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September 15, 2011

TO: Members of the MAG Air Quality Technical Advisory Committee

FROM: Oddvar Tveit, Tempe, Chair

SUBJECT: MEETING NOTIFICATION AND TRANSMITTAL OF TENTATIVE AGENDA

Thursday, September 22, 2011 - 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.

3. New Chair and Vice Chair of the MAG Air Quality Technical Advisory Committee

On June 13, 2011, the MAG Regional Council Executive Committee appointed Oddvar Tveit, Tempe, as the new Chair of the MAG Air Quality Technical Advisory Committee. Elizabeth Biggins-Ramer, Buckeye, was appointed as the new Vice Chair.

4. Approval of the May 24, 2011 Meeting Minutes

5. Update on CMAQ Projects for the Federal Fiscal Year 2011 Interim Year End Closeout

On May 24, 2011, the MAG Air Quality Technical Advisory Committee made a recommendation to forward the Congestion Mitigation and Air Quality Improvement (CMAQ) evaluation ranked by PM-10 emission reductions to the Transportation Review Committee for use in prioritizing proposed

2. For information.

3. For information and discussion.

4. Review and approve the May 24, 2011 meeting minutes.

5. For information and discussion.

projects submitted for Federal Fiscal Year 2011 Interim Year End Closeout funds. The MAG Regional Council took action on the projects on June 29, 2011. An update on the Federal Fiscal Year 2011 Year End Final Closeout will be provided.

6. MAG Video "Prevent Dust: Do Your Part"

The Maricopa Association of Governments recently completed a new video, "Prevent Dust: Do Your Part." The video features the dust reducing activities that are being implemented by the local governments, the state, and business and industry. The video also indicates that citizens need to do their part to reduce dust pollution.

7. Update on the MAG Five Percent Plan for PM-10

An update will be provided on the MAG Five Percent Plan for PM-10 and the activities to prevent PM-10 exceedances at the monitors and throughout the region. On June 29, 2011, the Maricopa County Farm Bureau invited the Mayors in the Southwest Valley to their annual policy meeting to discuss PM-10 issues. On July 8, 2011, EPA indicated that the region may take emissions reductions credit for the PM-10 measures that have already been implemented since 2007. It appears that additional control measures will not be necessary to meet the requirements for the five percent reductions in emissions, contingency measures, and reasonable further progress. The region will still need to demonstrate attainment and address other items. In addition, work is underway on a conceptual model for the attainment demonstration for the new Five Percent Plan for PM-10.

In the summer and fall of 2011, there have been several exceedances due to exceptional events caused by haboobs, dust storms, thunderstorms, and residual dust. The Arizona Department of Environmental Quality is

6. For information and discussion.

7. For information and discussion.

preparing the documentation for the 2011 exceptional events based upon the Draft Guidance Documents on the Implementation of the Exceptional Events Rule issued by the Environmental Protection Agency. Staff from Maricopa County and MAG are providing technical assistance. Due to the requirements that must be met and the number of exceptional events that have occurred, the documentation effort is resource intensive. Please refer to the enclosed information.

8. Comments on the Draft EPA Guidance Documents on the Implementation of the Exceptional Events Rule

On May 2, 2011, the Environmental Protection Agency provided Draft Guidance Documents on the Implementation of the Exceptional Events Rule. Comments on the draft guidance documents from the Maricopa Association of Governments, Arizona Department of Environmental Quality, and Western States Air Resources Council were submitted to EPA by June 30, 2011. Please refer to the enclosed material.

9. Court Order in the Lawsuit Filed Against the State for the Repeal of the Lottery Funds for Transit

On September 2, 2011, the U.S. District Court for the District Court of Arizona issued a court order in the lawsuit filed by the Arizona Center for Law in the Public Interest against the State regarding the repeal of the Local Transportation Assistance Fund (LTAF) by the Legislature in 2010. A copy of the court order is provided. Please refer to the enclosed material.

10. Withdrawal of the EPA Proposed New Eight-Hour Ozone Standards

On September 2, 2011, President Obama directed the Environmental Protection Agency to withdraw its proposed new eight-

8. For information and discussion.

9. For information and discussion.

10. For information and discussion.

hour ozone standards and delay any new rules until at least 2013, when the standard is next due for a formal review. The President indicated that he could not support advancing a standard that would be reconsidered in just two years. Please refer to the enclosed material.

II. Call for Future Agenda Items

The next meeting of the Committee has been tentatively scheduled for **Thursday, October 27, 2011** at 1:30 p.m. The Chairman will invite the Committee members to suggest future agenda items.

II. For information and discussion.

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

Tuesday, May 24, 2011
MAG Office
Phoenix, Arizona

MEMBERS ATTENDING

Doug Kukino, Glendale, Chair
#Shirley Gunther for Robin Stinnett, Avondale
#Elizabeth Biggins-Ramer, Buckeye
#Jon Sherrill for Jim Weiss, Chandler
#Jamie McCullough, El Mirage
Kurt Sharp, Gilbert
Cato Esquivel, Goodyear
#Scott Bouchie, Mesa
William Mattingly, Peoria
Phil McNeely, Phoenix
#Antonio DeLaCruz, Surprise
Oddvar Tveit, Tempe
#Mark Hannah, Youngtown
#Ramona Simpson, Queen Creek
*American Lung Association of Arizona
Grant Smedley, 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
*Erin Taylor, University of Arizona Cooperative
Extension
Beverly Chenausky, Arizona Department of
Transportation
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
Judi Nelson, Arizona State University
Christopher Horan, Salt River Pima-Maricopa
Indian Community
Tim Conner, Scottsdale

*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
Cathy Arthur, Maricopa Association of Governments
Randy Sedlacek, Maricopa Association of
Governments
Adam Xia, Maricopa Association of Governments
Feng Liu, Maricopa Association of Governments
Ranjith Dandanayakula, Maricopa Association of
Governments
Steve Tate, Maricopa Association of Governments
Matt Busby, City of Apache Junction
Heather Hodgman, City of Apache Junction
Joe Gibbs, City of Phoenix

Frank Shinzel, Maricopa County Air Quality
Department
Thomas Elnren, Maricopa County Air Quality
Department
Mitch Wagner, Maricopa County Department of
Transportation
Wendy Crites, Salt River Project
Joonwon Joo, Arizona Department of
Transportation
Charla Glendening, Arizona Department of
Transportation
Dan Catlin, Fort McDowell Indian Community
Scott DiBiase, Pinal County Air Quality
Michelle Wilson, City of Glendale

1. Call to Order

A meeting of the MAG Air Quality Technical Advisory Committee was conducted on May 24, 2011. Doug Kukino, City of Glendale, Chair, called the meeting to order at approximately 1:30 p.m. Shirley Gunther for Robin Stinnet, Avondale; Elizabeth Biggins-Ramer, Buckeye; Jon Sherrill for Jim Weiss, City of Chandler; Jamie McCullough, El Mirage; Scott Bouchie, Mesa; Ramona Simpson, Queen Creek; Antonio DeLaCruz, Surprise; Gina Grey, Western States Petroleum Association; and Mark Hannah, Youngtown attended the meeting via telephone conference call.

2. Call to the Audience

Mr. Kukino 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. He noted that no public comment cards had been received.

3. Approval of the April 28, 2011 Meeting Minutes

The Committee reviewed the minutes from the April 28, 2011 meeting. William Mattingly, City of Peoria, moved and Amanda McGennis, Associated General Contractors, seconded, and the motion to approve the April 28, 2011 meeting minutes carried unanimously.

4. Evaluation of Proposed CMAQ Projects for the Federal Fiscal Year 2011 Interim Year End Closeout

Dean Giles, MAG, discussed the evaluation of the proposed CMAQ projects for the Federal Fiscal Year 2011 Interim Year End Closeout. Mr. Giles stated that the deadline for submission of projects this year was April 14 and that twenty-four projects have been evaluated. He noted that the total CMAQ amount requested for those twenty-four projects was \$11.2 million and that the current estimate of MAG closeout funds that are available for Fiscal Year 2011 closeout is \$2.65 million. Mr. Giles mentioned that generally the closeout includes existing projects from the transportation improvement program and that usually jurisdictions will request to advance a project in the TIP or request funds to be advanced in an earlier year of the TIP for completing the design phase, for example. He added that jurisdictions also request additional funds for projects and occasionally there will be new project requests and these requests are typically for the purchase and installation of equipment. Mr. Giles stated that the Federal CMAQ projects go through an ADOT project development process and this process generally takes between 18 to 24 months and that is important because to be eligible for CMAQ, potential closeout projects need to be in a position or advanced stage in the ADOT development process to be able to obligate by the end of the Federal Fiscal Year which is near the end of August 2011.

Mr. Giles discussed that the table in the handout contains results of the project evaluation with the estimated emission reductions and the projects are listed in order of cost effectiveness based on the total CMAQ costs. Mr. Giles stated that consistent with the MAG Federal Fund Programming Principles, the evaluation of the proposed closeout projects are forwarded to the MAG Transportation Review Committee (TRC) for consideration in selecting projects. He noted that there was one revision on the table for a Phoenix project, the second from the bottom on page 1, which is the project for the

Western Canal west of 24th Street. It was noticed that the cost effectiveness for this project should be revised to \$275,898 per metric ton. This places it between the Valley Metro and Maricopa County projects above. Mr. Giles stated that MAG will make this revision to the table before forwarding the list on to the TRC. He noted that this item was for information and discussion, and possible recommendation to forward the CMAQ evaluation to the TRC for their May 26, 2011 meeting for use in prioritizing projects. Mr. Kukino, City of Glendale, stated that there were \$11.2 million in requests and he inquired on the amount of money that there is left to allocate. Mr. Giles responded that the current estimate is that there is \$2.65 million available.

Steve Trussell, Arizona Rock Products Association, inquired when projects would be slated for actual construction. Mr. Giles responded that if the obligation occurs in the current fiscal year, the projects would be headed for advertisement and then construction probably sometime after that. Mr. Trussell inquired if the projects would be started sometime this year. Mr. Giles responded that construction could start this year. Mr. Trussell inquired if these projects would be helpful in our efforts to reduce emissions and help with our current Five Percent PM-10 issue. Lindy Bauer, MAG, responded that potentially these CMAQ projects could reduce emissions and that the paving of unpaved road project listed could potentially be useful if the project will be open to traffic in 2011 or 2012. Cathy Arthur, MAG, added that there are a few CMAQ projects that could reduce PM-10 emissions if the projects were open to traffic before the end of 2012, but more emission reduction credit could be taken for projects starting earlier in 2012, because more of the credit could be taken over the whole year. Ms. Arthur mentioned that MAG will check which projects are funded.

Mr. Spencer Kamps, Home Builders Association of Central Arizona, inquired that due to our PM-10 problem and that unpaved roads are 14% of the emissions inventory, why there were not more paving of unpaved road projects in the proposed CMAQ project list. Mr. Giles responded that the purpose of the closeout process is to obligate all of the Federal funds before the end of the fiscal year. He added that in this particular case, there are several Fiscal Year 2011 PM-10 paved/unpaved road projects that are currently under development; however they do not show up on this list with the exception of the El Mirage project that Ms. Bauer mentioned. Mr. Giles stated that they are requesting additional funds through this process to help complete the El Mirage project. He noted that the other projects are under development and under way, but at this time they are not asking for additional funds.

Mr. Kamps inquired if the CMAQ money is part of the Federal money that would be lost if the Federal Clean Air Standard is not met. Ms. Bauer responded that she did not believe that CMAQ funds would be lost; it would be Federal Highway funds. She also pointed out that unpaved roads are 24% of the 2008 emissions inventory instead of 14%. Ms. Bauer stated that the CMAQ projects need to be ready to go before the end of the fiscal year and that it generally takes two years to pave a dirt road with CMAQ funds. She noted that if a member agency is just starting the process at this point, there will not be time to obligate funds before the CMAQ deadline and that is a problem with the interim CMAQ closeout process.

Mr. Kamps inquired if there was not one dirt shoulder, alleyway, or unpaved road paving project in the pipeline that could be funded in the entire valley besides the El Mirage project. He inquired if he was clear on this point. Mr. Giles responded that this point was not clear. Mr. Kamps inquired why, in this crisis, the region was not taking this extra \$2.6 million and addressing the largest category in the PM-10 emissions inventory. Mr. Giles responded that this list represents the CMAQ projects that were submitted for fiscal year end closeout funds. He stated that MAG is aware of the PM-10 problem and that there are number of roadway projects in Fiscal Year 2011. Mr. Giles noted that there

may be a number of scenarios that the Transportation Review Committee will look at during their meeting. One of these scenarios may be looking at additional funds for PM-10 paving projects.

Doug Kukino, City of Glendale, inquired if it would be reasonable to bring forward information on what projects that CMAQ funds were used for in the past and what unpaved roads projects beyond this list that cities are currently working on. Mr. Kamps stated that Ms. Bauer had given information in her previous presentation at today's AQTAC meeting on that measure and it was his recollection that it was 15 miles. He noted that it was important to understand that unpaved roads are the biggest problem in the current emissions inventory and that previously industry had been the biggest problem and it had been dealt with. Mr. Kamps stated that if the region has \$2.6 million that needs to be spent by the end of the fiscal year, then the funds should be used for the biggest category in the emissions inventory, unpaved roads, and the region should get credit for paving these unpaved roads.

Amanda McGennis, Associated General Contractors, inquired why cities have not identified paving of unpaved roads projects within their jurisdictions versus submitting other projects, such as installation of fiber optic lines for congestion mitigation. She also inquired if the cities had shelf projects that have been designed, but not funded, that could be submitted for CMAQ funding. Mr. Kukino responded, although he could not answer for all cities because other cities may be different, that the City of Glendale does not have unpaved roads in the public system. He stated that it appears that other cities are looking at their entire transportation plans and they are not focusing on just one area but are striving for a balanced approach.

William Mattingly, Peoria, stated that there is another aspect to the unpaved roads issue, which is that there are a number of private unpaved roads in cities' municipal boundaries that cities do not have direct responsibility for and since these private unpaved roads are not a city's responsibility, cities are not submitting paving projects for these roads. Elizabeth Biggins-Ramer, Town of Buckeye, stated that there are also county unpaved roads within Buckeye's boundaries over which Buckeye has no jurisdiction. She noted that Buckeye has paved almost all unpaved roads that are Buckeye's responsibility and that Buckeye has private unpaved roads as well as county designated roads that are not paved. Ms. McGennis stated that you can see why the contractor associations have difficulty in understanding some of the submitted projects versus the projects that would seem to have a more immediate effect on reducing PM-10 emissions; it sends mixed signals to the contractor associations. Ms. Bauer responded that unpaved roads are a difficult topic. She noted that this interim closeout needs to have projects that are ready to be obligated before September 30, 2011 and this deadline is a key point for CMAQ projects. Ms. Bauer stated that there are a number of private unpaved roads in the region and that maps of these private unpaved roads will be shown in another agenda item of today's AQTAC meeting.

Mr. Kamps asked Ms. Bauer if there were 600 miles of public unpaved roads and about 1,000 miles of private unpaved roads in the PM-10 nonattainment area. Ms. Bauer responded that there are 613 miles of public unpaved roads and 1,271 of private unpaved roads. Mr. Kamps stated that there is a lot of work to be done as the committee votes on the money for the proposed CMAQ projects. Ms. Bauer responded that there are a number of public and private unpaved roads in the region, however unpaved roads need to be reviewed to determine if they are causing violations at the monitors and also the traffic counts on those roads and how fast these roads can be paved need to be reviewed. She noted that the Federal Highway Administration encourages cities to use CMAQ money for big projects because it is not cost effective for smaller projects. Ms. Bauer stated that cities need to go through environmental clearances and sometimes it can be more expensive to use CMAQ money to pave

unpaved roads than if the cities pave the roads themselves with other funding. For example, Queen Creek turned back CMAQ funds because it was faster and less expensive to pave unpaved roads with their own funds.

Mr. Kamps stated that, to be honest, funding for anything is not easy now days and this is still \$2.6 million that is available to the region to address a problem that jeopardizes the economy here in Maricopa County and the potential of losing Federal funds. He noted that the region needs to reduce PM-10 emissions by 2,000 tons according to the Five Percent PM-10 Plan. Mr. Kamps inquired if that was correct. Ms. Bauer responded that the needed emissions reduction is smaller than that now and is about 1,680 tons. Mr. Kamps inquired why the region is not taking advantage of the best possible use of the \$2.6 million on a category that is large on the PM-10 emissions pie chart. He stated that it truly defies logic based on every discussion he has had here for the last six years, not to use the money for unpaved roads. Mr. Kamps added that the committee constantly goes through this debate about CMAQ moneys. He stated that if the CMAQ money is not going to be used for unpaved roads, then the AQTAC committee should say that in a policy statement.

Grant Smedley, Salt River Project, stated that he believed Mr. Kamps had a good point. He added that the cost effectiveness metric used to evaluate CMAQ projects does not take into account monitoring locations; the metric only looks at how much emissions reductions can be achieved for the dollars spent. Mr. Smedley added that maybe a monitoring location analysis could be added to the CMAQ evaluation. Mr. Giles responded that the CMAQ evaluation for paved/unpaved roads does take into account proximity to monitors. Mr. Trussell stated that it is encouraging that the cost of a project and cost of emissions reduction from paving of unpaved roads is very cost effective. He inquired on how the proposed CMAQ projects will be chosen, and he stated that he understood that it was according to cost effectiveness. He inquired if the top tier of the CMAQ projects, ranked by cost effectiveness, will be chosen. Mr. Kukino responded that the AQTAC's recommendation will be forwarded to another MAG committee. Mr. Giles responded that the AQTAC committee will forward the CMAQ evaluation to the MAG Transportation Review Committee for them to make a recommendation on how they would select proposed projects for the CMAQ closeout. He added that the TRC will look at cost effectiveness and will also look at the scenario of using funding that was either deferred or deleted from the different modes in the Regional Transportation Plan and reapplying that funding back within the same mode. Mr. Giles mentioned that one of the areas of discussion that the TRC will likely have on Thursday will be reallocating some of the air quality funds back to paving projects. He stated that may mean potentially nine paving projects would receive CMAQ money through the closeout process.

Mr. Kukino asked Mr. Giles to go over again the role of the AQTAC in the recommendation going forward to the TRC. Mr. Giles responded that as a technical committee the AQTAC reviews the CMAQ methodologies; MAG held a workshop on the CMAQ methodologies document on December 6, 2010 and received comments on the CMAQ document. He added that the latest edition is dated March 31, 2011 and it accounts for all the technical issues for evaluating different kinds of CMAQ projects. Mr. Giles stated that in regard to the closeout, the AQTAC reviews the evaluation of the proposed CMAQ projects and forwards, in this case, the CMAQ evaluation to the TRC. He added that at other times, such as during the update of the Transportation Improvement Program, the evaluation would be forwarded the MAG Modal Committees and then to the TRC.

Mr. Kukino stated that Mr. Kamps was correct and that this is a very sensitive issue and we do discuss these issues every time there is a CMAQ evaluation agenda item. Tim Conner, City of Scottsdale,

stated that since the committee is an air quality committee should not the committee be looking at the different projects that are presented as closeout projects that have the highest impact on the air quality issues that the region is trying to take care of. He added that during his review of the CMAQ project list, he saw three projects that would take up to \$240,000 of the \$2.6 million and would have the most effect on air quality. Mr. Conner stated that those three projects should be put up in the front line of the recommendations. He stated that these three air quality projects should be forwarded to the TRC in order to get the most benefit for air quality. He mentioned that the first project was the Phoenix Strategic Plan which has a weighted PM-10 emission reduction of 12.58 kilograms per day and a total emissions reduction of 59 kilograms per day, the second project was the El Mirage project which has a weighted PM-10 and total emission reduction of 147.3 kilograms per day, and the third project was Maricopa County paving of dirt shoulders for a bike lane on both sides, with a weighted PM-10 emission reduction of 3.83 kilograms per day. Mr. Conner recommended that these three projects be captured and highlighted in the AQTAC's recommendation to the TRC.

Mr. Kukino stated that the cost effectiveness in general is the measure that shows the most bang for the buck and that he believed that Mr. Conner's question is why PM-10 is not put in front of the other pollutants in the CMAQ projects evaluation. He asked Mr. Giles if there was any discussion on that. Mr. Giles responded that ranking by PM-10 was an option to the Committee. Mr. Trussell asked the AQTAC chair if the CMAQ projects list was a closed list and whether this list was the only choice. Mr. Kukino responded that this is the list of CMAQ projects that committee needs to respond to. He added there are no other CMAQ projects that requested additional funding as part of the CMAQ interim closeout and this is the process that the committee uses to determine the appropriate use for CMAQ money at this time.

