_{10-2.5}$ Measurements Conducted in Bakersfield, CA with the Teledyne-API Model 602 Beta^{PLUS} Particle Measurement System available on the web at http://www.airnow.gov/index.cfm?action=naq_conf_2011.aq3.

7.10.4. **Comment:** "Most of the examples throughout the guidance assume more extensive meteorological monitoring than exists in many areas of the west. Source wind data do not typically exist when events cover large distances, for example, when the source is the southwest desert. Meteorological data are sometimes available from local airports. We suggest allowing the use of available regional wind data as surrogate for source data as needed."
Specific reference to guidance text: High Winds Guidance document
Submitter: David Collier (President), WESTAR
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA recognizes the sometimes limited spatial coverage of wind data needed for high wind dust EE demonstrations and supports using all available meteorological networks and data sources (see responses to comments 7.3.3. and 7.3.10. for additional information). The EPA welcomes additional information on meteorological networks.

7.10.5. **Comment:** "We generally support the proposed [mitigation] guidance as written, which interprets actions to protect public health through individual actions as mitigation of exposure to exceedances from any source of air pollution, as distinguished from measures that control or prevent emissions. Emission control measures are covered in section 3.1, Not Reasonably Controllable or Preventable (including High Wind Action Plans), about which we have strong concerns."
Specific reference to guidance text: High Winds Guidance document
Submitter: David Collier (President), WESTAR
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA appreciates the feedback on mitigation and seeks additional feedback regarding analyses to support the "not reasonably controllable or preventable" criterion. See response to comment 7.4.1.

7.10.6. **Comment:** "In this [public comment] section of the proposed guidance, EPA asserts, "the state should submit the public comments along with the state's responses, if any, to EPA within 10 days of the close of the comment period." In many cases, response to public comments within 10 days will not be possible."

Specific reference to guidance text: High Winds Guidance document
Submitter: David Collier (President), WESTAR
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA has revised the draft High Winds Guidance document to allow air agencies to submit public comments along with the air agency's response within 30 days of the close of the comment period.

7.10.7. **Comment:** Clark County DAQEM agrees with guiding principles, but suggests that a 4th principle, "It is desirable to implement a reasonable and cost-effective process for the development and EPA review of state exceptional events" be added to "allow both states and EPA to efficiently use scarce resources during this period of economic austerity."
Specific reference to guidance text: High Winds Guidance document, Critical Elements on page 2
Submitter: Tina Gingras (Assistant Director), Clark County DAQEM
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: While the EPA agrees with the commenter, the EPA has not added the suggested language as a 4th guiding principle. One of the EPA's goals in developing exceptional event implementation guidance is to establish clear expectations to enable affected agencies to better manage resources as they prepare the documentation required under the EER. As part of an upcoming public comment process, the EPA will solicit feedback on a series of questions, some of which will seek specific, broadly applicable, streamlining mechanisms.

7.10.8. **Comment:** "EPA should recognize that EEs can and do occur at one monitor while other monitors in the same area may not violate an air quality standard."
Specific reference to guidance text: varies (additional documentation to support recommendation is provided in comment attachment at Submitted Comments\Need OCR\MAG_063011-ocr.pdf), comment refers to page 22 of HIGH WINDS GUIDANCE DOCUMENT doc that says "For example, a hypothesis that an exceedance was caused by a large-scale wind event is inconsistent with a situation where an isolated monitor exceeds while nearby monitors do not."
Submitter: Thomas Schoaf (Mayor, City of Litchfield Park and MAG Chair), Maricopa Association of Governments
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA agrees that high wind dust events can affect one monitor and not others and has revised the draft High Winds Guidance document to more clearly reflect this point. Agencies believing this scenario occurred in their areas are encouraged to explain the spatial extent of the exceedance in the conceptual model of their demonstration. For example, if the agency describes the event as a **regional** dust storm, then the EPA would expect monitors within the same **regional scale** to be similarly affected by the dust storm. Note that if an exceedance is due to low wind speeds, or sources that should have been reasonably controlled (e.g., lack of implementation or enforcement of controls) then this event would not meet the "not reasonably controllable or preventable" requirement.

