



Missouri
Department of
Natural Resources

Springfield Area Ozone Designation Process Meeting
The Library Center
10 a.m. to 12 p.m.
June 13, 2008

Staff Members Present:

David Lamb
Jeff Bennett
Jim Kavanaugh
Paul Myers
Rebecca Birke
Tiffany Campbell
Cindy Davies, SWRO
Paul Vitzthum, SWRO
Carrie Smith, Ombudsmen

Others Present by Attendance Record:

Brian Adams, Springfield-Green County Health Department
Daniel Hedrick, City Utilities of Springfield
Gary Pendergrass, Missouri Air Conservation Commission
George Thullesen, Empire District
Andrew Seiler, MoDOT-D8
Rick Hughlett, Rick's Automotive
Steve Wilson, USDA-NRCS
Mary Norman, Partnership for Sustainability
Jeff Seifried, Springfield Area Chamber of Commerce
George Cutbirth, Stone County
Ronda Headland, MDC
Kelly Hurst, URS Corp.
Jenni Jones, MoDOT
Cindy Stephens, OTC
Zach Young, MDC
Natasha Longpine, OTO
Tim Conklin, OTO
Emily Fox, Discovery Center, Partnership for Sustainability
Orel Baker, Springfield-Green County Health Department
Jami Gay, Springfield Air Quality
Rick Hess, City of Battlefield
Marc Thornsberry, City of Springfield
Randy Brown, City of Willard
Chuck Kroeger, The Forrester Group
Doug Neidigh, Springfield-Green County Health Department

Michelle Garand, Community Partnership, OCAA
Frank Miller, MoDOT
Earl Dotson, Lawrence County Commission
Tom Rinnie, OTO
Joe Keller, Greene County Highway
Barbara Luchs, City of Springfield
Brian Hamburg
JD Slaughter, Springfield-Greene County Health Department
Rita Heedham, Southwest Area Manufacturers Association

Opening Remarks:

Jim Kavanaugh – Air Pollution Control Program Director. Jim thanked everyone for attending. He explained that this would be the first of a series of meetings that we will hold in the area. This first meeting would be mostly informational in nature and we'll discuss the process. There are a lot of unknowns at this point. The second meeting will be more technical in nature. The final meeting will be a final opportunity to discuss the state's decision and recommendation a "pre-review" if you will before we submit it to EPA. EPA has the final authority to make the decision on which area will be included in a nonattainment area.

He then asked that everyone go around and introduce themselves.

He encouraged people to ask questions along the way.

Jeff Bennett

He discussed the process and the agenda for the meeting. We are going to talk about what causes ozone to form in Springfield. Springfield is one the three or four areas that we are looking at and to include you in the process. We want to be as transparent as possible.

Tiffany Campbell

Ozone 101 – ozone is a secondary pollutant. VOC + NO_x + sunlight = ozone.

Air monitoring map – she discussed the monitors and their locations

She discusses the 1997 ozone standard and how design values are derived. Rounding was allowed under that standard.

Springfield traditionally had a 71 of 72 ppb ozone level but the 77 ppb is an increase and we have seen that number increasing over the last few years. Under the 1997 standard you all were meeting the standard. With the tightened standard, Greene County has a violating monitor.

Thanks the area for their proactive approach to protecting air quality.

Jeff Bennett

Photochemical Modeling - see slide.

Concepts – you have VOC and NO_x that form ozone. This is an exercise that predicts ozone formation into the future. We are trying to predict what will happen in 2009.

Conclusion – Southwest Missouri sources contribute 30-50% to “high” ozone levels in their area.

Source Regions – see slide. Ozone modeling predicts concentrations of the ozone levels in each grid cell. So we know, in theory, what the ozone levels were on a certain date at a certain time.

Photochemical Modeling is not for the faint of heart!

Who else is contributing to ozone levels in Southwest Missouri? (see slide)

Springfield has remarkably good air quality in general, which is good. But we are seeing episodes where Oklahoma or Tulsa pollutants are contributing to bad air quality in this area. We have even done a trend analysis that showed Arkansas had some contribution to air quality issues here. There are also biogenic sources of ozone. ie: oak trees.

Question: What is the percentage of biogenic VOCs to ozone?

Answer: Biogenic VOCs in terms of percentage are never the same. On a hotter day it can be up to 90%. On other days it can be zero.

NO_x emission controls are going to have the biggest impact on air quality in the area. If we take NO_x out of the equation we can reduce ozone formation. For this particular area, NO_x controls may be the way to go.

This is a day to day evaluation. Human behavior, industrial process, etc. all affect ozone levels.

Question: It looks like point and mobile sources break out at 50-50 in this area. Is that true?

Answer: Yes. There are other smaller point sources that have an impact, too. While cars are getting cleaner, they still do contribute some. It is all the sources that have a contribution to this problem.