Mr. Trussell stated that, in light of that, he agreed with Mr. Conner's assessment and that is the best way to address the CMAQ projects. Mr. Kamps inquired if the proposal was to go with the three projects discussed by Mr. Conner. Mr. Conner responded that at least these three projects should be highlighted in the CMAQ project list, from an air quality standard standpoint, that the committee sees as being the most important ones on the list. Mr. Kamps stated that he would support that and it is important to send that message to the TRC. He added that, unrelated to the previous comments, that to put things in perspective the El Mirage project reduces 150 tons for almost half a million dollars worth of expenditure. Mr. Kamps stated that if the committee dedicated \$2.6 million to paving roads that would reduce emissions by almost 750 tons, which would be a huge chunk out of the emissions to meet EPA's goal. He stated that would be just with the CMAQ money today, not new money, not other money, or other paving projects that may be claimed in the plan. Mr. Kamps added that if it is assumed that the emissions reduction from other paving projects would be the same as the El Mirage project, then that would be a large reduction in tonnage emissions. Mr. Giles responded that the emissions reduction listed for the El Mirage project is not in tons, but in kilograms per day. Mr. Kamps recommended that the number of tons of emissions reduction should be calculated if \$2.6 million was used for paving projects.

Mr. Kukino stated that the committee is now moving towards a motion on the CMAQ projects and if there was any more discussion. Mr. Grant Smedley, Salt River Project, inquired if the motion could be to re-rank the CMAQ projects according to PM-10 emissions reduction instead of using the dollar per metric ton in light of the PM-10 issue. Mr. Kukino responded that he thought the answer is yes. He inquired on whether the ranking will be based on only total PM-10 emissions reduction or PM-10 emissions reduction in terms of cost effectiveness. Mr. Kukino asked what the motion was. Mr. Smedley stated if he is going to make a motion then it would be interesting to see all the CMAQ

projects ranked both ways by PM-10 emissions reduction and by cost effectiveness, if it would not cause additional work for the committee. Mr. Giles inquired if ranking the CMAQ projects by cost effectiveness would be in the same order as ranking the projects by PM-10 emission reductions. Mr. Smedley responded that he thought the cost of paving could be different from one project to another, but maybe it would be the same. Mr. Giles asked Mr. Smedley if the committee would only be looking at PM-10 and not the other pollutants, for the CMAQ project ranking. Mr. Kukino stated that Mr. Smedley was more asking a question than making a motion, but the committee should keep with the concept.

Mr. Kukino asked Mr. Giles what the time frame was to get the CMAQ projects to the next committee and if there is a hard deadline that the committee must meet and that is why the committee is meeting today. Mr. Giles responded that MAG adjusted the AQTAC meeting schedule for a Tuesday meeting because the TRC meets at 10:00 A.M. on Thursday this week. Mr. Kukino stated that what is needed is a recommendation. He asked Mr. Smedley to adjust his motion to recommend an action. Mr. Smedley moved to rank the CMAQ projects by PM-10 reduction rather than the dollar per ton emissions reduced metric. Mr. Trussell seconded the motion. Mr. Kukino stated that the motion is that the CMAQ projects will be ranked according to PM-10 emissions reduction. Mark Hajduk, Arizona Public Service Company, inquired if the committee is proposing that the CMAQ projects be ranked according to PM-10 emissions reduction or are the measures that have PM-10 emission reductions only being highlighted and the committee is suggesting that TRC look at the top of the list. Mr. Kukino stated that if Mr. Hajduk wants to recommend that it can be included in a second motion or Mr. Smedley could consider Mr. Hajduk's recommendation. Diane Arnst, Arizona Department of Environmental Quality, requested that the motion be read back since it has already been seconded. Mr. Kukino stated that the motion was to re-rank the CMAQ projects, submitted to the Transportation Review Committee, based on PM-10 emission reductions.

Ms. Arnst called for the question. Brian O'Donnell, Southwest Gas Corporation, inquired if Ms. Arnst said that committee members can comment on the motion. Mr. Kukino stated that if Mr. O'Donnell had a comment to go ahead and comment. Mr. O'Donnell stated that the CMAQ projects are already ranked and lists weighted PM-10 emissions reductions by kilogram per day with an associated total cost. He stated that the CMAQ projects can be reshuffled, but the information is already there. Mr. O'Donnell inquired if that was correct that information is already in the CMAQ list. He added that re-ranking the CMAQ list by PM-10 emissions reduction would just be taking out the other pollutants, but looking at the CMAQ project list it can be seen that the projects are already ranked. Mr. O'Donnell stated that he was trying to understand the motion. He inquired if the motion was to submit the CMAQ project recommendations ranked by PM-10 emission reduction. Mr. Kukino stated that the motion is to submit the CMAQ projects ranked by PM-10 emission reduction to the Transportation Review Committee. He stated that the motion was moved and seconded and called for a vote and all in favor say aye and those opposed. The committee voted on the motion. Mr. Kukino stated that the no votes will need to be counted. He asked the committee members present who had voted no on the motion to raise their hands. Mr. Kukino asked the committee members on the phone who had voted no on the motion to identify themselves. He decided to do a roll call vote. Ms. Bauer stated that she would ask the different entities by name for their vote. A roll call vote was done on the motion. Mr. Kukino stated that the motion had been approved, twenty to seven. Mr. Kukino stated that the committee would move on to Agenda Item #5.

5. Update on the MAG Five Percent Plan for PM-10

Cathy Arthur, MAG, discussed using the 2008 MCAQD PM-10 emissions inventory as the base for projecting the inventory to years 2011 and 2012. She noted that the 2008 inventory has changed greatly since it was submitted in 2007 with the Five Percent Plan. One of the major changes was due to EPA's new paved road emissions equation which reduced paved road emissions by 61%. Ms. Arthur stated that MAG is using growth factors from 2008 to 2012 based on projections by Marshall Vest with the Economic and Business Research Center of the University of Arizona who has been doing growth projections for about 30 years. She mentioned that on May 10, 2011, Mr. Vest released new second quarter 2011 projections. Ms. Arthur stated that MAG utilized Mr. Vest's new projections to create a table with annual projections for population, and construction and manufacturing employment. She noted that the new projections are more pessimistic than the projections MAG received six weeks before. Ms. Arthur added that the reason Mr. Vest was able to develop new projection factors so quickly was because he received new 2010 U.S. Census information, and Mr. Vest adjusted his projections based on the 2010 Census.

Ms. Arthur stated that the population is projected to decrease from 2009 through 2011, and from 2011 to 2012, the population is projected to have no change. She noted that in 2013, the population is projected to increase by 0.7%. Ms. Arthur added that this is a small turnaround, because, before the recession, the regional population was increasing by 2% to 3% per year. She noted that the construction employment numbers are also lower than in the previous estimates but the rate of decline in construction employment is diminishing between 2011 and 2012 with an even smaller decline in 2013. Ms. Arthur stated that for manufacturing employment there are declines from 2008 through 2010 with increases in 2011 and 2012. She added that the Mr. Vest's assumptions have been included in the spreadsheet used for deriving the latest projections for the PM-10 emissions inventory.

Ms. Arthur discussed the draft projected 2011 PM-10 emissions inventory pie chart. She noted that there are significant differences between the 2008 and 2011 PM-10 emission inventories: (1) paved and unpaved road emissions represent a higher percentage of total emissions than in the 2008 PM-10 emissions pie chart and, (2) construction emissions are significantly lower than in 2008. Ms. Arthur discussed the two bar charts showing 2008 revised and 2011 projected PM-10 emissions and noted that there was a 14.3% overall reduction in emissions of 48,148 tons per year in 2008 and 41,260 tons per year in 2011. She stated that the blue band for construction emissions on the bar charts is significantly smaller in the 2011 projection, decreasing from 16% to 7% between 2008 and 2011, with a more than 50% reduction in total construction employment. Ms. Arthur noted that most of the other source categories on the 2008 revised and 2011 projected bar charts are approximately the same percentage-wise, so the biggest impact of the projections is the decrease in construction employment. She added that based on the new projections, there is a 14% reduction in PM-10 emissions between 2008 and 2011 overall and in 2012, there is a small decrease. The emission decreases in 2008-2012 are attributable to the implementation of the control measures from the 2007 Five Percent Plan.

Ms. Arthur stated that there was an error on page 5 of the handout on Preliminary Projections of 2011 - 2012 PM-10 Emissions that has been corrected on the slide; the 5% reduction is calculated by multiplying 5% times the 2011 PM-10 emissions total, which is 41,260 tons per year. Page 5 of the handout shows a "5" in the calculation; it should show a "5%". She stated that 2011 is the base year that EPA has told MAG to use at this point in time. Ms. Arthur added that multiplying the 2011 PM-10 emissions total by 5% produces 2,063 tons and this is the new 5% reduction target for 2012. She noted that the region has an absolute reduction of 460 tons in PM-10 emissions between 2011 and

2012. Ms. Arthur stated that EPA has told MAG that the 460 ton emissions reduction between 2011 and 2012 could be used as a benefit.

Ms. Arthur stated that the benefit of the control measures is shown in 2012. She noted that population increases between 2011 and 2012 would have offset the emission reductions and there would not have been as large a reduction between 2011 and 2012. Ms. Arthur added that this leaves a 1,600 ton shortfall in 2012 and MAG is focusing on control measures that will offset this shortfall in 2012.

Ms. Arthur stated that the Clean Air Act also requires one year of reasonable further progress be shown in terms of the benefit of contingency measures and MAG was required to do this in the 2007 Five Percent Plan. She noted that this means that an additional 2,063 tons of emissions reductions for contingency measures would be needed on top of the 1,600 ton emissions shortfall in 2012. Ms. Arthur stated that when MAG talked to EPA about this in a phone call last Wednesday, Greg Nudd with EPA said he would talk with EPA attorneys to see if the reasonable further progress requirement could be waived, since MAG would have only a one year plan. She added that there is potential that EPA will conclude that the additional 2,063 tons of emissions reduction will not be required.

Ms. Arthur stated that the reason that emission reductions can be shown between 2008 and 2012 is because MAG has taken credit for all of the control measures in the 2007 Five Percent Plan, with the exception of three trackout measures (14, 15, and 17). EPA has indicated that MAG does not have enough empirical data to support the emission reductions that were taken for the trackout measures, and consequently MAG has removed the emission reductions for the trackout measures from the inventory. She noted that the reduction due to the trackout measures was 6.5% of paved road emissions in the 2007 Five Percent Plan. Ms. Arthur stated that EPA is reviewing the preliminary emission projections and may tell MAG that the emission reduction credits for other control measures, besides the trackout measures, may be disallowed. She stated that if that happens, the 1,600 ton emission reduction needed to meet the 5% requirement in 2012 will increase. Mr. Kamps inquired what Measures 14, 15, and 17 were. Ms. Arthur responded that these measures were not covered in any other category and one of the measures was reducing trackout from non-permitted sources, another was covering truck loads in Apache Junction, and she would check on the third measure. (The third measure was fully implementing Rule 316.) She noted that the measure with the largest emission reduction of these three trackout measures was the one that reduces trackout from non-permitted sources.

Ms. Arthur discussed additional issues regarding timing of implementation of control measures. The closer that control measures are implemented to January 1, 2012, the better, because if, for example, a paving project is open to traffic on January 1, 2012, then MAG can take a full year benefit for that project. If the paving project is not open to traffic until July 1, 2012, then MAG can only take half that credit. She stated that this is very different than other plans that MAG has developed in the past in which attainment is usually shown by a specific date. In this case, MAG has to show benefits that traverse the entire year. Ms. Arthur added that even though a paving project may have a tremendous benefit, MAG may only be able to take half the credit if the paving project is not open to traffic until July 2012. She noted that this is why timing of implementation of control measures is extremely important and ideally all measures would be implemented on January 1, 2012.

Ms. Arthur stated that MAG had some outstanding questions on other timing issues which include: (1) When will ADEQ be submitting documentation of 2009 Exceptional Events to EPA? If EPA agrees with the 2009 exceptional events, there will be three years of clean data assuming that there are no exceedances in 2011, (2) If exceptional events occur in 2011 (e.g., monsoon event), how quickly

can ADEQ submit exceptional events documentation to EPA? If an exceptional event does occur in 2011, MAG will need fast turnaround from ADEQ in documenting those as exceptional events because both 2009 and 2011 will need to be approved by EPA before MAG can request a clean data finding from EPA, (3) How soon after exceptional events documentation is received, can EPA make a decision on exceptional events?, and (4) Can the quality assurance of 2011 monitoring data be expedited by Maricopa County? Normally, 2011 data would be due to EPA by May 1, 2012. If quality assurance of data can be expedited, MAG could respond to requirements related to a clean data finding instead of the requirements for a Five Percent Plan. She noted that if there is a clean data finding, then the region would not need to do the 5% emissions reduction or the contingency measures and modeling would not be required.

Ms. Arthur stated that if modeling is required by EPA, the model selected would probably be the rollback model. She added that a new emissions inventory, with updates from EPA's new paved road equation and emission reductions from any new control measures passed by the Legislature including House Bill 2208, would then be submitted to EPA. Ms. Arthur stated that MAG will keep the committee updated with any changes in the projections, but that she doubted that the projections will change much and that the projections are the right order of magnitude for what MAG will have to show in 2012.

Diane Arnst, ADEQ, inquired what were the assumptions used for growth in unpaved roads due to lot splits for the emissions shown on the pie graph and the bar chart. Ms. Arthur responded that the assumption was an increase of 1.5% in private unpaved roads per year. Ms. Arnst inquired if that was for 2011. Ms. Arthur responded that was correct and the 1.5% increase was for 2012 as well. She added that the 1.5% increase in private unpaved roads per year was based on a lot split analysis done by MAG staff using GIS that showed that had been the trend in lot splits in the past before the recession. Ms. Arthur noted that at the Five Percent Technical Committee meeting last Wednesday, EPA made a statement that MAG may be able to waive that growth in private unpaved roads because the other population and employment projections are basically flat and therefore it would be unlikely there would be as many lot splits and private unpaved roads being created over that period compared to what the region would normally experience. She stated that revising the annual growth of private unpaved roads to zero may be one of the changes that MAG makes to the emissions inventory in the future and that would give the region more emissions benefit.

Grant Smedley, Salt River Project, inquired if the reasonable further progress requirement applies to a subsequent year or does it apply to 2012 again. Ms. Arthur responded that it was 2012 again, but if there were multiple years, as was the case in 2007, then the starting point for the calculation would be 2007 to the attainment year and then divide by the number of years. She added that in this case there is only one year and that is why it ends up being the same number. Mr. Smedley inquired if the reason it is only one year is because the region had clean data in 2010 and 2011. Ms. Arthur responded that the region had clean data in 2010 and hopefully will have clean data in 2011 and if the exceptional events are approved by EPA, there may be clean data for 2009. She added that ideally the region would be clean in 2012. Mr. Kukino stated that the second half of the "Update on the MAG Five Percent Plan for PM-10" presentation will be given by Lindy Bauer.

Lindy Bauer, MAG, gave an update on the MAG Five Percent Plan for PM-10. Ms. Bauer discussed the prevention activities that are underway so the region will have three years of clean data at the monitors and beyond, PM-10 issues that have been recorded on video as MAG was preparing the PM-10 video, and unpaved roads. She stated that regarding prevention activities, MAG has been working with its membership to try to prevent exceedances from happening at the monitors and

throughout the region. Ms. Bauer noted that: (1) City of Phoenix has come out with long term recommendations, ahead of schedule, and this is included in the agenda packet, (2) Maricopa County has been working on upgrades to provide near real-time monitoring data and the County gave MAG a tour of their facility and showed improvements that they are making to their data collection system. Since the County may need about three more months to complete these upgrades, the County will not be able to complete the upgrades by May 31st as originally planned, (3) MAG PM-10 Prevention Video is coming along well and should be completed by May 31st, (4) A network has been established to prevent PM-10 exceedances region wide and twenty-eight MAG member agencies are working with MAG on this network, (5) Maricopa County continues to coordinate with MAG member agencies to avoid duplication of effort, (6) MAG has completed a Rapid Response Action Plan Template and Tool Kit and this has been given to the MAG member agencies. MAG member agencies are customizing their tool kits for their respective jurisdictions, (7) MAG held a second Prevention of PM-10 Exceedances workshop with local governments, Maricopa County, and ADEQ on April 21st. In the workshop, it became apparent that leadership is needed from city management to help some of the city staff people, because they may not have the authority to cross department lines within the cities, (8) MAG will have a third workshop on May 26, 2011 to coordinate efforts on prevention of PM-10. City of Phoenix will present their long-term prevention of PM-10 recommendations at the workshop and also provide detailed information. The City of Phoenix has been serving as a role model in this effort. The County will also discuss Rapid Response from the County's perspective and talk about more efforts to coordinate with the cities to be successful in preventing exceedances at the May 26, 2011 workshop, and (9) ADEQ is continuing to send out Maricopa County Dust Control Action Forecasts five days in advance.

Ms. Bauer stated that prevention of PM-10 is the key to success and it is absolutely critical. She added that in March 2011, MAG showed some video clips at the AQTAC meeting, as well to the city managers and the elected officials on the MAG Regional Council, on what can happen if ATVs are used on vacant lots to do doughnuts and in turn cause an exceedance of the PM-10 standard. Ms. Bauer mentioned that when MAG staff were developing the PM-10 Prevention video, they also recorded some video clips of some other situations that produce PM-10 that are now being corrected. Ms. Bauer showed a video clip to the committee of a "Bobcat" front end loader doing demolition work on a windy day. She noted the Bobcat was 190 feet from an air quality monitor. Ms. Bauer added that the city, in which this Bobcat was working, went out to the site and did a rapid response to this demolition work. She stated that she thought that a permit and dust control plan is required to do demolition activity, Ms. Bauer noted that this type of activity needs to be careful of producing dust near air quality monitors in order to prevent PM-10 exceedances.

Ms. Bauer showed a second video clip of a person doing mowing for weed abatement. She noted that mowing is allowed for weed abatement and the County encourages mowing to control weeds, rather than discing which can generate even more dust. Ms. Bauer added that it is important to note that even mowing can cause problems with dust near an air quality monitor. She stated that Maricopa County has Rule 300, which is in effect all the time, which stipulates that opacity should not be over 20 percent for an hour. Ms. Bauer asked Jo Crumbaker, Maricopa County Air Quality Department, if the three minutes need to be consecutive. Ms. Crumbaker replied that the three minutes do not need to be consecutive within an hour. Ms. Bauer stated that the County can issue a citation for dust generating activities that cause the opacity to be exceeded. She added that an agency was doing weed abatement work and a water truck was on site for controlling dust; however near the end of the day the water truck ran out of water and the weed abatement activity still continued. Ms. Bauer noted that this caused dust and that agency received a citation. She stated that Maricopa County is trying to prevent

PM-10 exceedances by stepping up enforcement. She added that MAG is asking all the MAG member agencies to be vigilant when doing any kind of work that produces dust.

Ms. Bauer discussed the revised 2008 PM-10 emissions inventory pie chart and noted that the dark green segment, the 24% portion of the pie chart, represented emissions from unpaved road fugitive dust. She added that this is what Mr. Kamps had previously been referring to as the contribution from unpaved roads. Ms. Bauer stated that within the nonattainment area there are 1,884 miles of unpaved roads and of this total 613 miles are public unpaved roads and 1,271 miles are private unpaved roads. She noted that this is based on MAG's 2009 unpaved road inventory. Ms. Bauer added that MAG is in the process of updating the unpaved road inventory.

Ms. Bauer stated that MAG, as part of its dirt road research, looked at unpaved roads contained within a two-mile radius and 4-mile radius around each PM-10 monitor. She added that the 2-mile radius was selected because under stagnant conditions, it is usually sources within 2 miles that impact the monitor, and the 4-mile radius was selected, because under windy conditions, it is usually sources within 4 miles that impact the monitor. Ms. Bauer showed the committee a series of maps showing the locations of the PM-10 monitors with locations of public and private unpaved roads that were contained in a 2-mile radius and a 4-mile radius around the monitors. She noted that the red lines on the maps are private unpaved roads and the green lines are public unpaved roads. Ms. Bauer added that the first maps were of PM-10 monitors that had recorded exceedances. She showed the following unpaved road / monitor maps with 2-mile and 4-mile radius around the monitors: (1) West 43rd Avenue, (2) Durango, (3) South Phoenix, (4) West Chandler, (5) Higley, (6) Buckeye, (7) Greenwood, (8) Bethune School, (9) Glendale, (10) Zuni Hills, (11) Dysart, (12) Central Phoenix, (13) Supersite, (14) North Phoenix, (15) Mesa, (16) South Scottsdale, (17) West Phoenix, and (18) Apache Junction.