7.10.9. **Comment:** "If the six elements must be met for qualifying under the Exceptional Events (EE), and if wind direction, wind speed and recurrence are separate from HF, but are clearly "vital" as to how there was an exceptional exceedance, why are they not a part of the Critical Elements? These same Critical Elements are called technical elements on page 11. It is confusing with two different terms."
Specific reference to guidance text: High Winds Guidance document, Critical Elements on page 2

Submitter: Ann Hobbs (Air Quality Specialist), Placer County Air Pollution Control District
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The Exceptional Events Rule at 40 CFR §50.14 identifies both technical and process requirements for exceptional event (including high wind dust event) demonstration packages. The EPA tried to distinguish these in the draft guidance documents. In addition to the specific requirements of the regulatory language, there are additional technical analyses that agencies need to include in any high wind dust exceptional event demonstration. The EPA does not consider these analyses "critical elements" because they are not specifically identified by regulation nor are they stand-alone criteria. Rather, these analyses inform and support those criteria specifically required by the rule. There are linkages among most of the technical elements, making it more challenging to treat each criterion as an independent element. The EPA has clarified this in the revised draft guidance documents.

7.10.10. **Comment:** Wyoming Air Quality Division asks that the following terms be defined: Anthropogenic fires (p. 11), Severe exceptional events (p.12), Mild isolated exceedances (p.12), Frequent [exceptional events] (p.12), Rare [exceedances] (p .12), Stable surfaces (p.3)
Specific reference to guidance text: High Winds Guidance document, varies
Submitter: Steven Dietrich (Administrator), Wyoming Air Quality Division
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA has clarified or defined the following in footnotes in the revised draft guidance documents:

- Anthropogenic fires –The EPA has revised the language in the revised draft High Winds Guidance document.
- Severe exceptional events - e.g., 24-hour average PM_{10} >250µg/m3
- Mild isolated exceedances - e.g., exceedance at one site close to the standard
- Change rare to non-recurring - <1 high wind dust event per year
- Frequent - enough exceedances from high wind dust events to cause a violation of the NAAQS.
- Stable surfaces - defined in the "Consideration of Wind Speed" section of the draft High Winds Guidance document

8. Treatment of Technical Criteria for Exclusion of Data Affected by Events
8.1. Not reasonably controllable or preventable
8.1.1. **Comment:** "State Implementation Plans define the measures states must take to attain and maintain compliance with NAAQS. Section 110 of the Clean Air Act requires each State's SIP to include enforceable emission limits and other control measures to prevent NAAQS violations and holds EPA responsible for ensuring that these measures are sufficient. If not, EPA's responsibility is to require the State to revise its SIP to address any identified deficiencies through a SIP call." WESTAR believes that "EPA proposes to implement this provision in such a way that for recurring events, States must implement escalating emission control measures, beyond those required under Section 110 and Part D (for nonattainment areas) of the Act, to be eligible for exclusion of data under the Exceptional Events Rule."
Specific reference to guidance text: Additional information on comments at Submitted Comments\WESTAReerfinal063011.pdf
Submitter: David Collier (President), WESTAR
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA's draft guidance documents and the exceptional events website (http://www.epa.gov/ttn/analysis/exevents.htm) present examples to illustrate specific

points. They do not establish any new requirements. The revised draft High Winds Guidance document does not require that air agencies implement escalating control measures beyond those required in their SIP. Rather, the document states that, in the interest of protecting public health, it may be appropriate to implement escalating controls for events that recur. The EPA further identifies in the revised draft High Winds Guidance document that RACM/BACM measures may be a **reference point, but not the sole means**, by which the EPA assesses the reasonableness of controls. In its revisions to the draft guidance documents, the EPA has introduced the concept of a prospective controls analysis that could incorporate SIP-approved controls. See response to comments 7.4.1. and 7.5.9.

