

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 is 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.