Ms. Bauer showed the committee a table listing the number of miles of public and private unpaved roads that are contained within a 2-mile radius and a 4-mile radius around each of the above monitors. She noted: (1) Apache Junction monitor had the most miles of unpaved roads within 2 miles and 4 miles of the monitor, but this monitor has not had PM-10 problems in the past, (2) Zuni Hills monitor had the second highest number of unpaved roads within 2 miles and 4 miles of the monitor, but this monitor has not had PM-10 problems in the past, (3) Buckeye monitor had the third highest number of unpaved roads within 2 miles and 4 miles of the monitor and this monitor had some PM-10 problems in the past, although not recently, (4) Higley monitor had the fourth highest number of unpaved roads within 2 miles and 4 miles of the monitor and this monitor had some PM-10 problems in the past, but not recently. Ms. Bauer added that the number of miles of unpaved road within 2 miles and 4 miles of the West 43rd Avenue monitor is fairly low and it appears that in general, unpaved roads are not causing violations at the monitors. She stated that however the paving of unpaved roads would be very helpful with meeting the five percent reductions in emissions. She added that MAG looked at unpaved roads with traffic of 150 ADT or greater within 2 miles and four miles of the monitors and found that for the most part, these roads have been stabilized except for two roads in Apache Junction.

Ms. Bauer stated that there are issues with trying to pave private unpaved roads, because public money cannot be used to pave private unpaved roads due to the gift clause in the Arizona Constitution. She added that MAG is doing research to see if there are options that exist that would address the private unpaved roads as well. Ms. Bauer mentioned that paving of unpaved roads would be beneficial in addition to what the committee saw under another agenda item today with interim closeout. She stated that MAG is reviewing its current Transportation Improvement Programs to determine what paving projects are planned to obligate in 2011 that may be open to traffic in 2012. Ms. Bauer added that

MCDOT has indicated to MAG that they will be doing more paving of unpaved roads. She stated that MAG has allocated about 33.6 million dollars between 2001 to 2011 to help with the unpaved road issue. Ms. Bauer added that the region does have a large number of unpaved roads and MAG is continuing research on unpaved roads and MAG will report back to the committee with new information on unpaved roads.

Ms. Bauer stated that House Bill 2208, which had recently passed, was designed to prevent exceedances through a dust action general permit. She added that MAG has included, in the committee's agenda packet, a draft list of activities that could potentially be subject to the dust action general permit. Ms. Bauer noted that ADEQ had put the draft list of activities together. Brian O'Donnell, Southwest Gas Corporation, stated that the utilities will make their comments on this list, but for information, an easement or right of way does not allow a utility to work on a road, it just gives the utility the right to go in and put a line in for example. He added that the utility does not own the road and he will make that comment to ADEQ. Mr. O'Donnell stated that a utility having an easement for a pipeline does not mean the utility maintains that property; the property owner maintains the property.

Mr. Kamps inquired if there was a trip number to trigger which private and public unpaved roads would be included on the 2-mile and 4-mile radius unpaved road maps. Ms. Bauer responded that all the unpaved roads were included on the maps and these unpaved roads were from the 2009 unpaved roads inventory. She added that MAG did not use a cutoff, such as a certain number of daily trips, to select which unpaved roads were included on the maps; all unpaved roads were included on the maps. Mr. Kamps inquired if the unpaved roads that receive 150 trips per day are required to have a dust suppressant. Ms. Bauer responded that was correct. She stated that Maricopa County Dust Control Rule, she believed it was 310.01, requires public unpaved roads with 150 ADT or greater to be paved or stabilized. Mr. Kamps inquired if the roads are paved, then they would not be in this mix. Ms. Bauer responded that was correct; these are unpaved roads. Mr. Kamps inquired how many of the public unpaved roads are stabilized. Ms. Bauer responded that she did not know the answer to that question, but MAG will find out. Mr. Kamps stated that MAG should also look at the suppressant used, because he was not aware of a suppressant that works on a dirt road and that his association uses a lot of water on dirt roads. Mr. Kukino stated that the next item on the agenda was Agenda Item #6, "Review of the Draft EPA Guidance Documents on the Implementation of the Exceptional Events Rule."

6. Draft EPA Guidance Documents on the Implementation of the Exceptional Events Rule

Matt Poppen, MAG, gave an overview of the draft EPA guidance documents on the implementation of the Exceptional Events Rule. Mr. Poppen stated that on May 2, 2011, EPA released draft guidance documents related to the implementation of the Exceptional Events Rule for review by state and local agencies and these draft documents were included in the committee's agenda packet. He added that the agenda packet includes an overview document on the two attachments - one attachment lists frequently asked questions and the other attachment has guidance on high wind events, which is what most of his presentation will be about. Mr. Poppen mentioned that state and local agencies have first cut at commenting on these documents and the comments are due to EPA by June 30, 2011. EPA will incorporate those comments and then the public will have a chance to review the guidance as well. He stated that it appears that the guidance will go final in November 2011, if everything stays on schedule. Mr. Poppen added that EPA stated that the documentation is based on the following principles: (1) States 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, and (3) Clear expectations will enable EPA and other air agencies to better manage resources related to the exceptional events process.

Mr. Poppen discussed that when submitting exceptional events documentation, there are six technical elements that EPA requires must be met in order to approve an exceptional event: (1) Whether the event affects air quality, (2) Whether the event was caused by human activity unlikely to recur at a particular location. (e.g., fireworks or an unusual construction project) or was a natural event (e.g., high wind or wildfire), (3) Whether the event was not reasonably controllable or preventable. (This is probably the most important element and gets to the states' and local agencies' adequacy and implementation of existing control measures.), (4) Whether there was a clear causal relationship between the event and the measured concentration (This is the second most important element. The event has to be linked to uncontrollable sources or sources that were reasonably well controlled, but were overwhelmed by the event to be approved by EPA). (5) Whether there would have been an exceedance but for the event. (This element is getting at the causal relationship. The event had to be the tipping point that caused the exceedance.), and (6) Whether the event was associated with measured concentrations in excess of normal historical fluctuations including background (This element evaluates the magnitude of the event and the rarity of the event.). All six of these elements must be met, if one element is not met, EPA will not concur with the exceptional event request.

Mr. Poppen reviewed excerpts from EPA's guidance that best explained EPA's stance on these technical elements in the draft Exceptional Events Guidance. He noted that the not reasonably controllable or preventable element is the most important of the elements in EPA's eyes and is the one that requires the most documentation by the State. Mr. Poppen stated the following quote from EPA's guidance: "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." He noted that EPA added that RACM/BACM lists may be a reference point, so all the SIP rules that the region currently has in place will be the starting point, but not necessarily the sole means by which EPA assesses the reasonableness of controls. Mr. Poppen added that in areas where events continue to recur, like Maricopa County, EPA may consider BACM, or greater levels of control, as the appropriate starting point, regardless of attainment status. He stated that it is important to point out that just because the region has all these rules on the books, EPA does not assume that the region has reasonable controls. EPA looks at each event individually and does a sliding scale on whether the events had reasonable controls or not.

Mr. Poppen stated that the other trigger, which is a new element in the guidance, is that EPA has set a wind speed threshold. He stated the following quote from EPA's guidance: "In evaluating reasonableness, EPA will generally consider first and foremost whether the wind speeds were above the minimum threshold [25 mph] to entrain dust from stable surfaces." Mr. Poppen added that if there is an event which occurs with wind speeds below 25 miles per hour (mph), it will be difficult to prove to EPA that the controls were reasonable and the event was not preventable. He stated the following quote from EPA's guidance on the sliding scale for controls: "More stringent controls are reasonable if an area experiences frequent and/or severe exceptional event exceedances due to high winds than if the area has experienced only rare/and or mild isolated exceedances...For recurring high wind dust events...states are expected to consider and implement further controls as events continue to recur."

Mr. Poppen stated that EPA is always evaluating new sources to control, especially in areas that have recurring events.

Mr. Poppen noted that the magnitude of the wind speed and the frequency of the event recurrence determine the complexity of the analysis. He showed the committee a diagram from EPA's draft guidance that illustrated that the simplest and most basic analysis is used when the wind speed is close to 40 mph and the event only occurs once a year or less and the most difficult and comprehensive analysis is used when wind speeds are low, under 25 mph, and the events recur frequently.

Mr. Poppen showed the committee a chart from EPA's draft guidance listing the control analysis elements that EPA expects to see for the Exceptional Events analysis and he stated that the chart is broken down by the required elements for the Basic Controls Analysis and the Comprehensive Analysis. He noted that the simplest analysis would still require the first five elements for those events that were non-recurring (one or less a year on average) and when the wind speed was above twenty-five mph. For this type of analysis, the following information would be required: (1) Identification of upwind sources, (2) Description that anthropogenic controls that are in place, (3) Statement that natural sources are too large to control, (4) Explanation of how dust entrainment occurred despite controls, and (5) Description of program that is in place to implement controls. Mr. Poppen stated that the more comprehensive analysis would require back trajectories, source apportionment, and consequently the analysis becomes very complex.

Mr. Poppen stated that a new element that EPA has in the draft guidance is a high wind action plan and this is part of EPA's attempt to address recurring events. He added that EPA's definition of recurrence is defined as more than one event per year, averaged over a 3-year period; so if a region has more than one exceedance a year, EPA will consider that as a recurring events problem. Mr. Poppen stated that EPA developed the high wind action plan in response to recurring events. He stated the following quote from EPA's guidance: "EPA and the submitting state can consider the development of a High Wind Action Plan that would identify mutually agreed upon reasonable controls that a state could implement for subsequent high wind events...EPA would consider the controls to be reasonable as long as the events do not recur...If events recur, EPA will need to re-approve the High Wind Action Plan." Mr. Poppen noted that the high wind action plan is not a "one and done plan."

Mr. Poppen stated that MAG had expected that EPA would require a high wind action plan that included existing controls and demonstrated how Maricopa County and ADEQ implement existing controls during high wind events. He added that MAG also had expectations that if the region does everything that is contained in the high wind action plan, then that is proof that all the reasonable controls are in place and being implemented. Mr. Poppen noted that, however, this was not the tact that EPA took. He stated that EPA ended up saying that a high wind action plan should address and identify new sources of windblown dust that may not be addressed by an existing SIP, and if the existing controls that are in place do not stop a recurring event, then the region needs to find out what is causing the recurrence of events and put new controls in the high wind action plan to deal with future events. Mr. Poppen noted that this plan is similar to a small SIP, which would identify and require new controls for all significant dust sources. He stated that the high wind action plan does not have to be part of an existing SIP, but it is still an extensive document. Mr. Poppen added that the high wind action plan needs to be open for public comment, requires EPA approval, the State must make a statement that they are implementing the identified controls, and EPA must formally recognize that the plan is being implemented before the plan would be valid.

Mr. Poppen stated that the next most important element in the Exceptional Events analysis is the idea of a clear causal relationship and he provided the following quote from EPA's draft guidance: "The demonstration must show that elevated concentrations were caused by dust entrained by high winds. The sources of dust implicated by the demonstration should be shown to be not reasonably controllable

or preventable." He added that a region must link that the dust came mostly from natural sources, or sources that have been determined to be reasonably controlled. Mr. Poppen provided the following quote from EPA's draft guidance: "A correlation between high wind and high concentrations is important but does not independently demonstrate that the high concentrations were caused by wind-entrained dust from the sources that were addressed as part of the not reasonably controllable or preventable demonstration." He added that what EPA is saying is that a region cannot simply present data that there were high winds and high concentrations as a demonstration of a causal connection; the sources of dust have to be linked to windblown dust from natural sources or sources determined to be reasonably controlled to demonstrate this relationship. Mr. Poppen stated that the type of analysis that EPA requires for this demonstration should include: (1) Geographic extent of the event, transport of emissions - was it long range transport or was it local emissions, (2) Spatial and temporal relationships of concentrations - where are these emissions coming from and how long did they last, (3) Chemical speciation will be needed in some cases, and (4) Comparison to surrounding days and historical data.

Mr. Poppen noted that the following quote from EPA draft guidance is particularly important to our region: "A demonstration will be less compelling if there is evidence that is not consistent with the conceptual model of the how the event caused the exceedance. 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. Comparison of concentrations and conditions at other monitors could thus be very important for the demonstration of a clear causal relationship." He added that based on this portion of the guidance, it appears that EPA will generally not approve an exceedance at a single monitor, as was present in some of the 2008 events. Mr. Poppen stated that in 2009, MAG noted that three of the seven events were single monitor exceedances, so it is doubtful if EPA will approve those. Grant Smedley, Salt River Project, inquired how many of the exceedances in 2009 had wind speeds over 25 mph. Mr. Poppen responded that he will be discussing the wind speed later in his presentation, but some of the exceedances had wind speeds close to 25 mph, but even if winds were above 25 mph and only one monitor exceeds, EPA is likely not to approve it. He stated that in summary, the clear causal relationship must link the high concentrations to natural sources or anthropogenic sources that have been determined to be reasonably controlled; again this is largely the wind speed argument. Mr. Poppen noted that if there is any hint that anthropogenic sources were not reasonably controlled during the event, EPA will be unlikely to concur with the event. He stated that another example that EPA gives in its draft guidance is that if before the high wind event occurred there were higher than normal emissions from anthropogenic sources, then EPA would assume that the anthropogenic sources were the cause of the emissions during the high wind event. Mr. Poppen added in reality, a region will have to prove the negative to EPA's satisfaction, (that anthropogenic sources were not the cause) instead of trying to explain what the cause was, which can be very difficult.

Mr. Poppen stated that the "No exceedance but for the Event" is in practice a subset of the "Clear Causal Relationship" technical element. He added that it is an analysis showing that an exceedance would not have occurred except for the event. Mr. Poppen noted that EPA did not provide any quantitative examples, but EPA stated that a qualitative analysis may be acceptable in some cases. He added that EPA is saying this analysis is largely tied to the strength of the clear causal relationship and the not reasonable controllable or preventable demonstrations. The stronger those are, the less analysis is needed for this element.

Mr. Poppen stated that what EPA is looking for in the historical fluctuations documentation is that the event is rare and the magnitude of the winds were high, so this is simply just a presentation of the wind and concentration data. EPA would like the data presented in three formats. He added that EPA has

not set a threshold for historical fluctuations; for example, EPA has not stated that the historical fluctuations need to be above the 95th or 90th percentile. Mr. Poppen noted that EPA just wants to see how the event's data compare to historical data; and specifically EPA wants to see it in relation to annual data and seasonal data with and without past events.

Mr. Poppen stated that the last two elements: "Affects air quality" and "Is a natural event" are largely procedural elements that do not require any additional analysis. If the other four elements are met, then EPA says that it was proved it was a natural exceptional event. He added these are basically procedural statements that need to be included in the documentation.

Mr. Poppen noted that two other important items included in EPA's high wind guidance are a schedule outlining the steps/timing for submittal and approval of exceptional event packages. He added that items that he thought were most relevant were that after a State submits a package, EPA plans to respond initially within 120 days of a state submittal. Mr. Poppen stated that EPA may request additional information and once EPA receives that additional information, EPA may take up to eighteen months to make their decision on the exceptional event. He stated that currently EPA's guidance says that EPA will only make decisions on events that have a regulatory impact - attainment status or in MAG's case, the Five Percent Plan. Mr. Poppen added that this makes it difficult for many states that want to preventatively flag data as they may not know if they will be in nonattainment in the future. Many additional timing issues exist in the guidance as well. He mentioned that the remainder of the guidance has example demonstrations of the technical elements required by the exceptional events rule and an appendix explaining the use of the 25 mph threshold.

Mr. Poppen discussed MAG's preliminary comments on EPA's draft Exceptional Events guidance. He stated that these are not all of MAG's comments and these comments are preliminary comments after MAG's initial review of the guidance. Mr. Poppen listed the following MAG comments in regard to the "Not Reasonable Controllable or Preventable" element: (1) No guarantee that existing controls in the SIP would be considered sufficient to satisfy this requirement, even if controls are BACM or MSM. EPA may require ever-increasing controls as no de minimus level for sources was set by EPA. All sources are on the table. For example if a region goes through an exceptional event demonstration and finds that a small source like an unpaved shoulder may have contributed to the event, then the region would need to implement most stringent measures for unpaved shoulders. So this is the ever ratcheting level of controls that a region with recurring events will be required to do, (2) It is disturbing that EPA has set up a quota system with regard to how many high wind events EPA expects to see before additional controls will be evaluated (no more than one a year over a 3-year average). Mark Hajduk, Arizona Public Service, inquired if BACM and MSM would be constantly recreated. Mr. Poppen responded that it was difficult to know exactly what EPA will require. He added that EPA said that just because a region has BACM and MSM, the region cannot just say that it has reasonable controls. Mr. Hajduk stated that BACM is submitted in the SIP and is determined through the SIP process. He inquired that now all of a sudden through guidance, BACM is being reevaluated. Mr. Poppen responded that was correct. Mr. Hajduk stated that this is circumventing the public comment process. Mr. Poppen said he agreed with that. Brian O'Donnell, Southwest Gas Corporation, stated that another aspect of EPA's quota system on high wind events that is not being discussed, if EPA is only considering frequency of events and wind speed, is that Arizona topography is not being taken into account - the amount or percentage of square feet in an acre that is dirt versus vegetation that would surround a monitor like the West 43rd Avenue monitor or the dry river bottom. He added in other words, in a normal river there would normally be a lot of vegetation and so if the wind is blowing there will not be as much dirt at that monitor, or as much PM-10. He added that he did not think that EPA's draft guidance is taking into account Arizona's topography - the natural topography, not a vacant

lot that was worked on. Mr. O'Donnell stated that the effect of Arizona topography needs to be considered and included in EPA's draft guidance and it needs to be a criteria. He added that this is a great criteria if a person lives in Missouri and there is water versus dry dirt. Mr. Poppen responded that EPA does give states an opportunity to make a statement about natural sources. Mr. O'Donnell stated that this should be a criteria in Arizona. He added that he believes the amount of area that is natural dirt matters. Mr. Poppen responded as part of the "not reasonably controllable or preventable" analysis, the region would make the argument that there is a lot more open spaces and natural terrain that is subject to windblown dust than other areas and that it is infeasible to try and control these areas. Mr. O'Donnell stated that perhaps that should be an appendix for Arizona and an additional criteria.

Mr. Poppen continued the discussion of MAG's comments on EPA's draft guidance. He stated that additional controls will be evaluated and may be required for recurring events, even if wind speeds are above the threshold of 25 mph. Mr. Poppen added that natural sources may even be required to have controls under this scenario. He stated that EPA has an example in the guidance about the Mojave Desert using windbreaks to help control some of the wind and reduce PM-10 from natural sources. The example indicates that Mojave is claiming the windbreaks would be too expensive to put up and the windbreaks may harm the natural area that is trying to be protected. Mr. Poppen noted that EPA said if there are recurring events, a region will need to look at controls on natural sources, if all the anthropogenic sources are controlled. He stated that personally he felt that this was outside the scope and purpose of the Exceptional Events Rule. Mr. Poppen noted that the Exceptional Events Rule was set up to protect states from this ever increasing requirement for controls.

Mr. Poppen discussed MAG's comment on the High Wind Action Plan in EPA's draft guidance. He stated that the High Wind Action Plan only seems to be valid if exceptional events do not recur. Mr. Poppen noted that the opposite should be true; a High Wind Action Plan should make it easier for a state to claim all controls were in place so that recurring events do not penalize the state. Mr. Hajduk inquired if the High Wind Guidance document is part of EPA's draft Exceptional Events Guidance and not a stand alone, separate document. Mr. Poppen stated that was correct, but EPA said this is what EPA will use to evaluate submittals. He stated that even though EPA's guidance is draft, if ADEQ would submit Exceptional Events documentation to EPA, EPA would use the draft guidance to evaluate ADEQ's submittal. Mr. Hajduk inquired if Mr. Poppen's concern was that EPA's draft guidance was going beyond the intent of the Exceptional Events Rule and is requiring more analysis and more measures. Mr. Poppen responded that was correct and he was especially concerned that "Recurrence of Events" in the Exceptional Events Rule was only linked to human activity and that it was not linked to natural events. He added that the EPA's take on the "Recurrence of Events" for natural sources seems strange; for example, will EPA put a recurrence threshold on wildfires and allow only one wildfire per year? Mr. Poppen noted that when it is a natural event there should not be a quota system on how many events a region is allowed to have before stricter controls will be required. Mr. Hajduk stated that he agrees that the Exceptional Events guidance should only be focused on evaluating exceptional events and not setting more policy and requirements which should be in another rule setting.