8.1.2. **Comment:** "WESTAR is also concerned about EPA's expectation that States show reasonable controls were implemented "at the time of the event." While this is a reasonable requirement for local sources and sources addressed in the State Implementation Plan, it is ambiguous for many sources in the West. For example: For dust raised from distant sources by high winds, documentation of specific control measures underway "at the time of the event" is unlikely to be available. For many states, high wind events are regional in scope and can extend for hundreds of miles rather than being localized events and thus difficult to characterize because of their scope. Crop rotations, which are Best Management Practices for preventing agricultural wind erosion, are multi-year practices that include recurring cycles of greater and less vulnerability to wind erosion depending upon such factors such as the specific crops or fallow periods, tilling, crop development, and harvest. In summary, if EPA intends to require emission control measures beyond those required under Section 110 and Part D requirements, those requirements should be included in an amendment to the regulation with appropriate citations to the authorizing provisions of the Act. Until such a rulemaking has been completed, we reiterate that the test of reasonable controls should be limited to an evaluation of whether or not the State implemented the applicable provisions of their State Implementation Plan and any applicable High Wind Action Plan."
Specific reference to guidance text: Additional information on comments at Submitted Comments\WESTAReerfinal063011.pdf
Submitter: David Collier (President), WESTAR
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: See response to comment 7.4.1. and 7.5.9.

8.2. Natural event

8.2.1. **Comment:** ADEQ agrees that a natural event does not need to be infrequent to qualify as an EE.
Specific reference to guidance text: none
Submitter: Eric Massey (Director), Arizona Air Quality Division
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA acknowledges commenter's support.

8.3. Clear causal relationship

8.3.1. **Comment:** "We think the section on process provides a good framework for review and timelines including early consultations and notifications of additional needed information. Our concerns remain as to the ability of agencies to produce 'all' information requested. For example, the Clear Causal guidance in Section 3.3, Table 4, nos. 2. and 4 suggests an analysis to demonstrate temporal relationships, 'Wind direction data showing that emissions from sources identified as part of nRCP demonstration were upwind of the monitor(s) in question, satellite imagery,' and, '24-hour time series showing PM concentration at the monitor in question in combination with sustained and maximum wind speed data at area where dust was entrained.' Examples of analyses are

given, but these are in areas that are extensively monitored. There are numerous areas throughout the arid west where source-receptor relationships are regional in scope, and where dust sources are remote from ambient monitors that may detect the event. In most such areas meteorological information at the source would not exist, because there are no wind instruments deployed there. Satellite imagery can be a matter of luck, with cloud cover or other visibility obscuring conditions. We would expect EPA to take such factors into consideration as well as resource commitments when determining the information to be requested from the State and level of analyses needed to demonstrate Clear Causal relationship."
Specific reference to guidance text: High Winds Guidance document, section 3.3, Table 4, nos. 2 and 4
Submitter: David Collier (President), WESTAR
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: In the draft High Winds Guidance document, the EPA identified several types of analyses that air agencies can use to show a "clear causal relationship." These analyses are "possible" analyses versus "required" analyses. Agencies may need some, all, or other analyses to demonstrate the clear causal relationship criterion. The EPA will evaluate the clear causal relationship criterion on a weight-of-evidence approach based on available information for each case. The EPA also recognizes that, due to limited resources and the unpredictability of high wind dust events, agencies may not have all the information listed in the "clear causal relationship" table for every event.

8.3.2. **Comment:** "The Wyoming Air Quality Division would like EPA to take into consideration the resources and requirements of states when evaluating elements in this section. Many of the types of information to support these analyses are not available in states with smaller populations and less required monitoring. For instance, the Wyoming Air Quality Division's network of visibility monitoring is sparse and is not located near the industrial areas where exceedances usually occur. Additionally, the Wyoming Air Quality Division is only required to have speciated particulate monitoring at one location in the State."
Specific reference to guidance text: none
Submitter: Steven Dietrich (Administrator), Wyoming Air Quality Division
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: See response to comment 8.3.1.