Question: If we only contribute 30-50% and we take care of that, we'll still be in trouble with the contribution from other areas, right?

Answer: If, theoretically, you do control all of your ozone contribution, you would be well below the standard. National controls help address issues where other areas contribute to violations upwind or downwind. CAIR and mobile controls will help control everyone. Each area in the state has to control their sources, too. Other states and areas are going through this same evaluation. It will help everyone when controls are put in place.

Tiffany Campbell

She discussed the new 2008 ozone standard of 75 ppb. There is no rounding allowed. Area meets the standard at or below 75 ppb.

Question: Why did you pick Cedar County or El Dorado Springs to place monitors?

Answer: We go through a process. We locate monitoring sites with EPA guidance, and usually place them both upwind and downwind of major sources of ozone precursors. It is not necessarily due to what is going on at the certain monitoring location. We place them to get a bigger picture. At times they serve as background monitors.

Question: If the outstate or background level is already at 76 ppb, how would we ever meet this standard?

Answer: This lowered standard is requiring everyone to look at their sources. Controls in other places will also help lower those background values that we see coming in. National controls also help with this issue.

Question: What percentage of ozone is actually contributing to all the environmental health problems?

Answer: Ozone reacts with everything. It reacts with tissue in your lungs. It increases breathing difficulty even for healthy individuals. Also the percentage is going to be different in every area as far as health effects.

Question: Do you foresee the standard being continually lowered?

Answer: EPA is required to reevaluate the NAAQS every five years. If the science supports a lowered standard we may see in tightening in years to come.

Question: Can you explain how they set the standard?

Answer: A series of evaluations based on scientific evaluations done by CASAC. They propose a range and take comments on the range. Ultimately the EPA administrator makes the final decision.

Question: At 60 ppb wouldn't the entire nation be in violation?

Answer: Yes, probably. We don't have the numbers, but it is very likely.

Tiffany discussed the timeline for this process. Our recommendation is due to EPA is March 2009. We expect final designations from EPA on March 2010. The attainment date for an area is set based on the severity of an area's air quality problems.

Another point we want to make is that the recommendation is based on the most recent monitoring data. Our design values will be derived from 2005-2007 monitoring data. We will later submit 2008 data once it is quality assured. EPA will most likely base their decision on 2006-2008 monitoring data.

Ultimately, the classification of nonattainment that an area is designated will dictate the controls that may be necessary.

Question: What does this mean for other areas in Missouri that don't have data? ie: Joplin, St. Joe, Columbia.

Answer: This could mean a number of things. EPA is looking to reevaluate their monitoring requirements. These areas could see added monitors. We do have to evaluate every county in the state. Counties that do not have monitoring data available may be "unclassifiable".

We are waiting on new guidance from EPA. They have recommended that we move forward with previous guidance to get the process started. We may make slight modifications to the recommendation based on any new guidance that we get at the end.

To determine whether an area is going to be designated as a nonattainment area you have to do a "test". Ask yourself: Does a monitor in your area/county show monitored violations of the standard? If the answer is "yes" - nonattainment is probable – you don't get to choose.

A second "test" –Does any other county contribute to the ozone that causes those monitors to violate the standard? If it is clear that they contribute, they're in nonattainment.

Why is the MSA important? It is the default boundary. When EPA begins their review of the data, the MSA is their starting point for the boundary. Missouri and Illinois suggested in the past that this is not the appropriate boundary and had to make a case to support this. We have to make a case to show them who is really contributing and who is not. That is the starting point for the boundary, but not the ending point. They could pull in or add more than just those counties that make up the MSA if they see that it is necessary.

This process is not optional. We are required to go through this evaluation based on the Clean Air Act.

Four Concepts to remember in the designation criteria: violating monitors, emission contributions, and traffic and commuting patterns – you have to establish connectivity with the upwind or downwind metropolitan area, and growth – population, census data, employment growth. Meteorological data plays a roll in this as well. What pattern is there that shows us how the ozone is moving. How much does each of these criteria support inclusion? This is a part of it. We want you all to send us more accurate, local information.

Monitored Violation Area – see slide. These areas have high ozone levels, but are outside of the current control window. We are only at the point of deciding who is in or out. We are not discussing, yet, what that county is required to do.

Opportunity for Input:

If there is more appropriate information in terms of population and industrial growth in this area it will help us. Even projections will assist us with this process. Submit this information on the Web site.

Jeff discussed the next meetings. In late July we will be setting up another meeting. In mid-September we will have a draft recommendation for everyone to review.

EPA makes this final decision on the designation for this area. We have a rigorous schedule to meet.

Question: Who do you want to submit stuff – Cities or Counties?

Answer: County-level information is the default. Some city-specific information may come into it.

Doug Neidigh – the Clean Air Alliance will also come out and help get your areas educated about ozone.