Mr. Poppen discussed MAG's comment on the 25 mile per hour threshold in EPA's draft guidance. He stated that there are a few technical issues involved with this item. One issue is how wind speed is measured. Mr. Poppen showed the committee a table comparing wind speed (Maricopa County Air Quality Department) at the Central Phoenix monitor with the wind speed (National Weather Service) recorded at Sky Harbor Airport for exactly the same time period. He noted that for September 11, 2008, the Central Phoenix monitor recorded a twenty mile per hour average hourly wind speed and the highest five minute average wind speed it recorded was 28 mph, while the National Weather Service

recorded 39 mph for the two minute wind speed for the same time period. Mr. Poppen added that these sites are only three miles apart. He noted that the wind data set a region has will affect how EPA evaluates the data for Exceptional Events. Mr. Poppen stated that it is important to point these things out to EPA. This region happens to have wind speed recorded at the monitors, however many jurisdictions do not and they only use National Weather Service data. He added that this will result in many other jurisdictions looking like they have higher wind speeds than Maricopa County.

Mr. Poppen discussed MAG's comment on surface roughness. He stated that the important factor affecting windblown dust is the wind shear or the energy of the wind as it impacts the ground. He showed the committee a table comparing wind shear, surface roughness, and 10-meter wind speed. Mr. Poppen noted that as the surface roughness increases, it slows down the wind speed measured at a ten meter height. He added that most meteorological stations measure wind speed at ten meters, they do not measure wind speed at ground level. Mr. Poppen stated that the four examples in the table show that the exact same force was exerted at ground level, but the ten meter wind speed varied according to surface roughness. He added, for example, an area with a surface roughness of 0.1 cm will look like it has a 10-meter wind speed of 20.6 mph which is below the 25 mile per hour wind speed threshold set by EPA, so surface roughness needs to be taken into account when the wind speed threshold is being evaluated by EPA.

Mr. Poppen discussed additional comments by MAG on EPA's 25 mph wind threshold. He stated that: (1) It is unlikely EPA will approve a lower wind speed threshold for Maricopa County as EPA interprets Arizona wind tunnel tests to be consistent with the 25 mile per hour threshold in EPA's appendix, (2) MAG has found that the threshold of dust creation is lower than 25 mph (12 mph for Maricopa County), but EPA is evaluating the point at which dust emissions dramatically increase instead of using the initial threshold. So EPA is not concerned as much about when dust starts to emit with increasing wind speed, but at what wind speed that there is a dramatic increase in dust emissions, (3) Studies cited by EPA, in EPA's discussion of threshold velocity, concern only the horizontal movement (saltation) of soil in relation to wind velocity thresholds. Dust creation (vertical fluxes) thresholds have been shown to be much lower than saltation (50 to 75%) and can occur in the absence of saltation, (4) Other jurisdiction have reported lower wind threshold velocities for the creation of dust - San Joaquin Valley begins at 18 mph and Imperial Valley begins at 15 mph (as quoted in a Mojave County exceptional event submittal), (5) EPA presumes that windblown dust from wind speeds under 25 mph must only be from disturbed soils or anthropogenic activity. However, Clark County data cited by EPA does not support this assumption.

Mr. Poppen showed the committee a bar chart showing the relationship between dust emissions from disturbed and non-disturbed soil and wind speed that was developed by University of Nevada - Las Vegas for the Clark County study. He noted that for wind speeds under 20 to 25 mph, natural and disturbed soils emit dust at basically the same rate and it is inconsistent for EPA to say that only disturbed soils emit at wind speeds less than 25 mph.

Mr. Poppen discussed MAG's comments on the "Clear Causal Relationship" element. He stated that: (1) EPA implies isolated monitor exceedances do not represent an exceptional event. Other jurisdictions, other than Maricopa County, have submitted single monitor exceedances for review - Clark County Nevada (May 21, 2008), San Joaquin Valley Air Pollution Control District (January 4, 2008), and South Coast Air Quality Management District (October 13, 2008). So a single monitor exceedance is more of the norm than the exception, (2) Maricopa County is, in effect, being penalized for having a dense PM-10 network. Because the region has so many monitors there are many more data points to evaluate and because the monitors are closer together, Maricopa County is penalized when one monitor records an exceedance. This begs the question of "What distance between monitors

is required by EPA before a single monitor exceedance will be approved by EPA?", and (3) Dust production is not a homogenous process, but much more linked to hot spots that can change over time through precipitation, surface roughness, and some anthropogenic activity. So it is much more the norm to have a single monitor exceedance during a high wind event than to have multiple monitor exceedances. Mr. Hajduk inquired if MAG will submit separate comments on EPA's draft Exceptional Events guidance to EPA. Mr. Poppen responded that he did not know at this point if MAG would be submitting comments separately or working with ADEQ on these comments. Ms. Bauer responded that ADEQ has indicated that they would like to be the focus for comments, so at the moment, these are MAG's comments so far.

Mr. Hajduk stated his concern with the EPA's draft Exceptional Guidance is that we are in a rush to get our exceptional events approved for 2009 by EPA, so the data can be submitted and approved by EPA. He noted that this does not sound like it is a slam dunk; we don't know for sure it will get approved based on EPA's draft guidance, but the assumption is that it will. Mr. Hajduk added that his concern is that in this rush to get the data approved and our data submitted to EPA based on the EPA's draft guidance, EPA will push through some policy that is determined through guidance instead of going through the rulemaking process. Mr. Hajduk stated it sounded like a lot of these items in EPA's draft exceptional events guidance should go through rulemaking and that it should be a rule instead of a guidance document. He added that in the future he is concerned that some of this ratcheting down of provisions that Mr. Poppen identified in his presentation could come back to haunt us. Mr. Hajduk stated that he would like ADEQ and MAG to recognize that and include it in their comments to EPA on the draft guidance. Mr. Poppen responded that all of the states and agencies like WESTAR are also going to be commenting on EPA's draft guidance. He added that MAG has heard informally that there is a lot of negative reaction to this guidance as well from other states and agencies, so many of these issues will be commented on by other states and agencies besides ADEQ and MAG.

Grant Smedley stated that MAG has done a great job of summarizing the EPA's draft exceptional events guidance and we appreciate it. Mr. Smedley added that he had not had time to go through this large document, so he appreciated MAG's review of the draft guidance. He inquired if there is anything that obligates us to follow this draft guidance to the letter in the way we interpret the 2009 exceptional events if we feel we had adequate reasoning and we could justify in departing in places from the guidance. Mr. Poppen responded that is a good question and he did not know how EPA will respond to comments on the guidance and as an example, he referenced the effort put in for the 2008 events was to provide all the state's and MAG's documentation and reasoning for those events. He added however the 2008 exceptional events documentation submitted to EPA was not looked upon favorably by EPA, so it is hard to know if EPA will accept reasoning that differs from theirs. Mr. Poppen noted that it is ADEQ's responsibility to put together the exceptional event submittals and they have been working with EPA on that.

Beverly Chenausky, Arizona Department of Transportation stated that MAG had captured many of the requirements. She inquired on how is EPA defining what "nearby" is, especially since the Maricopa County PM-10 Nonattainment Area is larger than New Jersey. Ms. Chenausky stated that Mr. Poppen had mentioned that the single monitor text, which EPA had in its draft guidance, was almost written for our West 43rd Avenue monitor. She added that EPA is going beyond control of just anthropogenic sources by requiring that a statement or demonstration be included in state submittals to EPA on why natural sources are not reasonably controlled. Ms. Chenausky stated that there is an assertion in the draft guidance that EPA has to be shown that natural sources cannot be controlled and that is the point of the Mojave Tortoise example that states that control measures on natural sources would destroy the endangered species habitat. She inquired can it be assumed that EPA is going to expect more control

of the Salt River, because it is reasonably available to control. Mr. Poppen responded that it was possible and that the guidance seems to suggest that if events recur then the state or the local agency is not doing something correctly to completely control the sources even if the sources are subject to winds above the 25 mph threshold. He added that one of the principles quoted by EPA in the Clean Air Act is that each state should take reasonable measures to safeguard public health regardless of the source of the air pollution. Mr. Poppen noted that it appears that EPA is using that principle to imply that natural sources or sources that may be semi-natural may have to be controlled. Mr. Kukino stated that Mr. Poppen had done an incredible job. He added that he had looked at a few pages in the EPA draft guidance document and got a bit bogged down. Mr. Kukino thanked Mr. Poppen for clarifying much of the information in EPA's draft guidance. Mr. Kukino stated that the committee should move on to Agenda Item #7.

7. Call for Future Agenda Items

Ms. Bauer stated that MAG will be remodeling and consequently MAG has made arrangements with the RPTA, which is located at 101 North First Avenue, to use one of their conference rooms on the 10th floor for the next AQTAC meeting. She added that you can still park at the MAG building and walk over to the RPTA office. RPTA's address is 101 North First Avenue and it will be included in your agenda. Ms. Bauer stated that MAG has made arrangements to use RPTA's conference room for June, July, and August, if needed. Jo Crumbaker, MCAQD, asked what the cross streets were. Ms. Bauer responded that RPTA is across the street from MAG. She added that RPTA is at 101 North First Avenue and MAG is at 302 North First Avenue, so it is within walking distance.

Mr. Kukino stated that the next meeting is scheduled for June 30th at 1:30 PM at the new location. He asked the committee if there were any items that they wanted to discuss specifically. With no further comments, the meeting was adjourned at 3:28 p.m.

Lindy Bauer

From: Colleen McKaughan [McKaughan.Colleen@epamail.epa.gov]
Sent: Wednesday, July 20, 2011 4:13 PM
To: ecm@azdeq.gov; Lindy Bauer; WilliamWiley@mail.maricopa.gov
Cc: Lisa Hanf; Gregory Nudd; MichaelA Flagg; Kara Christenson; Doris Lo
Subject: Questions about the replacement 189(d) plan for Maricopa County

Hi, Everyone,

ADEQ and MAG have raised a couple of questions about the replacement 189(d) plan that the state will submit for the Maricopa County PM-10 nonattainment area:

1. What should be the base year for the 5% demonstration?
2. Can excess emission reductions be carried forward from year to year?

EPA has had internal discussions regarding your questions. Although we cannot direct the state to make specific choices or take specific actions, we are happy to provide input regarding the CAA and EPA regulations and guidance during the SIP development process. Here are our thoughts based on our current understanding of Maricopa County's circumstances.

Base Year:

EPA believes that it is reasonable for a state to submit the most recent inventory prepared for the area before it was first required to submit a 189(d) plan due to the failure to attain by the date set in its serious area plan. EPA believes that 2007 would be an appropriate year for the "most recent inventory" for the resubmitted Maricopa County plan. The 2007 emissions inventory in the resubmitted plan should address the issues with the previous 2007 emissions inventory that were raised in EPA's proposed disapproval of original 189(d) plan for the Maricopa County nonattainment area. EPA therefore believes that the 2008 Periodic Emissions Inventory, which reflects changes from EPA comments, would be an appropriate basis for the revised 2007 inventory, adjusted for the economic and population changes between 2007 and 2008.

Carry forward of excess emission reductions:

The EPA-approved San Joaquin 5% demonstration allowed early reductions (that were in excess of the needed 5% reductions for an earlier year) to count towards the 5% calculation for later years. This approach encourages reductions to be made as early as possible in order to attain the NAAQS as soon as possible. This approach was upheld by the 9th Circuit Court of Appeals. A similar approach in Maricopa County would be consistent with this precedent.

For your reference, here is the text of CAA 189(d):

"In the case of a Serious PM-10 nonattainment area in which the PM-10 standard is not attained by the applicable attainment date, the State in which such area is located shall, after notice and opportunity for public comment, submit within 12 months after the applicable attainment date, plan revisions which provide for attainment of the PM-10 air quality standard and, from the date of such submission until attainment, for an annual reduction in PM-10 or PM-10 precursor emissions within the area of not less than 5 percent of the amount of such emissions as reported in the most recent inventory prepared for such area."

We hope that these responses are helpful to you. We look forward to future discussions regarding the 189(d) planning process and continuing to work with you to fulfill this requirement.

Colleen W. McKaughan
Associate Director, Air Division
USEPA, Region 9
(520) 498-0118



A severe thunderstorm and a wall of dust approach Phoenix Sky Harbor International Airport on Monday night, the second time since July 5 that a dust storm reduced visibility and left a coat of grit over the Valley. JOSH RADTKE/THE REPUBLIC

DUST STORMS' SIZE IMPRESSES LOCALS

Magnitude, timing amaze longtime residents

By **Maria Polletta**
The Arizona Republic

Valley residents had barely finished ridding their cars, pools and homes of the grime left behind by the 5,000-foot-high July 5 dust storm when another wall of dust rolled in on Monday.

Though dust storms are nothing new to longtime Arizona residents, locals were stunned by the magnitude of the recent

storms, in addition to how close together they occurred.

"These were the largest and most significant I've ever experienced," said Phoenix resident Denise Prichard, 24, who has lived in Arizona for 13 years. "The first one especially was awful. Usually, they don't really come one right after the other like that."

The July 5 storm — "quite possibly the

See **DUST STORMS**, Page B2

INSIDE

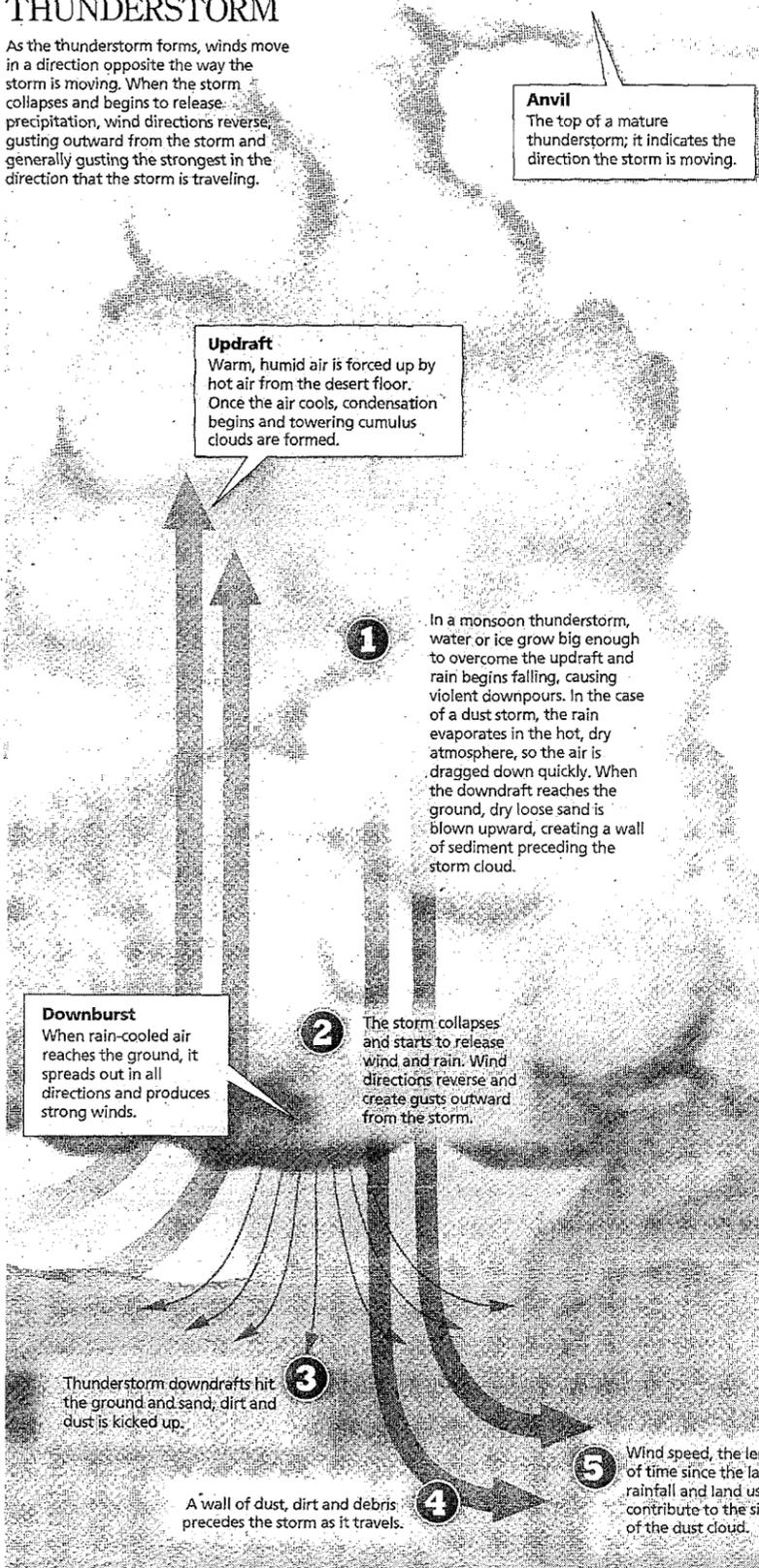
Meteorologists say perfect weather conditions exist in July to cause dust storms. See what's involved, on **B3**.



A lesson in dust storms

ANATOMY OF A MONSOON THUNDERSTORM

As the thunderstorm forms, winds move in a direction opposite the way the storm is moving. When the storm collapses and begins to release precipitation, wind directions reverse, gusting outward from the storm and generally gusting the strongest in the direction that the storm is traveling.



Two massive dust storms descended on the Valley this month, one on July 5 and the second on Monday. Dry and windy conditions, combined with vast open spaces, gave the storms room to build and run, causing dust clouds of epic proportions. Video from the storm made it seem like a Hollywood special effect. Elizabeth Padian, a National Weather Service spokeswoman, said the magnitude of the July 5 storm — “how high it was, how wide it was, how dense it was” — made it remarkable. Meteorologists said perfect weather conditions exist during July to cause the immense storms. Here’s how they form.

GEOGRAPHY

In the U.S., dust storms are frequently observed in Arizona, New Mexico and Texas. They’re also seen in southeast California from time to time.



DUST-STORM SEASON

Arizona dust storms are most common during the summer, from May to September. The height of dust-storm season is often in late June and early July, before monsoon rains soak the desert. In August, when humidity increases, thunderstorms produce enough rain to prevent swirling dust. However, the National Weather Service said it is possible for local areas of blowing dust year-round.

JAN.	FEB.	MAR.
APR.	MAY.	JUN.
JUL.	AUG.	SEP.
OCT.	NOV.	DEC.

AVERAGE NUMBER PER SEASON

The Phoenix area averages three to five dust storms a year, but the Valley used to have more frequent dust storms like the ones seen July 5 and Monday before development paved over the desert. This month’s storms were fueled, in part, by dry conditions in southern Arizona and dryland-farming practices.

WHY THE PREVALENCE OF DUST STORMS LATELY INSTEAD OF MONSOON STORMS?

A combination of dry conditions and powerful thunderstorm systems contributed to the size and strength of the two July storms. Farming also can cause the storms, especially when farmers leave a field fallow for a year to allow water to build up in the soil. In dryland farming, instead of planting a crop, the field is covered with dry earth in an attempt to seal in the moisture. The practice makes an area more susceptible to dust storms.

The July 5 dust storm reached 5,000 ft. high.

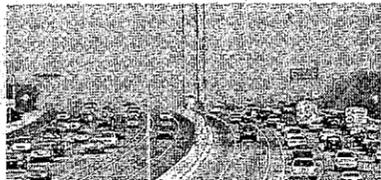
SIZE

A haboob can be 100+ miles wide and several thousand feet high.

WIND SPEEDS

Typical speeds are anywhere from 30 to 60 mph.

HAZARDS OF DUST STORMS



Motorists drive on I-10 near Chandler and Ahwatukee as a dust storm rolls through on Monday. PHOTOS BY MICHAEL SCHENNUM/THE REPUBLIC



Downtown Phoenix was covered by a dust storm on Monday.

DRIVING

Dust storms can reduce visibility to zero or near zero and can come on suddenly. The Arizona Department of Transportation offers these suggestions:

- If you must drive,
 - » Never stop in the travel lane.
 - » Travel at a speed suitable for limited visibility.
 - » Turn your lights on.
 - » Sound your horn intermittently.
 - » Use the painted lane striping to guide you.
 - » Look for a safe place to pull off the road.

HEALTH

Dust particles act as irritants. Combined with wind and pressure changes, dust can lead to:

- » Itchy, watery eyes
- » Dry cough
- » Nasal drainage
- » Aggravated asthma
- » Valley fever
- » Headaches

These effects can linger long after dust storms have rolled through. Those with respiratory conditions are encouraged to stay inside.