8.4. Historical fluctuations

8.4.1. **Comment:** "We support the approach in the proposed guidance to demonstrate historical fluctuation."
Specific reference to guidance text: none
Submitter: David Collier (President), WESTAR
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The EPA acknowledges commenter's support.

8.4.2. **Comment:** Presenting evidence that an event is "in excess of normal historical fluctuations including background" becomes increasingly difficult as NAAQS levels are set close to or below the level of the policy relevant background (ozone is particular issue).
Specific reference to guidance text: none
Submitter: Karen St. John (Sr. Director, Regulatory Affairs), BP America, Inc.
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: As described in the EPA's revised draft Q&A document, the EPA will use a weight-of-evidence approach to assess each demonstration on a case-by-case basis. The air agency's obligation in satisfying this element is to provide analyses and statistics. The

submittal of data showing how the event concentration compared with historical concentrations will help the EPA determine whether the "clear causal relationship," "but for," and "affects air quality" criteria have been satisfied.

8.5. But for

8.5.1. **Comment:** "EPA's draft guidance retains the requirement for a State to show that there would not have been a NAAQS exceedance but for the event without a clear explanation of how such a showing can be made. In fact, in the preamble to the Exceptional Events Rule, EPA commits to publishing, in a notice of proposed rulemaking, the means by which a state could make this showing once the techniques for adjusting data are sufficiently well documented. Until this rulemaking is completed, WESTAR sees no alternative but for EPA to revise the Exceptional Events Rule to remove the 'but for' test."
Specific reference to guidance text: Q&A document #13
Submitter: David Collier (President), WESTAR
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: The preamble to the Exceptional Events Rule states at 72 FR 13572, "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." This language refers to the partial adjustment of a 24-hour value rather than the exclusion of the entire 24-hour value, which is how the EPA handles concurred upon exceptional event data. Air agencies can satisfy the "but for" criterion with reasonably supportable adjustments, and in some cases, a qualitative analysis.

As indicated in the draft guidance documents, the EPA has retained the "but for" provision and continues to believe that this regulatory criterion in the Exceptional Events Rule implements the Clean Air Act language that specifies that *"a clear causal relationship must exist between the measured exceedances of a national ambient air quality standard and the exceptional event to demonstrate that the exceptional event caused a specific air pollution concentration at a particular air quality monitoring location…"*and that States can petition the EPA to *"exclude air quality monitoring data that is directly due to exceptional events from use in determinations…with respect to exceedances or violations."*(emphasis added)

8.5.2. **Comment:** Clark County DAQEM believes that a quantitative NEBF analysis exceeds the provisions of the EER and "conflicts with the EER preamble, which states in part: The EPA will consider such [quantitative] analyses as part of the weight-of-evidence to judge 'but-for,' but will not make quantitative adjustments to reported measured values because the EPA *does not believe sufficient quantitative methods are available at this time*. (emphasis added) (72 Fed. Reg. 13560, 13572 (Mar. 22, 2007))…Clark County encourages EPA to remove this de facto requirement from the draft guidance."
Specific reference to guidance text: none
Submitter: Tina Gingras (Assistant Director), Clark County DAQEM
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: See response to comment 8.5.1.

8.5.3. **Comment:** "The requirement for [the but for] test is included in EPA's EER along with a commitment by EPA, in the rule's preamble, to publish a proposed rule that would establish the parameters for making a demonstration once the agency "determine[s] that techniques for adjustment of air quality data are sufficiently well demonstrated for use in exceptional events determinations." That proposal has not yet materialized, nor has the

agency provided a clear explanation of how to make such a demonstration. Therefore, NACAA believes that until such time as EPA is able to identify and promulgate technically feasible techniques for "backing out" that portion of the monitored data determined to have resulted from the exceptional event, EPA should revise the EER to remove the 'but for' test."
Specific reference to guidance text: none
Submitter: Tad Aburn (Co-Chair), NACAA Criteria Pollutants Committee
Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: See response to comment 8.5.1.

8.5.4. **Comment:** "There are no examples of a quantitative analysis of NEBF included in this document. Without documented examples, the requirement of a quantitative NEBF should be removed from the Guidance."
Specific reference to guidance text: none
Submitter: Steven Dietrich (Administrator), Wyoming Air Quality Division
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA refers the commenter to the ozone/wildfire demonstration package on the exceptional events website at http://www.epa.gov/ttn/analysis/exevents.htm. This package uses regression and related additional statistical evaluation, surrogate day and rule of thumb analysis, and evaluation of the frequency of high ozone concentrations as part of a quantitative "but for" submission. See also the response to comment 8.5.1.

8.5.5. **Comment:** The NCDAQ requests that the U.S. EPA provide more guidance on what the EPA is willing to accept for weight-of-evidence for values that are just barely over the standard. For example, if the daily standard is 35 and the value impacted by the exceptional event is 37, what types of evidence will the U.S. EPA accept as proof that the value would have been 34 or 35 "but for" the exceptional event?

NCDAQ would also like the EPA to provide additional guidance on what the EPA is willing to accept for weight-of-evidence for values that are between the annual and daily standard, for example, if the annual standard is 15, the daily standard is 35 and the value measured is 27. What types of evidence should the NCDAQ provide to demonstrate to the USEPA that but for the exceptional event, the value would have been 14 or 15?

The EPA only discusses the "But For" test for ozone. The NCDAQ recommends that the EPA also include similar discussions for "But For" tests for sulfur dioxide and perhaps nitrogen dioxide too. If data collected by a sulfur dioxide monitor are influenced by an exceptional event such as a volcano or an industrial mishap, how would a state go about demonstrating that the exceptional event caused the exceedance? What weight-of-evidence would be required? Similarly, if data collected by a near road nitrogen dioxide monitor were influenced by an exceptional event, what weight-of-evidence would the EPA be looking forward to demonstrate the "But For" test?
Specific reference to guidance text: Q&A document #13
Submitter: Sheila Holman (Director), NC Division of Air Quality
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: See response to comment 8.5.4.

8.5.6. **Comment:** "EPA should provide examples of analyses that will be accepted to demonstrate a quantitative 'but for' test and what analysis is acceptable to distinguish between an event contribution and a non-event contribution."
Specific reference to guidance text: none
Submitter: Larry Allen (Air Pollution Control Officer), San Luis Obispo Air Pollution Control District

Date: 6/30/2011 via e-mail to Gina McCarthy and EEGuidanceComments@epa.gov
Response: See response to comment 8.5.4.

8.5.7. **Comment:** It is very difficult to demonstrate "but for," particularly for ozone-related events. Most air pollutant exceedance events consist of contributions from multiple sources. The EPA's guidance seems to apply differently for PM vs. ozone events. The EER preamble and the high winds guidance acknowledge that a PM exceedance can be exceptional even with contributions from natural and anthropogenic sources, but the answer to Q&A #6 implies that if an ozone/wildfire event has a contribution from an anthropogenic source as well as the fire, the event cannot be excluded under the EER. Further, demonstrating "that a fire plume has passed over a monitor is extremely difficult. All the methods that EPA suggested for demonstrating that a fire plume passed a monitor are insufficient as discussed below…" BP provides examples of satellite, modeling, and monitoring limitations and then identifies that if complete, detailed analyses are performed, they would likely exceed the desired response time and monetary resource availability.
Specific reference to guidance text: Q&A document #6 (see document for additional detail: Submitted Comments\BP_063011pdf.pdf)
Submitter: Karen St. John (Sr. Director, Regulatory Affairs), BP America, Inc.
Date: 6/30/2011 via e-mail to EEGuidanceComments@epa.gov
Response: The EPA disagrees with the commenter's interpretation of Q&A 6 that an ozone/wildfire-related exceptional event with contributions from the fire and anthropogenic sources cannot be excluded under the EER. In the response to Q&A 6 in the revised draft Q&A document, the EPA states that because the effects of a fire on ozone are complex, the ensuing "but for" demonstration may be more complicated than a "but for" demonstration for another pollutant, like particulate matter. The EPA can, and has, concurred on ozone/wildfire related exceptional events and refers the commenter to the website: http://www.epa.gov/ttn/analysis/exevents.htm