HOW MUCH DUST WAS IN THE AIR?

Particulate-monitor readings throughout the Valley shot up during both dust storms. Though readings at some stations were significantly higher during the first storm, readings remained elevated for a longer period of time after the second storm. The readings represent micrograms per cubic meter of PM10 particulates. The annual PM10 average for Phoenix is 38 micrograms per cubic meter.

July 5

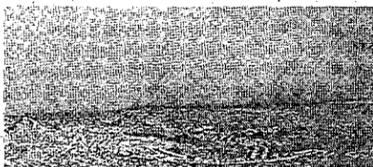
Central Phoenix 3,579	West Chandler ..2,967
South Phoenix...2,576	Higley5,190
West Phoenix4,623	

Monday

Central Phoenix 2,057	West Chandler696
South Phoenix...2,861	Higley938
West Phoenix909	



ROB SCHUMACHER/THE REPUBLIC



NICK OZA/THE REPUBLIC

Hubbub over haboob

By Richard Ruelas
The Arizona Republic

NO LOVE FOR HABOOB

Azcentral.com’s Facebook page (www.facebook.com/azcentral) recently asked readers: “Do you like the word ‘haboob’ as a name for Arizona dust storms?”

More than 1,100 took the poll and most picked “no.” Here’s the breakdown:

No: 702 votes.
Yes: 428 votes.
I’m not sure: 34 votes.

Haboob, the word, has stirred something of a dustup.

It has long been a meteorological term, but has not been used much in newspaper articles, television broadcasts or polite conversation.

Its use, and possible overuse this summer, has led some Arizonans to yearn for the days when the walls of dust were simply referred to as dust storms.

The latest use of the word might have a simple origin: Today’s forecasters are more scientifically minded than those of the previous generation.

Arizona dust storms were called haboobs as far back as the October 1972 issue of the Bulletin of the American Meteorological Society. The article, “An American Haboob,” written by Sherwood Idso of Tempe, examined a July 16, 1971, Valley dust storm that had the same characteristics

as the ones in the Sudan.

A search of Republic archives shows intermittent use of “haboob” until 1999, when a story said it appeared on residents’ vocabulary radar courtesy of weatherman Sean McLaughlin, then of Channel 12 (KPNX).

McLaughlin, now a news anchor on Channel 5 (KPHO), said he doesn’t remember introducing the term. “Maybe I just wanted to be more technically correct one night,” he said.

Go to haboob.azcentral.com:

- To view a slide show featuring photos of two recent dust storms.
- To watch a time-lapse video of a storm rolling into the Valley.
- To share your dust storm experiences.



Scan this with your smartphone’s barcode-reader app to see more about this month’s violent dust storms, including reader-submitted photos.

2011 Exceedances of the 24-Hour PM-10 Standard by Date
(Preliminary Data Through September 12, 2011)

Date	Monitor	24-Hour Avg. PM-10 Concentration in ug/m ³	Additional Information
February 19, 2011	West Chandler	167.9	Frontal system winds from the south. Five continuous Pinal County PM-10 monitors recorded exceedances on February 19, 2011.
March 12, 2011	South Phoenix	168.5	
July 3, 2011	Buckeye	385.6	Regional dust storm
	Central Phoenix	279.8	
	Durango	278.1	
	Dysart	240.0	
	Glendale	242.8	
	Greenwood	254.6	
	Higley	196.8	
	South Phoenix	280.7	
	Supersite	229.0	
	West Chandler	199.2	
	West 43rd Ave.	250.7	
	West Phoenix	244.2	
Zuni Hills	260.8		
July 4, 2011	Higley	198.5	Localized thunderstorm outflow winds from the south. Five continuous Pinal County PM-10 monitors recorded exceedances on July 4, 2011.
July 5, 2011	Buckeye	164.2	Regional dust storm
	Central Phoenix	277.5	
	Durango	156.9	
	Dysart	220.0	
	Glendale	168.3	
	Greenwood	156.0	
	Higley	375.7	
	South Phoenix	207.4	
	Supersite	331.8	
	West Chandler	360.6	
West Phoenix	267.0		
July 7, 2011	Higley	266.9	Localized thunderstorm outflow winds late in the evening along with residual dust from the July 5, 2011 regional dust storm. Five continuous Pinal County PM-10 monitors recorded exceedances on July 7, 2011.
	West Chandler	205.8	
July 8, 2011	Apache Junction	194.2	Localized thunderstorm outflow winds
July 18, 2011	Buckeye	196.7	Regional dust storm
	Central Phoenix	211.2	
	Durango	268.2	
	Dysart	163.9	
	Greenwood	209.3	
	South Phoenix	303.7	
	West 43rd Ave.	245.3	
West Phoenix	159.7		
August 3, 2011	West Chandler	249.3	Localized thunderstorm outflow winds early in the morning. Four continuous Pinal County PM-10 monitors recorded exceedances on August 3, 2011.

Date	Monitor	24-Hour Avg. PM-10 Concentration in ug/m ³	Additional Information
August 5, 2011	Buckeye	158.7	Residual dust from August 4 evening thunderstorms-under investigation
August 18, 2011	Buckeye	296.8	Regional dust storm
	Central Phoenix	232.2	
	South Phoenix	179.0	
	West Chandler	186.1	
August 25, 2011	Buckeye	235.9	Regional dust storm
	Central Phoenix	308.7	
	Durango	437.5	
	Dysart	273.7	
	Glendale	241.2	
	Greenwood	388.6	
	South Phoenix	421.5	
	Supersite	242.2	
	West Chandler	278.6	
	West 43rd Ave.	370.3	
	West Phoenix	212.6	
Zuni Hills	212.8		
August 26, 2011	Apache Junction	169.0	Localized thunderstorm outflow winds. Four other continuous Pinal County PM-10 monitors recorded exceedances on August 26, 2011.
August 27, 2011	Buckeye	226.3	Regional dust storm
	Central Phoenix	234.0	
	Durango	261.4	
	Glendale	220.4	
	Greenwood	208.2	
	South Phoenix	301.5	
	West Chandler	229.3	
	West 43rd Ave.	292.6	
West Phoenix	164.6		
August 28, 2011	Apache Junction	282.7	Carryover from August 27, 2011 regional dust storm. Four other continuous Pinal County PM-10 monitors recorded exceedances on August 28, 2011.
	Higley	175.8	
September 2, 2011	Apache Junction	217.4	Regional dust storm
	Buckeye	169.8	
	Central Phoenix	308.0	
	Durango	255.4	
	Greenwood	198.1	
	Higley	213.5	
	South Phoenix	339.3	
	Supersite	208.9	
	West Chandler	387.5	
	West 43rd Ave.	219.7	
September 6, 2011	Apache Junction	172.6	Localized thunderstorm outflow
September 11, 2011	North Phoenix	184.1	Regional dust storm
	Supersite	178.7	
	West Phoenix	168.8	
September 12, 2011	Durango	229.8	Regional dust storm
	West 43rd Ave.	162.2	
	West Phoenix	200.6	

2011 Exceedances of the 24-Hour PM-10 Standard by Monitor
(Preliminary Data Through September 12, 2011)

Monitor	Date	24-Hour Avg. PM-10 Concentration in ug/m ³	Additional Information
Apache Junction	July 8, 2011	194.2	Localized thunderstorm outflow winds
	August 26, 2011	169.0	Localized thunderstorm outflow winds. Four other continuous Pinal County PM-10 monitors recorded exceedances on August 26, 2011.
	August 28, 2011	282.7	Carryover from August 27, 2011 regional dust storm. Four other continuous Pinal County PM-10 monitors recorded exceedances on August 28, 2011.
	September 2, 2011	217.4	Regional dust storm
	September 6, 2011	172.6	Localized thunderstorm outflow
Buckeye	July 3, 2011	385.6	Regional dust storm
	July 5, 2011	164.2	Regional dust storm
	July 18, 2011	196.7	Regional dust storm
	August 5, 2011	158.7	Residual dust from August 4 evening thunderstorms-under investigation
	August 18, 2011	296.8	Regional dust storm
	August 25, 2011	235.9	Regional dust storm
	August 27, 2011	226.3	Regional dust storm
	September 2, 2011	169.8	Regional dust storm
Central Phoenix	July 3, 2011	279.8	Regional dust storm
	July 5, 2011	277.5	Regional dust storm
	July 18, 2011	211.2	Regional dust storm
	August 18, 2011	232.2	Regional dust storm
	August 25, 2011	308.7	Regional dust storm
	August 27, 2011	234.0	Regional dust storm
	September 2, 2011	308.0	Regional dust storm
Durango	July 3, 2011	278.1	Regional dust storm
	July 5, 2011	156.9	Regional dust storm
	July 18, 2011	268.2	Regional dust storm
	August 25, 2011	437.5	Regional dust storm
	August 27, 2011	261.4	Regional dust storm
	September 2, 2011	255.4	Regional dust storm
	September 12, 2011	229.8	Regional dust storm
Dysart	July 3, 2011	240.0	Regional dust storm
	July 5, 2011	220.0	Regional dust storm
	July 18, 2011	163.9	Regional dust storm
	August 25, 2011	273.7	Regional dust storm
Glendale	July 3, 2011	242.8	Regional dust storm
	July 5, 2011	168.3	Regional dust storm
	August 25, 2011	241.2	Regional dust storm
	August 27, 2011	220.4	Regional dust storm
Greenwood	July 3, 2011	254.6	Regional dust storm
	July 5, 2011	156.0	Regional dust storm
	July 18, 2011	209.3	Regional dust storm
	August 25, 2011	388.6	Regional dust storm
	August 27, 2011	208.2	Regional dust storm
	September 2, 2011	198.1	Regional dust storm

Monitor	Date	24-Hour Avg. PM-10 Concentration in ug/m ³	Additional Information
Higley	July 3, 2011	196.8	Regional dust storm
	July 4, 2011	198.5	Localized thunderstorm outflow winds from the south. Five continuous Pinal County PM-10 monitors recorded exceedances on July 4, 2011.
	July 5, 2011	375.7	Regional dust storm
	July 7, 2011	266.9	Localized thunderstorm outflow winds late in the evening along with residual dust from the July 5, 2011 regional dust storm. Five continuous Pinal County PM-10 monitors recorded exceedances on July 7, 2011.
	August 28, 2011	175.8	Carryover from August 27, 2011 regional dust storm. Five continuous Pinal County PM-10 monitors recorded exceedances on August 28, 2011.
	September 2, 2011	213.5	Regional dust storm
North Phoenix	September 11, 2011	184.1	Regional dust storm
South Phoenix	March 12, 2011	168.5	
	July 3, 2011	280.7	Regional dust storm
	July 5, 2011	207.4	Regional dust storm
	July 18, 2011	303.7	Regional dust storm
	August 18, 2011	179.0	Regional dust storm
	August 25, 2011	421.5	Regional dust storm
	August 27, 2011	301.5	Regional dust storm
	September 2, 2011	339.3	Regional dust storm
Supersite	July 3, 2011	229.0	Regional dust storm
	July 5, 2011	331.8	Regional dust storm
	August 25, 2011	242.2	Regional dust storm
	September 2, 2011	208.9	Regional dust storm
	September 11, 2011	178.7	Regional dust storm
West Chandler	February 19, 2011	167.9	Frontal system winds from the south. Five continuous Pinal County PM-10 monitors recorded exceedances on February 19, 2011.
	July 3, 2011	199.2	Regional dust storm
	July 5, 2011	360.6	Regional dust storm
	July 7, 2011	205.8	Localized thunderstorm outflow winds late in the evening along with residual dust from the July 5, 2011 regional dust storm. Five continuous Pinal County PM-10 monitors recorded exceedances on July 7, 2011.
	August 3, 2011	249.3	Localized thunderstorm outflow winds early in the morning. Four continuous Pinal County PM-10 monitors recorded exceedances on August 3, 2011.
	August 18, 2011	186.1	Regional dust storm
	August 25, 2011	278.6	Regional dust storm
	August 27, 2011	229.3	Regional dust storm
September 2, 2011	387.5	Regional dust storm	
West 43rd Avenue	July 3, 2011	250.7	Regional dust storm
	July 18, 2011	245.3	Regional dust storm
	August 25, 2011	370.3	Regional dust storm
	August 27, 2011	292.6	Regional dust storm
	September 2, 2011	219.7	Regional dust storm
	September 12, 2011	162.2	Regional dust storm

Monitor	Date	24-Hour Avg. PM-10 Concentration in ug/m ³	Additional Information
West Phoenix	July 3, 2011	244.2	Regional dust storm
	July 5, 2011	267.0	Regional dust storm
	July 18, 2011	159.7	Regional dust storm
	August 25, 2011	212.6	Regional dust storm
	August 27, 2011	164.6	Regional dust storm
	September 11, 2011	168.8	Regional dust storm
	September 12, 2011	200.6	Regional dust storm
Zuni Hills	July 3, 2011	260.8	Regional dust storm
	August 25, 2011	212.8	Regional dust storm



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June 29, 2011

Ms. Gina McCarthy
 Assistant Administrator for Air and Radiation
 U.S. Environmental Protection Agency
 Room 5406 Ariel Rios North
 1200 Pennsylvania Avenue, N.W.
 Washington, D.C. 20460

Dear Assistant Administrator McCarthy,

The Maricopa Association of Governments ("MAG") is pleased to submit the following comments regarding draft Exceptional Events Rule ("EER") guidance documents, released by the Environmental Protection Agency ("EPA") on May 2, 2011.

We appreciate your continued interest in this matter and the Agency's follow-up to your March 8, 2010 commitment to "develop solutions that will improve rule implementation."¹ We also appreciate the time and effort that EPA staff have invested in developing various documents to help guide the review and consideration of requests to exclude certain ambient air quality data on the basis of exceptional events.

We strongly believe, however, that the current draft guidance documents can be improved substantially to both clarify matters regarding the implementation of the EER, and to save scarce federal, state and local resources. Specifically, we would recommend that:

- 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."
- 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.
- 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.
- 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).
- 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.

¹ Letter to Martin Bauer, President, Western States Air Resources Council, March 8, 2010.

June 29, 2011

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- EPA should accelerate the contemplated timeframes for review and decisions on EEs and not require up to 18 months for Agency review of complete requests for treatment of data as an EE.
- 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.

Altogether, we thank you for your efforts in this area and for your thorough consideration of our comments. We look forward to working with you, the Office of Air and Radiation, the Office of Air Quality Policy and Standards and EPA Regional offices as the Agency works to finalize its EER guidance and any associated policies or statements. We would be happy to provide additional information on any of the matters discussed in the attached detailed comments.

If you have any questions please do not hesitate to contact Lindy Bauer or Matt Poppen, MAG, at (602) 254-6300.

Sincerely,



Thomas L. Schoaf
Mayor, City of Litchfield Park
Chair, MAG Regional Council

cc: Janet McCabe, EPA Office of Air and Radiation Principal Deputy Assistant Administrator
Peter Tsirigotis, EPA Office of Air Quality and Planning Standards
Phil Lorang, EPA Office of Air Quality and Planning Standards
Colleen McKaughan, EPA Region IX
Matt Lakin, EPA Region IX
Meredith Kurpius, EPA Region IX
Michael Flagg, EPA Region IX
Henry Darwin, Arizona Department of Environmental Quality Director
Dave Klemp, Western States Air Resources Council President

MAG Comments on EPA Draft Guidance Regarding Implementation of the Exceptional Events Rule
Including Associated Attachments

I. Requirements Relating to the “Not Reasonably Controllable or Preventable” Element Should be Revised.

In the draft guidance², EPA makes several assertions regarding its interpretation of Clean Air Act (“CAA”) section 319 and the definition of an EE contained within CAA section 319(b)(1)(A)(ii). In specific, EPA states that it “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.”³ EPA also indicates that, under the “reasonableness” factor, “[t]here is no defined *de minimis* emission rate or ambient contribution that limits which sources should be considered for control, and EPA will review this on a case by case basis.”⁴ EPA further states that “RACM/BACM list may be a reference point, but not the sole means, by which EPA assesses the reasonableness of controls.”⁵

We do not believe that the plain language of CAA section 319 can or should be interpreted by EPA in this manner. The statutory language that EPA relies on is part of the definition of an “exceptional event.” It only requires that an event not be “reasonably controllable or preventable” and does not convey any additional authority to EPA to apply stricter requirements. In this regard, it is notable and relevant that measures that have been adopted into a State Implementation Plan (“SIP”) pursuant to CAA section 110, have previously been determined to be measures “*necessary to assure* that national ambient air quality standards are achieved . . .” (Emphasis added) Thus, EPA has already rendered an assessment of the adequacy of such measures. Moreover, under CAA section 110, a SIP must contain adequate provisions “*as may be necessary or appropriate* to meet the applicable requirements [of the CAA]” including elements to provide for sufficient monitoring, data compilation and enforcement. Therefore, not only do SIP elements easily meet any requirement of “reasonableness” under CAA section 319 but EPA’s prior approval of such elements constitutes an a priori determination by the Agency that the measures are, in fact, reasonable.

² Guidance on 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, May 2, 2011.

³ Id. at 13.

⁴ Id.

⁵ Id. at 14.

On a policy level – by indicating that if a SIP is not recently reviewed or revised, it automatically merits additional scrutiny -- EPA is creating a situation in which states and localities can never have any assurance that EPA will not use the EER to effectively “reopen” a SIP and impose a series of ad hoc determinations and assessments. This is precisely the opposite of a major goal of the new EER guidance -- to provide assurance to states and localities that properly classified EEs can be excluded from ambient air quality data. The current structure of EPA's guidance provides no means for a state or local agency to be assured that prior determinations with respect to existing and planned controls will be considered “reasonable” upon implementation, even if these controls have been previously determined to constitute BACM or MSM through an approved SIP process. In effect, EPA is taking the “we'll know it when we see it” approach to evaluating reasonableness of existing controls on a case by case basis.

The approach as outlined in the guidance also has no *de minimis* level for emission sources and includes no limits regarding EPA's evaluation of controls on natural sources. Such an approach is diametrically opposed to the intent of Congress to protect state and local agencies from being penalized for events outside of their control, particularly events that arise from natural conditions. In fact, it is striking to the degree which the draft guidance fails to even discuss natural events at all, even though this is a separate and distinct category of EE under CAA section 319(b)(1)(A)(iii). There is literally no discussion of the type of events that may be considered to be “a natural event” under the definition of an EE even though arid areas like Arizona may be subject to unique natural events such as haboobs and lesser dust storms.

This approach is also contrary to the statutory structure of CAA section 319 which specifically limited the scope of EE regulations. Under CAA section 319, EE regulations were limited to the “review and handling of air quality monitoring data . . .” Guidance cannot and should not attempt to read the definition of an EE far more broadly or attempt to convey additional authority for EPA to revise previous SIP determinations. Such an approach would constantly “move the chains” on what state and local efforts would be considered as adequate by EPA Regional Offices, again opposite the Congressional goal of providing more certainty and uniformity to EPA's assessment of EEs. This effect can be demonstrated in several specific areas of EPA's approach to the determination of “reasonableness” discussed below.

A. Wind Speed.

The guidance indicates that “[i]n evaluating reasonableness, EPA will generally consider first and foremost whether the wind speeds were above the minimum threshold to entrain dust from stable

surfaces.”⁶ EPA also states that “[i]n the absence of local studies, EPA intends to use 25 mph as the minimum sustained wind speed sufficient to entrain particles from stable surfaces for western states.”⁷

We are providing technical comments regarding the use of a specific wind speed threshold in Sections IV and V of this document. However, as an overall comment, it is important to point out that other jurisdictions have reported significantly lower thresholds for the initiation of windblown dust (12, 15 and 18 mph)⁸ and that the individual conditions of the land (soil moisture, soil texture, vegetative cover, topography, land use, etc.) over which the wind passes on the event day will have a greater influence on the amount of windblown dust created than an averaged wind tunnel threshold can provide. Therefore, we believe that state and local agencies should be given the opportunity to explain these conditions without bias from EPA based upon a pre-determined wind speed threshold. As explained below, this concern is heightened by our technical assessment that a 25 mph is not supportable. Rather than add clarity to the determination of exceptional “high wind” events, we believe a presumed level of wind speed would place an unfair burden on a state or locality of defeating an unsupported presumption.