The EPA recognizes that some demonstration analyses are resource intensive, but given the importance of accurately evaluating exceptional events, the EPA expects submitters to prepare and submit the appropriate level of supporting documentation, which will vary on a case-by-case basis using the weight-of-evidence approach. The EPA further notes that the CAA does not give the EPA the authority to exclude data if the air agency has not met and demonstrated each criterion.

The National Ambient Air Quality Standards

OVERVIEW OF EPA'S PROPOSAL TO REVISE THE AIR QUALITY STANDARDS FOR PARTICLE POLLUTION (PARTICULATE MATTER)

- On June 14, 2012, the U.S. Environmental Protection Agency (EPA) proposed to strengthen the National Ambient Air Quality Standards (NAAQS) for fine particle pollution, also known as fine particulate matter ($PM_{2.5}$). The agency also proposed to retain the existing standards for coarse particle pollution (PM_{10}).

- An extensive body of scientific evidence shows that exposure to particle pollution causes premature death and is linked to a variety of significant health problems, such as increased hospital admissions and emergency department visits for cardiovascular and respiratory problems, including non-fatal heart attacks. PM also is linked to the development of chronic respiratory disease.

- People most at risk from fine and coarse particle pollution exposure include people with heart or lung disease (including asthma), older adults, children, and people of lower socioeconomic status. Research indicates that pregnant women, newborns, and people with certain health conditions, such as obesity or diabetes, also may be more susceptible to PM-related effects.

- Particle pollution also causes haze in cities and some of our nation's most treasured national parks.

- Fine particles come from a variety of sources, including vehicles, smokestacks and fires. They also form when gases emitted by power plants, industrial processes, and gasoline and diesel engines react in the atmosphere. Sources of coarse particles include road dust that is kicked up by traffic, some agricultural operations, construction and demolition operations, industrial processes and biomass burning. Emission reductions from EPA rules already on the books will help states meet the proposed revised standards by making significant strides toward reducing fine particle pollution. These include clean diesel rules for vehicles, rules to reduce pollution from power plants and rules to reduce pollution from stationary diesel engines.

- For fine particles, today's proposal would:
    - **Strengthen the annual health standard** for fine particles by setting the standard at a level within the range of 12 micrograms per cubic meter ($\mu g/m^3$) to 13 $\mu g/m^3$. The current annual standard, 15 $\mu g/m^3$, has been in place since 1997.
    - **Retain the existing 24-hour fine particle standard**, at 35 $\mu g/m^3$. EPA set the 24-hour standard in 2006.

- **Set a separate fine particle standard to improve visibility**, primarily in urban areas. EPA is proposing two options for this 24-hour standard, at 30 deciviews or 28 deciviews. (A deciview is a yardstick for measuring visibility.)
- **Retain existing secondary standards** for $PM_{2.5}$ and PM_{10} identical to primary standards to provide protection against other effects, such as ecological effects, effects on materials, and climate impacts.
- EPA's proposed changes to the fine particle standards are consistent with advice from its independent science advisors, the Clean Air Scientific Advisory Committee (CASAC).

- **For coarse particles, today's proposal would retain the existing 24-hour standard.** This standard, with a level of 150 $\mu g/m^3$, has been in place since 1987.
- EPA examined thousands of studies as part of this review of the standards, including hundreds of new studies published since EPA completed the last review of the standards in 2006. The new evidence includes more than 300 new epidemiological studies, many of which report adverse health effects even in areas that meet the current $PM_{2.5}$ standards. EPA also considered analyses by agency experts, along with input CASAC, which provided comments at several points throughout the review process..
- As part of EPA's commitment to a transparent, open government, the agency will seek and encourage broad public input in setting this standard that provides critical health protection to millions of Americans.
- The Clean Air Act requires EPA to review the particle pollution standards every five years. The proposed revisions, which are a result of that review, also respond to a court remand of two of the existing $PM_{2.5}$ standards, which were issued in 2006.

<u>More details about the proposed standards</u>

- The proposal also addresses several issues related to the proposed standards. Among them:
  - To ensure a smooth transition to the new standards., EPA is proposing to grandfather <u>preconstruction permitting</u> applications that have made substantial progress through the review process at the time the final standards are issued;
  - The agency is proposing <u>updates and improvements to the nation's $PM_{2.5}$ monitoring network</u> that include relocating a small number of monitors to measure fine particles near heavily traveled roads. EPA's proposal does not require additional monitors.
  - In addition, the proposal would <u>update the Air Quality Index (AQI)</u> for particle pollution.

- EPA anticipates making attainment/nonattainment designations by December 2014, with those designations likely becoming effective in early 2015.

- States would have until 2020 (five years after designations are effective) to meet the proposed health standards. Most states are familiar with this process and can build off work they are already doing to reduce pollution to help them meet the standards.

- A state may request a possible extension to 2025, depending on the severity of an area's fine particle pollution problems and the availability of pollution controls.

- The Clean Air Act does not specify a date for states to meet secondary $PM_{2.5}$ standards; EPA and states determine that date through the implementation planning process. The same controls that will be installed to meet the primary, health-based standards will also help areas meet the secondary standards. In 2020, we expect virtually all counties will meet the secondary standards without state/local reductions.

- By law, EPA cannot consider costs in setting or revising national ambient air quality standards. However, to inform the public, EPA analyzes the benefits and costs of implementing the standards as required by Executive Orders 12866 and 13563 and guidance from the White House Office of Management and Budget.

- EPA will issue a regulatory impact analysis that estimates the potential benefits and costs of meeting a revised annual health standard in the year 2020. The proposed standards are expected to yield significant health benefits, valued at $2.3 billion to $5.9 billion annually for a proposed standard of 12 $\mu g/m^3$ and $88 million to $220 million annually for a proposed standard of 13 $\mu g/m^3$ – a return of $30 to $86 for every dollar invested in pollution control. Estimated costs of implementing the proposal are $69 million for a proposed standard of 12 $\mu g/m^3$ and $2.9 million for a proposed standard of 13 $\mu g/m^3$.

- EPA will take comment on the proposed rules for nine weeks (63 days) after the proposal is published in the Federal Register. The Agency will hold two public hearings, in Philadelphia and Sacramento, Calif. Details will be announced in a separate notice.