B. Requirements Regarding “Recurrence”

We believe that EPA has misinterpreted CAA section 319 as it respects the recurrence of anthropological events. The Agency has not: (1) clearly confined this concept to events caused by human activity as required by CAA section 319(b)(1)(A)(iii); (2) attempted to create new authority not conveyed by statute to require additional controls based merely on the existence of recurrence; and (3) established an empirical threshold for recurrence without adequate support. In specific, EPA states that “[f]or recurring high wind dust events, EPA believes these principles can be achieved using a progressive approach in which states are expected to consider and implement further controls as events continue to recur”⁹ and that “[m]ore stringent controls are reasonable if an area experiences frequent and/or severe exceptional event exceedances due to high winds than if the area has experienced only rare and/or mild isolated exceedances.”¹⁰ Finally, the Agency states that it “will generally consider recurrence for high wind dust events as more than one high wind dust event per year, averaged over three years.”¹¹ We find no support in the statute for such statements and believe

⁶ Id. at 12.

⁷ Id. at 14.

⁸ 12 mph (Maricopa County Air Quality Department, Appendix 4 of 2008 PM-10 Periodic Emissions Inventory); 15 mph (Imperial County, as quoted in Mojave County April 12, 2007 Exceptional Event Documentation); and 18 mph (San Joaquin Valley, as quoted in Mojave County April 12, 2007 Exceptional Event Documentation and 73 Fed. Reg. 14,696).

⁹ Id. at 2.

¹⁰ Id. at 12.

¹¹ Id. at 15.

that it is inappropriate, arbitrary and outside the scope of the EER for EPA to set a recurrence threshold for high wind dust events, or any other natural event (e.g., wildfires, volcanic eruptions).

The EER plainly acknowledges that natural events such as high winds can recur and that they do not have to be rare to be considered exceptional. The frequency of high wind events are clearly outside the control of state and local agencies. But the guidance documents nonetheless appear to require additional actions based on recurrence for natural events (e.g., "analysis should be more extensive if events recur, particularly at wind speeds below 25 mph . . ." ¹² EPA may consider High Wind Action Plans "reasonable as long as events do not recur . . ." ¹³). Yet CAA section 319 applies "recurrence" only to the definition of exceptional events where human activity is involved (i.e., the statute clearly separates such events from natural events by use of the term "or" in CAA section 319(b)(1)(A)(iii)). While EPA acknowledges this fact in the guidance document, ¹⁴ EPA does not clearly state that other parts of the guidance document addressing recurrence as inapplicable, as a matter of law, to natural events. Instead, the guidance document appears to ignore the explicit association of recurrence with human activity and create overarching obligations on state and local entities simply because they are located in areas where exceptional events may occur more often than other areas. This not only is unfair, but it is again opposite of Congressional intent to alleviate the burden on such areas.

There is even less support in the statute or legislative history for a requirement that more than one exceptional event per year means that an event is likely to recur. Setting aside the fact that this standard is being set without statutory support, it is clear that EEs can extend over several days, affecting the air quality data for sometimes weeks at a time (e.g., fires that have plagued Southern California and Arizona are proof of this concept). In addition, EPA provides no data or technical support to buttress its determination that events happening more than once a year should be considered as those likely to recur given that exceedances in any one year may plausibly be related to different types of EEs.. EPA should therefore not impose an arbitrary "trigger" of one event/year for which it has provided no empirical support. At bottom, there should be no quota system on EEs, nor can any quota system be derived from the language of CAA section 319.

C. High Wind Action Plans

The guidance provides that "EPA and the submitting state can consider the development of a High Wind Action Plan that would identify mutually agreed upon reasonable controls that a state could implement for subsequent high wind events." ¹⁵ EPA further provides that it "would consider the

¹² Id.

¹³ Id. at 20.

¹⁴ EPA states that "natural events can be likely to recur and still be eligible for data exclusion." Id. at 23.

¹⁵ Id. at 19.

controls to be reasonable as long as events do not recur...If events recur, EPA will need to re-approve the High Wind Action Plan regardless of whether it is revised or remains as-is.”¹⁶

EPA can clearly not require a High Wind Action Plan under CAA section 319. No such authority is conveyed by this provision. As noted above, the scope of regulatory authority within CAA section 319 is constrained to the review and handling of air quality data. In the event that EPA pursues a “voluntary” provision to allow states to consider and EPA to review High Wind Action Plans, however, we would note that linking a High Wind Action Plan to recurrence provides no incentive for state or local agencies to complete such a plan. The purpose of such a plan should be the opposite of what EPA proposes.

For example, if a state or local agency details all of the control measures in place, and the implementation and enforcement strategies for those control measures (as concurred by EPA), then the state or local agency should be protected from having to vigorously demonstrate that future events were not reasonably controllable or preventable. An incentive for completing such a plan by the state or local agency would be that they would have some assurance ahead of time that EPA finds their existing controls and implementation measures adequate. If the High Wind Action Plan is not valid for recurring events, then there is little or no benefit for a state or local agency to complete such an intensive, publicly reviewed, SIP-like plan for one event a year. The state or local agency would be better served under the current scenario by simply documenting the reasonableness of controls in place during each recurring event, rather than trying to update a High Wind Action Plan after every exceptional event occurrence.

II. Requirements Relating to the “Clear Causal Relationship” Element Should be Revised.

A. EPA Wrongly Concludes That Single Monitors Cannot Show Exceptional Events from High Winds.

EPA’s guidance document attempts to oversimplify the conditions under which EEs can occur. The guidance document provides that EE event demonstrations are “less compelling” if there is evidence which is inconsistent with the conceptual model or theory under which the exceptional event occurs. While this observation may border on a truism (data at variance with a theory will no doubt detract from the theory) the observation has limited utility and cannot serve as an overall “screen” between supportable and unsupported EEs. In this regard, we specifically and strongly disagree with EPA’s contention 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.”¹⁷

¹⁶ Id. at 20.

¹⁷ Id. at 22.

In making this statement, EPA seems to be implying that a large-scale wind event must result in large-scale transport of windblown dust. This is a simplistic view of the relationship between wind speed and the creation of windblown dust. There are dozens of factors that control the production of windblown dust (e.g., wind, precipitation, temperature, soil texture, soil composition, soil aggregation, soil moisture, surface roughness length, vegetation, land uses, topography) and these factors vary significantly within a region affected by a large-scale wind event. In almost all cases, windblown dust production is not a homogenous process, but rather is linked to a specific set of conditions that allow for the energy from the wind to entrain dust.

As stated by Gillette, “[p]revious field studies and remote sensing studies have pointed out that the sources of dust carried globally are not homogenous over large areas...These ‘hot spots’ are often part of ‘source regions’ that for a large extent are ‘hot spots’ surrounded by areas of much lower dust production. On a smaller scale, aerial photographs of agricultural lands in the West Texas USA show that a very small fraction of the fields actually produce visible dust plumes. The fields where I studied dust emissions in West Texas (Gillette, 1981) were hot spots: intense areas of dust production surrounded fields where little if any dust was being emitted.”¹⁸

A common source of a windblown dust event in the West is the prefrontal storm system. Gillette takes pains to point out that this type of system does not produce homogenous dust levels. In specific, Gillette states that “[s]ynoptic scale and meso-scale meteorological systems deliver momentum to the surface in a variety of forms. An example of a synoptic-scale structure that is often associated with wind erosion is the prefrontal wind storm. Large-scale systems do not explain the existence of local ‘hot spots’ since strong dust production is not uniformly observed for the entire land surface over which the system passes. Meso-scale structures such as haboobs (downdrafts of thunderstorms) create short-lived intense local dust production, but are short lived, and may cause erosion in locations that do not normally produce dust.”¹⁹

Given these observations, it is expected that events resulting from synoptic scale wind events would not result in uniform exceedances or elevated monitor concentrations across a region or monitoring network. In fact, this type of event is previously documented, with three western state agencies submitting examples of exceedances that occur only at one monitor in the region during synoptic scale wind events.²⁰ It is completely plausible that the monitor located nearest an area that has the most potential of producing “hot spots” should exceed while other monitors in the region do not.

¹⁸ Gillette, 1999. A Qualitative Geophysical Explanation for “Hot Spot” Dust Emitting Source Regions. *Contr. Atmos. Phys.*, 72, 67–77.

¹⁹ *Id.*

²⁰ Examples include but are not limited to: San Joaquin Valley Air Pollution Control District, January 4, 2008 Event; Clark County Department of Air Quality and Environmental Management, May 21, 2008 Event; Arizona Department of Environmental Quality, March 14, 2008 Event. Additionally, South

Exceedances at one monitor in a network cannot be assumed a priori to be caused by anthropogenic activities causing soil disturbance near the exceeding monitor. PM-10 monitors throughout a network have different land uses and monitoring purposes. A PM-10 monitor located near sources of windblown dust (open, and exposed soils) should be expected to record higher concentrations of PM-10 during a wind event than monitors located in a downtown or residential core that are surrounded by built sources incapable of producing windblown dust.

Additionally, it is unclear what EPA exactly means by the phrase, "nearby monitors". The guidance document does not detail whether the Agency is intending by use of this term to impose a specific distance requirement. Should this be the intent, setting such a distance requirement would be extremely tenuous, given the limited knowledge on transport and deposition rates of PM-10 from a high wind event. Moreover, if EPA would adopt this approach, it would be arbitrarily setting up a system where regions that have a dense network of PM-10 monitors face more scrutiny during natural events than do regions with fewer PM-10 monitors (for the simple reason that dense monitoring networks will have more situations where only individual monitors exceed). There is nothing in the EER that even hints that large-scale high wind events are required to show multiple monitored exceedances in order to be considered an exceptional event. In fact, the opposite reality is reflected in the preamble of the EER.²¹

III. Timelines Contained in the Draft Guidance Are Too Long.

With regard to the review and approval of exceptional events, EPA indicates that "[t]he timing of EPA's final decision will depend on the regulatory impact of the data and will be described in the initial review letter. For EE packages that impact a regulatory decision 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."²²

Eighteen months is clearly an excessive and unnecessary amount of time for EPA to act upon a final submittal. This is especially true, since under the process outlined in the EER and the draft guidance, prior to a final decision on an exceptional event request, EPA will have already done a completeness

Coast Air Quality Management District also reported a single monitor exceedance under Santa Ana wind conditions on October 13, 2008.

²¹ For example, the EER states that "[s]ince the conditions that cause or contribute to high wind events vary from area to area with soil type, precipitation, and the speed of wind gusts, States should provide appropriate documentation which indicates what types of circumstances contributed to the exceedances or violations at the monitoring site in question." 72 Fed. Reg. 13,560, 13577 (March 22, 2007)

²² Draft Guidance at 28-29.

review (within a prior timeframe of 120 days) and possibly asked for additional information from the submitting agency (which would extend this timeframe another 60 days). Given the fact the EPA intends to only act upon exceptional events that have a regulatory impact, EPA should be able to issue a final concurrence with these events in substantially less time than 18 months. State and local agencies need quick action on these decisions, as waiting for concurrence from EPA on regulatory significant exceptional events can easily hold planning processes hostage.

IV. Technical Comments on Use of Wind Speed.

The draft guidance provides the following discussion of wind speed calculation:

Sustained wind speed is generally calculated as the wind speed averaged over a period of at least one minute: typical averaging times for a sustained wind speed are one to five minutes.³¹ EPA will not consider any average less than one minute to represent a sustained wind speed. Packages should include the maximum sustained wind speed for each hour of the event and also the number of periods above 25 mph (as part of the clear causal relationship a time series with sustained wind speeds during the event should also be included (see Section 6.2.2.4)). The maximum sustained wind speed does not necessarily have to be at the site of the exceedance, but it should represent the source area. If the sustained wind speed provided is not at the exceeding monitor then the CCR demonstration will generally be expected to support this claim. Sustained wind speed data are typically available from sources such as local air monitoring stations and National Weather Service Stations.²³

There are important technical details to be cognizant of when comparing wind speed values during a high wind dust event. First, meteorological stations operated by different agencies can report significantly different wind speeds from the same area depending upon the unique conditions of their exact location and averaging time used to report wind speed. As an example, data from National Weather Service (NWS) stations comes from meteorological towers located at airports, where surface roughness is low and long fetches of open space exist. Also, the averaging time of the NWS sustained wind speed values is either one or two minutes. As a result, NWS wind speeds are usually the highest wind speeds reported for an area. Meteorological stations run by air agencies often report wind speed in hourly averages and have stations towers that are situated in areas with high surface roughness values (e.g., near or on existing buildings, in dense residential or industrial areas, etc.) in order to access available power sources. As an example, see the table below which shows wind speeds as measured by the Maricopa County Air Quality Department Central Phoenix monitor and the NWS Sky Harbor Airport station. These two sites are approximately 3 miles apart and are both located within the urban core of Phoenix.

²³ Id. at 34.

Date	Hour	MCAQD wind speed	NWS wind speed
9/11/08	18:00	20 mph hourly avg.; 28 mph highest 5-minute avg.	39 mph 2-minute avg.
11/9/08	17:00	15 mph hourly avg.; 18 mph highest 5-minute avg.	25 mph 2-minute avg.

This example shows that under the same region-wide wind conditions, two monitors located in the same micro-area can report vastly differing wind speeds due to averaging times and surface roughness changes. Some state and local agencies do not operate their own meteorological stations and rely exclusively on NWS data. In the example table above, both of these days would be good candidates for exceptional events using EPA's threshold of 25 mph at 10 meters. However, for those jurisdictions like Maricopa County that do operate independent meteorological stations, the local wind data in the example table above does not exceed the 25 mph threshold based upon hourly average data, and only slightly exceeds the threshold on one day based upon a 5-minute average. The same level of wind energy passed over both monitoring sites in the example above, yet the unique micro-conditions (especially surface roughness as compared to an ultra-smooth paved runway) and differing averaging times yield differing wind speed values. It is important for EPA to realize the differences between measurement techniques and micro-site conditions and not penalize agencies that have more meteorological data available for comparison.

Additionally, the most common wind speed value reported by meteorological stations is wind speed at 10 meters. However, what is most critical to windblown dust production is not the wind speed at 10 meters, but the wind shear at ground level, usually represented as u^* . This value is highly controlled by surface roughness. The following example shows 10-meter wind speeds (U) values at a given wind shear value with differing surface roughness heights.²⁴

u^* (cm/s)	Surface roughness value (cm)	10-meter wind speed (mph)
40	0.001	30.9
40	0.01	25.8
40	0.1	20.6
40	1.0	15.5

This table demonstrates that rough surfaces significantly diminish the 10-meter wind speed under the same wind shear force. The soils in the table above are all subject to the same wind shear of 40 cm/s, yet the 10-meter wind speeds are dramatically different. This also helps to explain why in the previous example the NWS stations located at airport runways have consistently higher 10-meter

²⁴ The fluid dynamics Prandtl equation: $U = \frac{kz}{z_0} u^*$, allows for the calculation of U , where U is wind speed at 10 meters, k is Von Karman's constant (0.4), z is 10 meters, and z_0 is measured surface roughness value.

wind speeds than a monitor located in a residential or industrial area surrounded by built structures. The majority of the wind tunnel tests performed by Clark County (as referenced by EPA) were done on smooth surfaces, with almost all surface roughness values at 0.04 cm or less. As such, the 25 mph 10-meter threshold is representative of wind speeds across smooth surfaces. 10-meter wind speeds over rougher surfaces will be less than 25 mph while still producing wind shears capable of generating windblown dust. It is critical that EPA is cognizant of the effects of surface roughness and averaging times when evaluating wind speed data and when comparing wind speed measurements at different meteorological stations in the same region.

V. Technical Comments Related to Appendix A.

Appendix A provides that:

In EPA's weight of evidence analysis of high wind dust events, sustained wind speeds above 25 mph will be assumed to have the potential ability to raise dust emissions from some stable surfaces in arid, semi-arid, or seasonally dry regions. Wind speeds below this threshold will be assumed to entrain dust primarily from disturbed anthropogenic sources that have not been reasonably controlled...The 2004 data [Clark County wind tunnel tests] show that non-linear increases in PM10 flux generally begin to occur at sustained 10 meter velocities exceeding 25 mph. These data form the basis for EPA's selection of a 25 mph threshold for natural events.²⁵

Wind speed thresholds for the creation of PM-10 emissions from fugitive dust sources provide one insight into the wind erosion process, but do not address the phases of transport and deposition of PM-10 at differing monitoring sites. Wind speed at the PM-10 concentration monitor in question may not be relevant especially during long range transport events. Additionally, EPA should not presume that PM-10 dust generated at wind speeds lower than 25 mph must be a result of disturbed soils, especially since the Clark County data EPA references shows that stable and disturbed soils appear to emit at about the same rate under 25 mph. EPA should take a neutral stance on the source of emissions and let the state or local agency present their evidence on likely sources of windblown PM-10 emissions and the status of the implementation of controls on those same suspected sources. A presumption that all dust from wind speed events below 25 mph must be the result of uncontrolled anthropogenic activity is unfairly biased against any agency submittal. If the agency submits evidence that all reasonable controls were in place and enforced, either in an individual submittal or through an agreed upon High Wind Action Plan, than EPA should not summarily dismiss such demonstration unless there is proof that anthropogenic activities were the cause of the exceedance exists.

²⁵ Appendix A at 57.

A. Aerodynamic Entrainment

EPA's Appendix A further states that "the Clark County study found small amounts of entrainment below 25 mph. The small PM₁₀ fluxes observed at lower wind 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."²⁶

Several recent articles have shown how direct aerodynamic entrainment can produce substantial dust, if not the majority of dust in the absence of saltation.²⁷ While the Clark County wind tunnel tests did collect sediment in the elutriation chamber, cyclone, and glass fiber filter, this sediment data was not used to estimate PM-10. Specifically, the study notes that:

Experience in the 1995, 1998-99 and 2003 wind tunnel studies showed that, unless an unusually high PM-10 concentration was eroded from the soil surface, 10-minute wind tunnel sampling runs were of insufficient duration to obtain detectable weight changes on the glass fiber filters. For this reason, TSI Dust-Trak PM-10 data were used to estimate PM-10 fluxes. Additionally, since the 2004 study used progressive velocity increases, the collected saltation, cyclone or filter data do not correspond to any particular velocity during a run, but instead represent an integrated mass measurement. The mass data could be analyzed to determine if there are differences between stable and unstable soil surface conditions.²⁸

Because saltation was not specifically measured in concert with PM-10 concentrations, it cannot be known if the dust emissions recorded in the Clark County wind tunnel studies are the result of direct

²⁶ *Id.*

²⁷ Macpherson et al., 2008. Dust emissions from undisturbed and disturbed supply-limited desert environments. *J. GeoPhys. Res.* 113, F02S04; Roney and White, 2004. Definition of measurement of dust aeolian threshold. *J. GeoPhys. Res.* 109, F01013; Kjelgaard et al., 2004. PM₁₀ emission from agricultural soils on the Columbia Plateau: Comparison of dynamic and time-integrated field-scale measurements and entrainment mechanisms. *Agric. For. Meteorol.* 125, 259-277; Loosmore and Hunt, 2000. Dust suspension without saltation. *J. GeoPhys. Res.* 105, 20663-20671; Harrison et al., 2009. A Monte Carlo Model for Soil Particle Resuspension Including Saltation and Turbulent Fluctuations. *Aero. Sci. and Technol.* 43, 161-173.

²⁸ Pages 37-38 of: Wacaser et al., 2006. Refined PM₁₀ Aeolian Emission Factors for Native Desert and Disturbed Vacant Areas. In: Appendix E of PM10 State Implementation Milestone Achievement Report. Clark County, Nevada Department of Air Quality and Environmental Management.

aerodynamic entrainment, saltation, or some combination of both, for any of the recorded velocities. Thus it is not appropriate to assume (based upon Clark County wind tunnel data) that direct aerodynamic entrainment is not responsible for high PM-10 concentrations, or may even lead to exceedances, at elevated wind speeds.

The majority of field studies regarding threshold velocities rely on the visible movement of soil before determining a minimum threshold velocity for windblown dust to occur (see discussion below on effects of soil disturbance) and subsequently rely on the horizontal movement of soil to be a surrogate for the vertical production of dust. Visible verification of soil movement is only possible for particles approximately PM-70 or greater. PM-10 particles are likely ejected from the surface much earlier than can be visibly verified through observation of saltation. For those studies that actually measure vertical PM-10 emissions, the role of direct aerodynamic entrainment plays a significant role and results in threshold friction velocities for dust that are much lower than what is required for saltation.

B. Soil Disturbance

Appendix A states that "[t]he effect of surface disturbance on threshold wind speed was further examined for a number of natural desert soils by a number of researchers. The main conclusion was that disturbance of soils profoundly lowers the threshold friction velocity of desert soils."²⁹

In the four studies referenced by EPA in support of the above quotation, it is vital to remember that the threshold friction velocity measured in these studies was the horizontal movement of soil. As quoted from the studies EPA references:

"The threshold velocity profile was obtained when continuous movement of grains was first visible" (Gillette 1980 & 1982). "The threshold friction velocity (TFV) was defined as the velocity at which fragments were initially detached from the soil surface. Wind speed inside the wind tunnel was gradually increased until forward particle movement was observable across the soil surface" (Belnap et al., 2007).