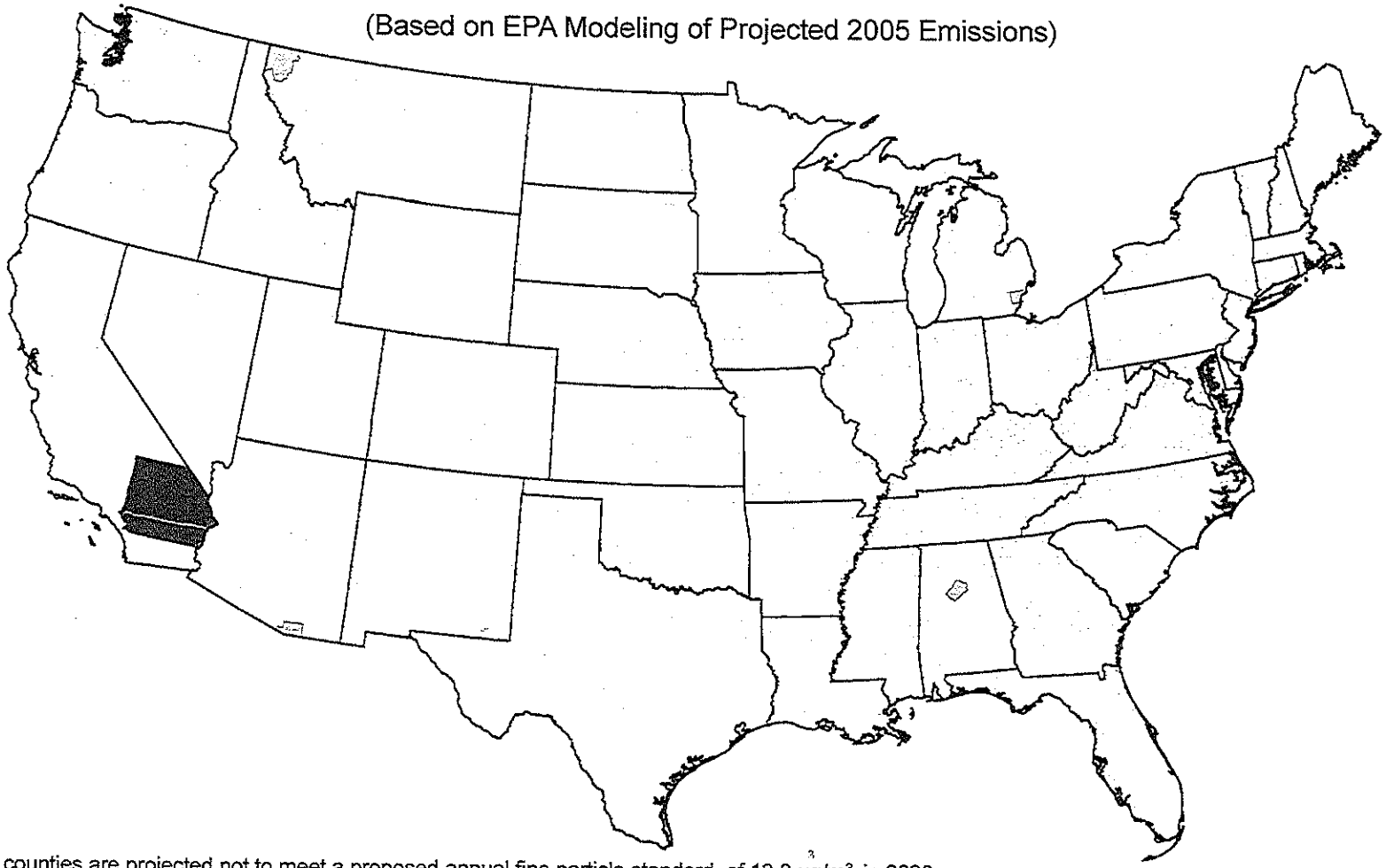
- EPA will issue final standards by Dec. 14 2012.

FOR MORE INFORMATION

- To read the proposed standards and additional summaries, visit http://www.epa.gov/airquality/particlepollution/actions.html

EPA Projections Show Virtually All Counties Would Meet the Proposed Primary Fine Particle Standards in 2020

(Based on EPA Modeling of Projected 2005 Emissions)



2 counties are projected not to meet a proposed annual fine particle standard of 13.0 ug/m³ in 2020

4 additional counties are projected not to meet a proposed annual fine particle standard of 12.0 ug/m³ in 2020

Note: Future fine particle pollution levels were projected only for counties with monitoring data and within the contiguous 48 states

Modeled emissions reflect the expected reductions from federal programs including the Cross State Air Pollution Rule, the Mercury and Air Toxics Standards, the Light-Duty Vehicle Tier 2 Rule, the Heavy Duty Diesel Rule, the Clean Air Nonroad Diesel Rule, Regional Haze Regulations and Guidelines for Best Available Retrofit Technology Determinations, NO_x Emission Standard for New Commercial Aircraft Engines, Emissions Standards for Locomotives and Marine Compression-Ignition Engines, Control of Emissions for Nonroad Spark Ignition Engines and Equipment, Emissions Reductions from Oceangoing Vessels, Emissions Standards for Reciprocating Internal Combustion Engines and Amended New Source Performance Standards and Emissions Guidelines for Hospital/Medical/Infectious Waste Incinerators.