None of the four studies measured actual dust concentrations (vertical flux), but rather relied on the traditional assumption that dust concentrations scale with horizontal flux (saltation). This is an important distinction, because recent studies performed in the same locations as the articles referenced by EPA³⁰ show that significant dust emissions occur in the absence of saltation and are not

²⁹ Id. at 59.

³⁰ In the Macpherson article, some of the soils from the same general area as the EPA referenced 1980 Gillette article are tested. Macpherson et al., 2008. Dust emissions from undisturbed and disturbed supply-limited desert surfaces, *J. Geophys. Res.*, 113, F02S04.

directly correlated with horizontal flux.³¹ While the studies referenced by EPA indicate that disturbance lowers the threshold friction velocity at which saltation occurs, the threshold friction velocity at which dust emissions occur is often significantly lower (50 to 75%) than the threshold required for saltation to occur.³² Additionally, the saltation threshold friction velocities of undisturbed soils measured by Gillette (1980) were often unobtainable, or only reached at velocities higher than what occurs in nature (> 100 cm/s),³³ suggesting that many undisturbed desert soils never produce windblown dust. However, dust emissions from the natural soils studied by Gillette are frequent and occur in both undisturbed and disturbed states, regardless if saltation was observed.³⁴ Since the concern of EPA, and state and local air agencies, is the control of fugitive dust (particularly PM-10), it is essential to recognize that the threshold velocity required to create dust emissions is significantly lower than saltation thresholds and often is uncorrelated to the measured horizontal flux.

Additionally, assuming disturbance only has the effect of lowering threshold friction velocities implies that disturbed and undisturbed soils have the same emission rate, just with differing trigger points (i.e., assume a hypothetical soil with an undisturbed threshold friction velocity of 50 cm/s and a disturbed threshold friction velocity of 25 cm/s. Both soils will emit at the same rate once velocities exceed 50 cm/s). The Clark County wind tunnel data earlier referenced by EPA disputes this (Figure ES-1, pg. 58). The disturbed and stable soils have the same threshold friction velocity of approximately 10 mph, with the disturbed soils producing more dust relative to stable soils as wind velocities increase. This result is consistent with the Macpherson et al. 2008 study which found that, "Following mechanical disturbance, clay-crusted and non-cohesive surfaces experience an increase in available fines on the surface, resulting in a large increase in emission rate and E_{total}/q ."³⁵

³¹ "Past research suggests that when dust uplift is driven by saltation, a linear relationship exists between the dust emission rate and the saltation flux [Shao et al., 1993; Houser and Nickling, 2001], thus abrasion efficiency is relatively constant with u^* . Evaluating the relationship between E_{total}/q and u^* revealed large data scatter and failed to produce a significant trend with strong correlation coefficients (shown in Figure 6), indicating that E_{total}/q is not constant, nor can it be accurately described by a direct relationship with u^* ." Macpherson et al., 2008. Dust emissions from undisturbed and disturbed supply-limited desert surfaces, *J. Geophys. Res.*, 113, F02S04.

³² Roney and White, 2004. Definition and measurement of dust aeolian thresholds. *J. Geophys. Res.*, 109, F01013.

³³ "Since field measurements show that u^* only exceptionally reaches 100 cm/s on Earth, this will be the upper limit for our computations." Alfaro and Gomes, 2001. Modeling mineral aerosol production by wind erosion: Emission intensities and aerosol size distribution in source areas. *J. Geophys. Res.*, 106, 18075–18084.

³⁴ Macpherson et al., 2008. Dust emissions from undisturbed and disturbed supply-limited desert surfaces, *J. Geophys. Res.*, 113, F02S04. The April 12, 2007 exceptional event in the Mojave Desert documents high PM-10 concentrations from non-anthropogenic sources associated with wind speeds below the saltation friction velocities of undisturbed soils recorded by Gillette (1980).

³⁵ Macpherson et al., 2008. Dust emissions from undisturbed and disturbed supply-limited desert surfaces, *J. Geophys. Res.*, 113, F02S04.

This shows that dust emissions (E) increase at a faster rate with rising wind than do saltation (q) rates. This is an important distinction, and shows that the role of disturbance primarily increases the reservoir of material available for dust suspension and does not necessarily lower the threshold velocity. A correct understanding of the differences between how disturbed and undisturbed soils create dust in response to high winds is key to explaining dust emissions during an exceptional event, especially at speeds that are lower than observed saltation thresholds.

VI. Conclusion

MAG appreciates the difficult task that EPA faces in constructing an EE guidance document that can both lend certainty to the process of excluding certain ambient air data as an EE while maintaining the ability to recognize varying conditions in different states and regions. We are more than willing to continue to work with EPA to develop a more robust and responsive guidance document that can further our mutual goal of protecting the public health while not unduly penalizing areas that experience EEs. On a macro level, we believe one approach that EPA should consider is fuller reliance on state and local authorities to both consider and designate certain conditions as constituting EEs. The current guidance document offers little assurance that EPA is willing to improve the efficiency of the EE process by relying more heavily on state and local air pollution agencies to determine, based on their on-the-ground knowledge of conditions in an area, what natural and anthropologically-based events are exceptional and what events are not.

MAG also believes that neither the CAA nor EE policy should be interpreted as requiring or authorizing EPA to "second guess" SIP requirements related to the control of National Ambient Air Quality pollutants and their precursors. EPA can and should rely on previous determinations of RACM and BACM. Such an approach could both simplify the process of EE review and lend more certainty to the EE process. In an era when federal, state and local governments need to do "more with less," it seems incredible that we are engaging in a process that may take 400 hours to determine the approvability of a single EE event. Relying on existing SIP mechanisms and the considered professional judgment of state and local air regulators offers a way to streamline this process and ensure that determinations on EE can be made quickly and efficiently. Finally, EPA could also presume that SIP measures were implemented and are being implemented to reasonably address EEs unless evidence exists otherwise. This is not just a matter of trust. States and localities have committed, by law, to implement such measures. In addition, under other provisions of EER, a public review process for EEs is provided. Such factors are more than sufficient to assure EPA that state and local governments are carrying out duties and measures they have previously agreed to implement.



Janice K. Brewer
Governor

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Henry R. Darwin
Director

VIA Electronic Mail

June 30, 2011

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

Re: Comments to the Exceptional Event Guidance Documents

Dear Ms. McCarthy,

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

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

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

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

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I. Conceptual Model

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

II. Weight of the Evidence

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

III. "High Wind" Threshold

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

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

IV. 1-5 Minute Average Wind Data

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

V. Recurrence

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

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

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

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

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

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

VI. High Winds Events Analysis

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

VII. Treatment of Fire Related Exceptional Events

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

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

VIII. Not Reasonably Controllable or Preventable

ADEQ is concerned that the draft guidance does not provide any certainty regarding what control measures qualify as reasonable control measures during an exceptional event. Instead, the guidance appears to indicate that the more often an event occurs, the less exceptional it becomes, even though the event is overwhelming the control measures that are in a SIP. This becomes even more problematic as the availability of additional controls is exhausted through the Reasonably Available Control Measures (RACM), Best Available Control Measures (BACM) and Most Stringent Measures (MSM) analyses required in moderate and serious PM₁₀ nonattainment areas.

The SIP approval process pursuant to Section 110, Part C and Part D of the Clean Air Act is the appropriate process for determining the reasonableness of control measures based on the classification of the planning area. ADEQ contends that control measures that are reasonable within a serious PM₁₀ non-attainment area may not be reasonable in a moderate PM₁₀ non-attainment area.

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

IX. Exceedances at Rural Monitors

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

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

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

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

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

will prevent the problem from recurring, and only penalizes the sources within the non-attainment area that have already made significant efforts to reduce and prevent the emissions of PM₁₀. ADEQ is concerned that there is currently no EPA methodology or mechanism to deal with these situations and recommends that EPA include specific guidance on how intra-state, interstate, and international transport of air pollution should be addressed.

XI. Control of Natural Sources

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

XII. Processing Timeframes

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

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

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

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

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

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

XIII. Streamlining

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

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

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

XIV. Dispute Resolution

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

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

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

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

Sincerely,



Eric C. Massey, Director
Air Quality Division

cc: Deborah Jordan, EPA Region IX
Colleen McKaughan, EPA Region IX
William Wiley, Maricopa County Air Quality Department
Lindy Bauer, Maricopa Association of Governments
Don Gabrielson, Pinal County Air Quality Management District
Ursula Kramer, Pima County Department of Environmental Quality

WESTERN STATES AIR RESOURCES COUNCIL



June 30, 2011

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

Dear Ms. McCarthy,

The Western States Air Resources Council (WESTAR), an association of 15 western state air quality management agencies, appreciates the opportunity to work in partnership with EPA on approaches to improve the implementation of the Exceptional Events Rule. The purpose of this important rule is to ensure that regulatory decisions under the Clean Air Act are not biased by monitored air quality data over which a state has little or no control. By excluding monitoring data affected by exceptional events from regulatory decisions, state and local agencies will be able to focus resources on solving problems that they can fix. Please note that the California Air Resources Board is submitting separate comments in its own behalf.

WESTAR appreciates the effort EPA has made to respond to our recommendations dated September 11, 2009. It is clear that EPA has put considerable effort into evaluating approaches to streamline decision-making and to clarify the technical showings states will be expected to include in their requests for data exclusion. In the attachment, we identify areas where EPA's draft guidelines are helpful and areas where, in our view, further discussion is needed. In general, we believe that the guidance is a step in the right direction, but there are areas that remain a concern.

The attachment includes a number of recommendations, all of which would improve implementation of the exceptional events rule. Of particular concern to WESTAR are the following four issues, discussed in detail in the attachment:

1. Guidance in lieu of rule revisions. 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.
2. "Not reasonably controllable or preventable" showing. 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.
3. The "but for" test. 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.
4. Level of effort for showing; State agency capabilities and resources. 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.

We look forward to continuing our discussions on this important issue. If you have any questions or comments, please contact Dan Johnson at 206-254-9145.

Sincerely,



David Collier, President
Western States Air Resources Council

APPENDIX

The following comments are grouped into four sections. In the first section, we address the portion of the draft guidance that covers the specific technical elements required in an exceptional events demonstration package. Section 2 covers other elements of an exceptional events demonstration package. In section 3, we address EPA's recommendations on process and timeframes. Finally, in section 4, we touch on several additional overarching issues.

Section 1: Technical elements of evidence in a demonstration package

Not reasonably controllable or preventable

In our September 2009 recommendations, WESTAR provided comments on the requirement that a state requesting exclusion of data under the exceptional events rule must show that emissions causing the event were not reasonably controllable or preventable, including a demonstration that reasonable actions to protect public health have been implemented. We reiterate our previous view that 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.

Based on our review of the draft guidance, 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.

In Section 3.1.2, the draft guidance says, "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." Later in this section, the draft guidance says "In areas where events continue to recur, EPA may consider BACM, or greater levels of control, as the appropriate starting point [to determine reasonable controls], regardless of attainment status...it could be reasonable to require controls more stringent than BACM or RACM, particularly in areas with recurring exceedances."

Where wind events may recur, states can elect to develop a voluntary High Wind Action Plan, agreed upon by EPA that may provide an additional measure of emission controls during an exceptional event. Section 3.1.6. of the draft guidance states the following:

"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." ... "If events

recur, EPA will need to re-approve the High Wind Action Plan regardless of whether it is revised or remains as-is. If EPA indicates that the High Wind Action Plan needs to be revised and the state chooses not to do so, this will be considered in EPA's determination of whether controls in place were reasonable for subsequent events."

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.

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.

Historical Fluctuation

We support the approach in the proposed guidance to demonstrate historical fluctuation. In an environment where recurring high wind events cause spikes in PM values, we don't see added value in showing that a particular wind-caused PM exceedance is above a certain historical value to qualify as exceptional. We reiterate our recommendation that this requirement should be deleted by rule revision, at least for wind events. The suggested simple presentation of historic data points as evidence of historical fluctuation should help support weight-of-evidence showings for other elements of the exceptional event demonstration, including the Clear Causal Relationship showing, the But For test, and the showing that air quality was affected.

Clear Causal Relationship

In our September 2009 recommendations on the requirement to show that there was a clear causal relationship (Clear Causal) between the exceedance and the event, WESTAR provided a suggested outline of elements and thresholds that could be accepted and result in expedited review of the Clear Causal showing. The proposed guidance does address several of those suggestions, including the narrative in the conceptual model to establish elements of the causal relationship. 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. We would expect EPA to consider these factors for other technical elements as well.

The “But For” test

In our September 2009 recommendations, WESTAR provided comments on the regulatory implications of including data affected by exceptional events in the dataset used to make important regulatory decisions, including determinations of attainment status and the impact of inflated design values on the classification of a nonattainment area and the design day used to establish the basis of emission reductions required in an attainment SIP. We reiterate our previous recommendation to revise the regulation to remove the requirement for the state to demonstrate that “[t]here would have been no exceedance or violation but for the event.”

In Attachment 1: Exceptional Events Rule Frequently Asked Questions, question 13, EPA offers an approach that would retain the data affected by an exceptional event for the purpose of determinations of attainment but would allow the state to “back out” that portion of the monitored value determined to have come from the event. In concept, the actual monitored value would be included in attainment/nonattainment determinations, but could be adjusted to exclude the non-anthropogenic fraction in design value calculations used for other regulatory determinations (e.g. nonattainment area classifications). If such an approach were available, much of the concern WESTAR has raised about inflated design values in air quality datasets could be lessened. However, it appears this approach cannot be implemented without

a rule revision. In its discussion of this issue in the preamble to the exceptional events rule (Section V. E.) EPA acknowledges that “...we are not aware of the existence of precise and universally applicable techniques that are administratively and technically feasible and that could support partial adjustment of air quality data...” and goes on to state “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...”. Until such an approach is adopted by EPA through rulemaking, we see no alternative but for EPA to revise the rule in such a way that any data affected by exceptional events may be excluded.

Caused by Human Activity Unlikely to Recur at a particular location or a Natural Event

We appreciate the idea that recurring events must be “natural” to qualify as exceptional, and that recurring high wind/dust events that may be caused all or in part by emissions from anthropogenic sources judged to be reasonably controlled may be treated the same way as natural events. We are troubled nonetheless about the proposal to, in effect require High Wind Action Plans that include escalating emission control measures to define what “reasonably controlled” anthropogenic sources means for recurring events, rather than the control measures approved in the State Implementation Plan, as discussed in the above section on Not Reasonably Controllable or Preventable.

Section 2: Other elements of technical demonstration

Wind Data

WESTAR, in its September 2009 recommendations proposed a wind speed threshold of 20 MPH or greater to trigger expedited review for high wind dust events. The EPA proposed threshold is 25 MPH to trigger “basic analysis,” apparently from a DRI study of desert dust in Clark County that concluded that dust from wind at that speed or above can entrain dust from undisturbed natural surfaces. Other studies in other areas indicate different soil types, ground cover, etc., and suggest that in these areas different threshold wind speeds would be more appropriate to determine the rigor of analysis needed in the demonstration package.

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.

Conceptual Model

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.

Mitigation

We generally support the proposed 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.

Public Comment

In this section of the proposed guidance, EPA asserts that “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.

Section 3: Proposed Process Timeframes and Demonstration Package Recommendations

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. Depending on the amount and availability of relevant information, it may not be possible to submit ALL requested supplemental information within the proposed time frames, or at all. Some variation to the schedule may be needed, as well as a process for determining what is possible when not all of the information requested is available.

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.

Section 4: Additional Issues

A significant concern remains about the uncertainties as to the level of analyses required to demonstrate that a given event was not reasonably controllable or preventable. It is an important concern in that analyses of the other required elements, particularly the But For test are derived in part from the reasonably controllable analyses. WESTAR’s September 2009 recommendations include expedited reviews for cases where the conditions of the exceptional event are clear, required elements of the package are presented and concurrence easily reached. This concern is partially addressed in this high wind guidance by the wind threshold

approach and the recommended sequence of analysis steps. We would encourage EPA to make this concern a priority as a general matter.

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 data base) distorts the air quality values that are used for ongoing planning and regulatory purposes. It also affects eligibility for Limited Maintenance Plans.

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.

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6 **IN THE UNITED STATES DISTRICT COURT**
7 **FOR THE DISTRICT OF ARIZONA**

8 Kelly Paisley; and Sandra Bahr,
9 Plaintiffs,

No. CV-10-1253-PHX-DGC

ORDER

10 vs.

11
12 Henry R. Darwin, in his capacity as Acting
13 Director of the Arizona Department of
14 Environmental Quality; and Doug Ducey,
in his capacity as Treasurer of the State of
Arizona,

15 Defendants.

16
17 Plaintiffs are residents of Maricopa County seeking to enforce compliance with
18 requirements of the Clean Air Act (“CAA”), 42 U.S.C. § 7401 et seq., and a State
19 Implementation Plan submitted by Arizona under the CAA. The parties have filed
20 motions for summary judgment, and the motions are fully briefed. Oral arguments were
21 heard on September 2, 2011. For reasons stated below, Plaintiffs’ motion will be granted
22 and Defendants’ motion denied.

23 **I. Background.**

24 The CAA establishes a comprehensive program for controlling and improving the
25 Nation’s air quality through state and federal regulation. Pursuant to the CAA, the
26 Environmental Protection Agency (“EPA”) has established national ambient air quality
27 standards (“NAAQS”) for certain pollutants. 42 U.S.C. §§ 7408, 7409. Communities
28 that violate the NAAQS are designated as nonattainment areas. The CAA requires each

1 state to develop a state implementation plan (“SIP”) providing for the attainment,
2 maintenance, and enforcement of the NAAQS within each area of the state. *Id.* § 7410.
3 The SIP is to be submitted to the EPA for approval. *Id.* “[O]nce the EPA approves a
4 SIP, the state is required to comply with it unless and until a replacement SIP is formally
5 approved.” *Coal. for Clean Air, Inc. v. S. Coast Air Quality Mgmt. Dist.*, No. CV97-
6 6916-HLH, 1999 WL 33842864, at *1 (C.D. Cal. Aug. 27, 1999) (citing 42 U.S.C. §
7 7410(a)(3)). Indeed, the approved SIP’s “requirements and commitments become
8 binding upon the state as a matter of federal law.” *AIR v. C&R Vanderham Dairy*, 435 F.
9 Supp. 2d 1078, 1085 (E.D. Cal. 2006).

10 Maricopa County, particularly the Phoenix metropolitan area, has been designated
11 as a nonattainment area for carbon monoxide, ozone, and particulate matter. In 1993, the
12 State of Arizona developed a proposed SIP, which later was revised and approved by the
13 EPA. The SIP included new funding sources for transit improvements which recently
14 had been adopted by the Arizona Legislature as part of House Bill 2001 (“H.B. 2001”)
15 and which were designed to reduce carbon monoxide and ozone and ensure compliance
16 with air quality standards mandated by the CAA. H.B. 2001, 41st Leg., 6th Sp. Sess.
17 (Ariz. 1993). Among the provisions of H.B. 2001 incorporated into the SIP were
18 amendments to A.R.S. § 5-522 to provide for the payment of lottery monies into the local
19 transportation assistance fund (“LTAF”). Subsection (A) of amended § 5-522 provided
20 that not less than 31.5% of revenues received from a new multistate lottery game known
21 as “Powerball,” up to a maximum of \$18 million each fiscal year, would be deposited
22 into the LTAF. A.R.S. § 5-522(A)(4) (1994). This provision applied only if \$45 million
23 would otherwise be available to the state general fund from lottery proceeds. A.R.S.
24 § 5-522(E) (1994). Under the SIP, the \$18 million would be apportioned to counties on
25 the basis of their citizens’ participation in the lottery, with an estimated \$10.8 million per
26 year going to Maricopa County. A.R.S. § 28-2602(F) (1994); Doc. 41-1 at 33.

27 In 2010 – the terms of the federally-binding SIP notwithstanding – the Arizona
28 Legislature passed House Bill 2012 (“H.B. 2012”) and repealed the provisions of § 5-522

1 that allocated lottery monies to the LTAF, as well as the statutory provisions establishing
2 the LTAF itself, A.R.S. §§ 28-8101 through 28-8104 (formerly A.R.S. §§ 28-2601 and
3 28-2602). H.B. 2012, 49th Leg., 7th Sp. Sess. (Ariz. 2010). Governor Brewer signed the
4 bill into law on March 18, 2010, and it became effective three months later. *Id.* § 50.

5 In June 2011, Plaintiffs filed suit against the State, the Governor, the Arizona
6 Department of Environmental Quality (“ADEQ”), and the ADEQ’s then-current Director,
7 Benjamin Grumbles. Doc. 1. In an order dated November 8, 2010, the Court concluded
8 that Plaintiffs have standing to sue, but dismissed the State, the Governor, and the ADEQ
9 based on Eleventh Amendment immunity. Doc. 15.

10 Plaintiffs filed an amended complaint against the new Acting Director of the
11 ADEQ, Henry Darwin, and the Treasurer for the State of Arizona, Doug Ducey. Doc. 33.
12 Because the portion of the SIP requiring that lottery funds be deposited into the LTAF is
13 enforceable as a matter of federal law, the complaint alleges, the Arizona Legislature was
14 without authority to repeal the deposit of lottery funds into the LTAF absent prior
15 approval from the EPA. *Id.* ¶ 37. Plaintiffs claim that the failure of Defendants to ensure
16 the continued deposit of lottery funds into the LTAF as provided for in the SIP
17 constitutes a violation of the CAA, 42 U.S.C. § 7604(f). *Id.* ¶ 39. Plaintiffs seek an
18 order, pursuant to 42 U.S.C. § 7604(a)(1), declaring that the Arizona Legislature’s repeal
19 of the deposit of lottery funds into the LTAF is preempted by the CAA and therefore has
20 no legal effect, declaring that the requirement to deposit lottery funds into the LTAF as
21 required by the SIP remains in full force and effect as a matter of federal law, and
22 directing Defendant Ducey to comply with the requirement to deposit lottery funds into
23 the LTAF. *Id.* at 8, ¶ 40.

24 **II. Summary Judgment Standard.**

25 A party seeking summary judgment bears the initial responsibility of informing
26 the court of the basis for its motion, and identifying those portions of the record
27 demonstrating the absence of a genuine issue of material fact. *Celotex Corp. v. Catrett*,
28 477 U.S. 317, 323 (1986). Summary judgment is appropriate if the evidence, viewed in

1 favor of the nonmoving party, shows that there is no genuine issue as to any material fact
2 and that the movant is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(a).

3 **III. Analysis.**

4 Defendants contend that the claims against them are barred by the Eleventh
5 Amendment. Doc. 38. Plaintiffs argue that H.B. 2012 is preempted by the CAA and that
6 declaratory and injunctive relief are appropriate. Doc. 40.

7 **A. Defendant Darwin.**

8 In the CAA, Congress authorizes civil suits against any person or governmental
9 instrumentality “who is alleged to have violated . . . or to be in violation of an emission
10 standard or limitation” under the CAA. 42 U.S.C. § 7604(a)(1). Congress grants this
11 authorization, however, only to “the extent permitted by the Eleventh Amendment[.]” *Id.*

12 The Eleventh Amendment generally bars suit against state officials where the state
13 is the real party in interest, that is, where “the judgment would tap the state’s treasury or
14 restrain or compel government action.” *Almond Hill Sch. v. U.S. Dep’t of Agric.*, 768
15 F.2d 1030, 1033 (9th Cir. 1985); see *Pennhurst State Sch. & Hosp. v. Halderman*, 465
16 U.S. 89, 101 (1984). Under the exception to this immunity created by the Supreme Court
17 in *Ex Parte Young*, 209 U.S. 123 (1908), however, a federal court may award prospective
18 injunctive relief “when a plaintiff brings suit against a state official alleging a violation of
19 federal law [.]” *Natural Res. Def. Council v. Cal. Dep’t of Transp.*, 96 F.3d 420, 422 (9th
20 Cir. 1996). The *Young* exception requires a “special relation” between the state officer
21 sued and the challenged statute, such that the officer has “some connection with the
22 enforcement of the act[.]” *Confederated Tribes & Bands of Yakama Indian Nation v.*
23 *Locke*, 176 F.3d 467, 469 (9th Cir. 1999).

24 Defendants contend that because Director Darwin has no responsibility over the
25 implementation of the former LTAF and former A.R.S. § 5-522, he lacks the “special
26 relation” required for the *Young* exception. Doc. 38 at 7. As the Court previously found
27 (Doc. 15 at 7), the ADEQ Director is directly responsible for enforcing the SIP and may
28 adopt revisions to the SIP only in conformity with federal regulations. A.R.S. § 49-404;

1 *see Sweat v. Hull*, 200 F. Supp. 2d 1162, 1173 (D. Ariz. 2001). In this case, Plaintiffs
2 seek to enforce the SIP – they seek a declaration that the obligation to deposit lottery
3 funds into the LTAF, as required by the SIP, remains in effect. Doc. 33 at 8. Defendant
4 Darwin, as the state official responsible for enforcing the SIP, has the requisite “special
5 relation” to the SIP for purposes of the *Young* exception.

6 Defendants note, correctly, that the sole form of injunctive relief sought in the
7 complaint is an order directing the Treasurer – not the ADEQ Director – to deposit lottery
8 funds into the LTAF. Because Director Darwin may not effectuate this injunctive relief,
9 they argue, he does not have the special relation to the claimed violation for purposes of
10 the *Young* exception and the suit against him therefore is barred by the Eleventh
11 Amendment. Doc. 38 at 7-10. The Court does not agree.

12 This Circuit has “long held that the Eleventh Amendment does not generally bar
13 declaratory judgment actions against state officers.” *Nat’l Audubon Society, Inc. v.*
14 *Davis*, 307 F.3d 835, 847 (9th Cir. 2002) (citations omitted). “The only question is
15 whether the declaratory action is seeking prospective, rather than retrospective, relief.”
16 *Id.*; *see Ringo v. Lombardi*, No. 09-4095-CV-C-NKL, 2010 WL 3310240, at *4 (W.D.
17 Mo. Aug. 19, 2010) (under *Young* “state officials may be sued in their official capacities
18 for prospective declaratory and injunctive relief where plaintiffs allege that the officials
19 are violating federal law”). Plaintiffs seek a declaration that repeal of the allocation of
20 lottery funds to the LTAF is preempted by the CAA, and that the SIP’s requirement that
21 lottery funds be deposited into the LTAF therefore remains in effect. Doc. 33 at 8.
22 Stated differently, Plaintiffs claim that Defendants’ failure to enforce the SIP and allocate
23 lottery funds to the LTAF constitutes a continuing violation of federal law. Defendants
24 do not assert, and the Court does not otherwise find, that the declaratory relief sought by
25 Plaintiffs has “retrospective effect; rather it has purely prospective effect, either of its
26 own force or as a basis for . . . injunctive relief.” *Nat’l Audubon Society*, 307 F.3d at 848;
27 *see S & M Brands, Inc. v. Summer*, 393 F. Supp. 2d 604, 619 (M.D. Tenn. 2005)
28 (the plaintiffs “couched their claims entirely in prospective language” by seeking

1 judicial declarations that repeal of certain state statutory provisions is preempted by
2 federal law). The Court concludes that Director Darwin is the appropriate state official to
3 receive the Court's declaratory judgment that the SIP remains the controlling law and
4 must be complied with. The Eleventh Amendment does not bar suit against Director
5 Darwin, "who has direct authority over and principal responsibility for enforcing [the
6 SIP]." *Nat'l Audubon Society*, 307 F.3d at 347. Defendants' summary judgment motion
7 will be denied in this respect.

8 **B. Defendant Ducey.**

9 Defendants argue that the Arizona Legislature repealed the LTAF itself, the
10 complaint seeks no relief with respect to the repeal, and therefore there is no LTAF into
11 which the Treasurer may deposit lottery monies. As a result, Defendants contend, the
12 Court cannot provide redress. Doc. 38 at 6-7. Defendants read the complaint too
13 narrowly.

14 In the section entitled "REPEAL OF LTAF" (Doc. 33 at 7), Plaintiffs allege that
15 the Legislature "was without authority to repeal the deposit of lottery funds into the
16 LTAF" (*id.* ¶ 38). This challenge to the Legislature's authority, reasonably construed, is
17 not limited solely to the repeal of the provisions of A.R.S. § 5-522. The claim that
18 Defendants violated federal law by failing "to ensure the continued deposit of lottery
19 funds into the LTAF as provided for in the SIP" (*id.* ¶ 39) would ring hollow absent a
20 challenge to the repeal of the LTAF itself. Plaintiffs' complaint "must be construed so as
21 to do justice." Fed. R. Civ. P. 8(e). The Court finds that it can provide appropriate
22 redress and Plaintiffs therefore have standing to sue Defendant Ducey. Defendants'
23 summary judgment motion will be denied in this respect.¹

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25
26 ¹ Defendants argued in their motion that the 2009 version of the statute no longer
27 permitted the Treasurer to deposit funds from A.R.S. § 5-522(A) into the LTAF, and that
28 returning to that statutory scheme therefore would not permit injunctive relief against the
Treasurer. As made clear at oral argument, however, Plaintiffs seek enforcement of the
SIP, and the SIP clearly contained statutory authority for the Treasurer to deposit funds
from A.R.S. § 5-522(a) in the LTAF. *See* A.R.S. § 28-2602(F) (1994).

1 **C. The SIP Prohibits the Repeal.**

2 The Supremacy Clause of the United States Constitution provides that the
3 “Constitution, and the Laws of the United States which shall be made in Pursuance
4 thereof . . . shall be the supreme Law of the Land . . . , any Thing in the Constitution or
5 Laws of any State to the Contrary notwithstanding.” U.S. Const. Art. VI cl. 2. Under
6 this clause, “Congress has the power to preempt state law.” *Crosby v. Nat’l Foreign*
7 *Trade Council*, 530 U.S. 363, 372 (2000). Indeed, as the Supreme Court recently
8 confirmed, “[t]he Supremacy Clause, on its face, makes federal law ‘the supreme Law of
9 the Land’ even absent an express statement by Congress.” *Pliva, Inc. v. Mensing*, 131
10 S. Ct. 2567, 2579 (2011).

11 This Circuit has made clear that provisions of an EPA-approved SIP are federally
12 enforceable in district court through the CAA’s citizen suit provision, 42 U.S.C.
13 § 7604(a)(1). *Romoland Sch. Dist. v. Inland Empire Energy Ctr., LLC*, 548 F.3d 738,
14 741 (9th Cir. 2008); *see also Latino Issues Forum v. EPA*, 558 F.3d 936, 938 (9th Cir.
15 2009); *Ass’n of Irrigated Residents v. U.S. E.P.A.*, 632 F.3d 584, 588 (9th Cir. 2011); *GM*
16 *Corp. v. United States*, 496 U.S. 530, 540 (1990). As amended by H.B. 2001, A.R.S.
17 § 5-522(A)(4) (1994) required that revenues from the multistate lottery game be
18 deposited into the LTAF. This requirement was made part of the EPA-approved SIP.
19 Doc. 39-1 at 7. Defendants admit that, absent prior approval from the EPA, the Arizona
20 Legislature lacked authority to repeal the portions of A.R.S. § 5-522(A) that are included
21 in the SIP, and that the Legislature’s attempt to do so therefore is null and void and the
22 lottery funding requirement included in the SIP remains in full force and effect. Doc. 36
23 ¶¶ 37-38. To the extent repeal of the statutory provisions establishing the LTAF itself
24 precludes full enforcement and implementation of the SIP, the Court finds that the
25 Legislature was without authority to repeal those provisions as well.

26 In summary, to the extent H.B. 2012 repealed portions of A.R.S. § 5-522(A) that
27 are included in the SIP and repealed the statutory provisions establishing the LTAF, *see*
28 A.R.S. § 28-8101 et seq., the bill “is ineffective and preempted by federal law.” *Sweat*,

1 200 F. Supp. 2d at 1172. Plaintiffs' motion for summary judgment will be granted in this
2 regard.

3 **D. Policy Arguments Are Inapposite.**

4 Defendants assert that this lawsuit has no significance to air quality or transit
5 services in the Phoenix area. Doc. 38 at 13-14. But the advisability of requiring lottery
6 funding for transit, or other policy considerations that went into the SIP, are not for this
7 Court to decide. "That some people honestly believe that the [LTAF] has outlived its
8 usefulness cannot mean that those of that view can take matters into their own hands."
9 *Kentucky Resources Council, Inc. v. EPA*, 304 F. Supp. 2d 920, 930 (W.D. Ky. 2004).
10 "[O]nce the EPA approves a SIP, the state is required to comply with it unless and until a
11 replacement SIP is formally approved." *Coal. for Clean Air, Inc. v. S. Coast Air Quality*
12 *Mgmt. Dist.*, No. CV97-6916-HLH, 1999 WL 33842864, at *1 (C.D. Cal. Aug. 27, 1999)
13 (citing 42 U.S.C. § 7410(a)(3)). If Defendants disagree with the SIP, they must follow
14 appropriate federal procedures to revise it. *See* 40 C.F.R. § 51.104. Compliance with the
15 CAA's procedure for revision of SIPs "is absolutely essential to maintaining national
16 standards for ambient air quality in a cooperative spirit. Without those procedural
17 controls, the [CAA] is bereft of coherence and enforcement power." *Id.*

18 **E. Conclusion.**

19 The Court concludes that Defendants Darwin and Ducey are properly named and
20 subject to suit in this case. The Court also finds that the SIP, which has the effect of
21 federal law under the CAA, precluded the Arizona Legislature from rescinding key
22 provisions of the SIP without EPA approval. As a result, the Court will grant summary
23 judgment in favor of Plaintiffs, deny Defendants' motion for summary judgment, and
24 order appropriate relief.

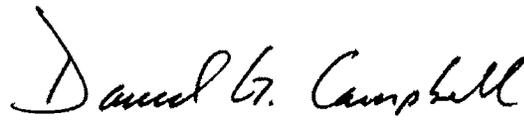
25 **IT IS ORDERED:**

- 26 1. Plaintiffs' motion for summary judgment (Doc. 40) is **granted**.
27 2. Defendants' motion for summary judgment (Doc. 38) is **denied**.
28 3. The Court enters the following declaratory relief: To the extent H.B. 2012

1 repealed portions of A.R.S. § 5-522(A) that are included in the SIP, and repealed the
2 statutory provisions establishing the LTAF, *see* A.R.S. § 28-8101 et seq., the bill is
3 ineffective and preempted by federal law. The requirement to deposit lottery funds into
4 the LTAF as set forth in the EPA-approved SIP remains in full force and effect.

5 4. The Court intends to enter an appropriate injunction against Defendant
6 Ducey to reinstate the deposit and disbursement of Arizona lottery funds into and from
7 the LTAF as required by the SIP. The parties are directed to confer and submit to the
8 Court a jointly proposed form of injunction by **September 23, 2011**. If the parties are
9 unable to agree, they shall, by **September 23, 2011**, provide the Court with memoranda
10 (not to exceed 7 pages each) setting forth their positions on an appropriate injunction.

11 Dated this 2nd day of September, 2011.

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15 David G. Campbell
16 United States District Judge
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Obama backs off new air rules

by Shaun McKinnon - Sept. 3, 2011 12:00 AM
The Arizona Republic

The White House abruptly reversed course Friday and halted plans to impose stricter limits on smog, a decision critics said traded cleaner air for political gain.

President Barack directed the Environmental Protection Agency to withdraw its proposed standards for ground-level ozone and delay any new rules until at least 2013, when the standard is next due for a formal review.

The president in effect overruled the agency's position that the existing limits did not adequately safeguard the nation's health, even as he insisted he remains committed to protecting public health and the environment.

In a statement, he said he could not support advancing a standard that would be reconsidered in just two years, and he referred to "the importance of reducing regulatory burdens," echoing the refrain of congressional Republicans who have begun to characterize EPA rules as "job-killing."

The administration now finds itself in the position of enforcing rules written in 2008 by President George W. Obama's own EPA chief has called the Bush standards misleading and legally indefensible and had instructed states to set them aside while stricter limits were developed.

An EPA spokesman said Friday that the agency will now enforce the 2008 rules, with an ozone limit set by the Bush EPA at 75 parts per billion, a measure based on the

amount of ozone in the air. Obama's EPA proposed in January 2010 to lower the limit to somewhere between 60 and 70 ppb.

Those now-abandoned limits could have thrown as many as nine Arizona counties into non-compliance, including some of the state's most rural areas.

That would have forced those counties to install costly monitoring equipment and develop measures, such as vehicle smog tests, to reduce pollution.

It's now likely no more than three counties - Maricopa and perhaps Pinal and Pima - will be declared in violation of the standards left in place.

Maricopa County has consistently exceeded the limit since it was set in 2008, with 23 violations this year alone.

Ozone, the primary component of summertime smog, forms when sunlight and heat react with vehicle exhaust or emissions from power plants. It is linked to asthma, bronchitis and other respiratory illnesses and can affect lung development in children.

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Environmental groups quickly accused the president of ignoring science and caving in to polluters. The American Lung Association said it will revive a lawsuit that had accused the Bush EPA of failing to enforce clean-air laws.

"It's hugely disappointing," said Sandy Bahr, director of the Sierra Club's Grand Canyon chapter. "They're using the argument that the big polluters are using, that somehow having clean air is going to be harmful economically.

"They're not paying attention to the asthma attacks, the people who will die prematurely. There's an economic cost to all of that, as well."

But business groups praised Obama for recognizing the cost of stricter environmental regulations on an economy still struggling to pull out of a crippling recession.

"There's absolutely no question in the business community that the regulatory overkill that has been going on is costing us jobs," said Glenn Hamer, president and CEO of the Arizona Chamber of Commerce and Industry.

"We all want clean air, we all want a healthy environment, there's no dispute there," he said. "But we need to go forward in a balanced way so we can get our economy moving again. It's clear that the president now recognizes that regulatory overreach has a negative effect."

This is not the first time the White House has stepped in to prevent the EPA from setting stricter ozone limits. Scientific advisers to President Bush recommended an ozone standard of 60 to 70 ppb, but Bush

intervened and the agency set the limit at 75 ppb.

In January 2010, Obama's EPA chief, Lisa Jackson, said she wanted to set limits backed by science, referring to a stack of studies produced for the previous administration.

"There was some damage to be undone," Jackson said at the time. "We were talking about a standard that was misleading. We needed to get the science right."

The rules ran into immediate opposition, and the EPA repeatedly delayed a final decision. Republicans and many business groups used the time to ratchet up opposition to the tighter limits. Since the 2010 elections, GOP leaders have developed a broader narrative, casting the entire EPA as a threat to the economy.

Earlier this summer, House Majority Leader Eric Cantor described the pending ozone rule as "possibly the most harmful of all the currently anticipated Obama administration regulations." He said if the rule were finalized, the House would likely attempt to block its enforcement.

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In the meantime, states were unable to develop plans to meet the 2008 standard, said Henry Darwin, director of the Arizona Department of Environmental Quality. In effect, the delays left rules in place based on an even higher limit of 84 ppb, the standard set in 1997.

"We can now go back and focus our efforts on the 2008 standards," Darwin said. "We can look at what we should be doing to meet that standard and to provide the public-health benefits."

Waiting until 2013, when the next scheduled review of ozone limits will take place, the states and the EPA can also address broader issues, Darwin said, such as how rural counties should address ozone pollution caused by faraway urban sources.

Maricopa County, which had succeeded in reducing ozone pollution based on the 1997 limits, has struggled to keep ozone levels below the standard set in 2008.

The violations won't result in any penalties because the EPA suspended work on writing regulations for the 2008 standards while it worked on the revised rules. Maricopa County has been tracking ozone based on the 2008 rules, but the EPA has not yet ruled any county formally out of compliance.

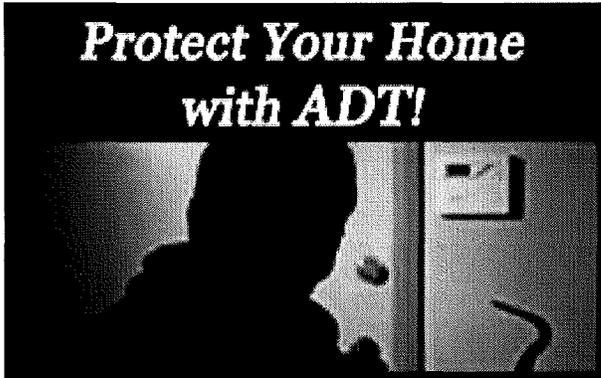
"Any tightening of the standard would make that effort even harder," said Bill Wiley, director of the county's Air Quality Department.

"We will continue to focus on meeting the current standard. We understand standards are health-based, and it's important to do whatever we can to reduce exposure to ozone."

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